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GRAFTED FUTURES: CLIMATE ADAPTATION IN A POST-SOVIET WORLD

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Abstract

What does adaptation to climate change entail? How do communities considered to be the “most vulnerable,” respond to environmental changes beyond their control? This dissertation explores the implementation of pilot climate adaptation projects by international development planners and their collaborators working in Tajikistan’s government and NGO sectors. My research brings to light the struggles, aspirations, and achievements of the people targeted by these projects.

Amidst the derelict industries and infrastructural ruins of the Soviet Union, a vast majority of Tajik men migrate to Russia to access higher wages through illicit work. Meanwhile, international aid organizations try (and often fail) to help Tajik communities respond to serious climatic changes: most acutely, shrinking glaciers providing less runoff for irrigation. I seek to understand how households stay rooted to a place that is ecologically and economically precarious. With so little help available from external entities, and so many working as migrants abroad, my informants labored to graft familial networks, social lives, and future imaginaries to local places. This dissertation explores the lived reality of climate adaptation as a twinned strategy of rooting and dispersal.

In tending to orchards, my informants endeavored to nurture scions: which can be understood as both branches of trees amenable to grafting and notable descendants of a family. Keeping households afloat in a precarious environment without government support required a reliance on what could be cultivated from the land. The scion’s dual nature highlights the interdependence of ecology and family in the mountainous regions of contemporary Central Asia. In building up this strategy over several turbulent post-Soviet decades, residents were able to accommodate new norms and agendas from NGOs and state agencies into adaptive transnational livelihoods. Families facing uncertainty transformed their relationship to the state, development institutions, and the environment through collaborative adaptation.

Grafted Futures: Climate Adaptation in a Post-Soviet World

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Introduction: Grounding Adaptation

The jeep slowly ambles up a broad valley in the Pamir mountains of Tajikistan. The road runs above the banks of the meandering Vanj River, which absorbs numerous glacial-fed streams flowing down between imposing rock faces. The vehicle passes villages ranging from two to two hundred households every few kilometers. They are situated on areas with enough flat land and a reliable stream to irrigate crops – each one an oasis of green in a vast sea of dun-colored, glacial-peaked mountains. The manager of the development project, Shadulo, sits up front in the jeep and explains the day's task as I sit in the back, listening. We will walk through four villages to check on the progress residents are making on a drinking water project. The water spigots they are constructing are meant to allow household members to channel the glacial melt into a pipe, instead of relying on exposed irrigation ditches (*aryk*) that periodically freeze up or run dry, as the weather dictates. The project is two months behind schedule, Shadulo notes, as we drive through the barren stretches of road between each habitable zone.

Before exiting the vehicle, Shadulo turns to look me in the eye: “The people here are so lazy, otherwise this project would have been finished by now. They do not want progress. They are just stuck in the past.” That day, as I returned his gaze with a simple nod, I could only formulate a fragmentary picture of why these “lazy” villagers were behind on digging ditches needed to set up a drinking water system. In due time, I would come to realize that they were in fact quite industrious, repairing, maintaining, and reconfiguring nearly all the infrastructure they relied on to forge a viable future out of the remnants of the Soviet era. Meanwhile, I would continue to puzzle over what Shadulo

meant about their lack of desire for progress and the kind of political work such a temporal casting was meant to do.

A few miles down the road, the jeep pulls over at a thicket of greenery marking the habitable edge of an otherwise rocky terrain. We escape the merciless summer sun and move into the inviting coolness of a backyard through makeshift wooden gates separating neighbors' territories. Seen from the perspective of the Soviet era, when the Pamir region of Tajikistan enjoyed targeted investment from Moscow as a vaunted frontier advancing the region toward socialist modernity (Kassymbekova 2011; Rubinov 2019), the statement by development workers such as Shadulo that people were stuck in a bygone era made some sense. Looking around, teams of oxen were pulling wooden ploughs that had been refashioned after a half-century of disuse. Tree limbs were being cut and firewood stacked using toothed scythes forged by a local metalsmith. A visitor chancing upon the desiccated countryside could be forgiven for assuming that the Pamir mountains of Tajikistan were living in a past time.

But Shadulo, a ruddy man of sixty-one with close-cropped gray hair, had lived in Vanj his entire life. As the director of the most active development organization in the area, the Aga Khan Development Network (which implemented the drinking water project), he not only benefitted from one of the very few well-paying jobs in the valley but also enjoyed prominent family connections that helped him secure the job in the first place. During Soviet rule, Shadulo had been the director of one of the region's largest collectivized farms (*sovkhos*). He recalled how the valley had been home to a high-priority quartz mine, a marble factory and a bustling central town. The fact that these had all been abandoned or fallen into woeful disrepair could not be explained simply as an

accident of history. “People don’t want to put in the work,” Shadulo insists, shaking his head as we survey the imperfect cement basins taking shape in people’s backyards, “It is like they want to ruin the future.” Looking at the ungainly squares of cement that residents were trying to install in the rocky soil, Shadulo pointed out many errors and extended very little praise. In dismissing the efforts of his neighbors in front of the anthropologist, the development officer seemed to be searching for an explanation for the diminished trajectory of his home region over the last two and a half decades of post-Soviet life. What could be built out of the remnants of socialism’s demise? Could people’s labor make up for the deficits left in its wake? Would the growing interest in climate change across the international development industry, which was the only source of investment in the region, help create new possibilities along a forgotten frontier?

At the end of that long day walking through project sites with Shadulo, we end up seated in Azim’s orchard-canopied front yard. Still unsure of where my long-term fieldwork would end up taking me, I ask Azim, a teacher at the local school, if I could stay for a week to observe the community’s agricultural and ecological activities. “Of course you can stay as long as you like,” he said, without a moment’s hesitation. I ended up living in a small room in the back of Azim’s home for nearly a year.

Chatting with Azim, his wife, Sitara, and their neighbors, and working alongside them in the fields, I came to realize that many of the challenges occasioned by an uncertain climatic futures were already evident in Vanj. While charting the efforts of development workers and state agencies to confront climate change, I came to appreciate how Azim and his neighbors were in many respects already addressing the environmental challenges that the international community had come to see through the technocratic

lens of “adaptation to climate change,” all while being depicted by developers as “stuck in the past” and unproductive. The people of Vanj, as in much of rural Central Asia, had been battling these circumstances every day since the immense investments of the Soviet Union disappeared, literally overnight. An array of state and international initiatives would seek to resolve that absence, but by the time I arrived in Vanj in the summer of 2014 the valley was essentially in the hands of the residents. Their struggle to imagine and enact a better life for themselves, under constrained and limiting conditions, is the backbone of this dissertation.

Reluctant horticulturalists, as I call the people I lived and worked alongside, forged a living amidst the ruins of large-scale ventures, real and imagined. Their reluctance hinged on the fact that the Pamir region had enjoyed massive state investment, referred to longingly by many of my interlocutors as “Moscow’s provisioning” (*moskovskoye obespecheniye*). The Soviet Union had sought to establish subsidized industrial centers throughout the periphery (Reeves 2014), a policy with significant impacts on people’s livelihoods in the Pamirs. As Till Mostowlansky (2017) notes in his study of the Pamir Highway, a road which opened up the region to a modern era, infrastructural gains not only materially changed living conditions but allowed people to believe in the promises and ideological premises of socialism. They became invested in ideologies underpinned by a bountiful future and came to believe in these utopias as tangible transformations took hold around them. After the disappearance of this multi-decadal investment, residents went about, reluctantly, trying to overcome what had been lost.

Responding to a cascade of ecological, economic and political challenges required novel tactics and new approaches. The international development community and their

local partners in state and non-governmental ranks were looking for adaptation techniques to pilot, measure and disseminate. Meanwhile, Vanj residents had turned to horticulture, the cultivation of fruit trees, to enliven their terrain and create opportunities for sustenance and survival. My informants devised unexpected livelihood strategies and grafting techniques to ground unsound adaptation schemes and try to turn them into forested spaces that might sustain communal futures in the region.

This dissertation argues that grafting was not only a horticultural technique explored by my informants but a polyvalent form of adaptation employed by multiple actors to address future uncertainty. Taking something vital from one entity and giving it life in an analogous form appeared in a variety of processes that I encountered throughout my fieldwork. Development workers aligned climate rationales to existing environmental projects, state workers enlivened the rubble of past socialist projects, and residents applied the hard-won gains of labor migration to horticultural cultivation. These intersecting practices point to an expansive notion of grafting that illuminates what adaptation to the future might hold. When human endeavors and environmental constraints are entwined through creative necessity, new futures can come to fruition.

Vital Bodies

The sudden, startling, and bewildering deindustrialization that swallowed Tajikistan in 1991 returned labor to the body. People did not look to factory work, education or the state to secure a semblance of stability. These previously reliable pathways had receded into the past. Karl Marx noted early in his writing that “man lives from nature, i.e. nature is his body [...]” (Marx 2009 [1844]). This perspective, articulated in a draft of his

Economic and Philosophical Manuscripts, ceded the basis of physical and mental life to the external ecology of nature. The subsequent omission of these words in later manuscript drafts demoted nature in place of an industrialized, urban worker: the proletariat.

There is some irony in the fact that the linkages recognized, and later redacted, by Marx were etched in sharp relief by the collapse of the Leninist-Marxist regime in Central Asia. “Lenin always taught us: one step forward, two steps back—but not this far back,” Azim joked, reflecting on how drastically industrialization and state investment collapsed around him. When the Soviet industrial base ceased to function, the bodies of family members were the main tools and machines marshaled to meet household needs. But was their labor power the result of their own strength alone? What were the elements that made up post-Soviet endurance?

Situating the subject of history within the body of the laborer, Marx found the engine for his theorizing. In so doing, Marx sought to flip Hegel on his head. In the afterword to Volume One of *Capital*, Marx insisted,

“to Hegel, the life process of the human brain [...] is the demiurge of the real world [...] With me, on the contrary, the ideal is nothing else than the material world reflected by the human mind, and translated into forms of thought [...] With him it is standing on its head. It must be turned right side up again, if you would discover the rational kernel within the mystical shell.”

What kernel is hiding in the mystical shell? Rather than seeing Spirit as the basis of History, as Hegel had insisted, Marx asserted that material conditions dictated how historical struggles played out. Inflecting Hegel’s dialectic with Feuerbach’s critique of

religion, Marx sought to subsume the importance of Spirit to materiality and praxis. He maintained a focus on work, but shifted from a concern with consciousness as being-for-self towards a notion of work that operated within “modes of production.” This concern with production led Marx to unpack, with unmatched perspicuity, the “intercourse” that took place between a population, which did the work of manufacturing, and government, which regulated the population under the dictums of capital gain (1972 [1888]: 150). The resulting arrangement, a “division of labor,” trumped individuals’ will by structuring their consciousness according to whatever social relations were most productive. The relations of capital become social relations, and the exchange of work for wages turns their “accumulated labor” into more capital – robbing the proletariat of content, thereby making them “abstract” (1972 [1932]: 191). In the process, human bodies were turned into mechanized parts (1972 [1847]: 390) – allowing them to be dominated by the ceaseless churning of capital which appropriated their labor power.

Marx prioritized the preeminence of labor in the formation of capital as the centerpiece to his labor theory of value.¹ This emphasis on labor is an enduring legacy of Marxism but is also a product of the Enlightenment’s focus on the subject. For Marx, the driver of history was not a teleological progression ending with the State (as Hegel envisioned) but a material dialectic between the means of production and those who struggled to control it. Karl Marx wrote his doctoral dissertation on the “metaphysical materialism” of the Epicureans, and his own historical materialism was set in opposition

¹ This view has been countered by scholars arguing that financial capital holds the upper hand over labor (Pickety 2015). If labor does continue to matter, then it has reemerged as informal collaborations across emergent rural-urban constellations or as vast transformations to the category of work itself, taking on affective and gendered dimensions (Hardt and Negri 1999: 94; Collier and Yanagisako 1987).

to their abstraction.² However, in prioritizing the laboring body, Marx deemphasized the industrial, ecological and vital machinery that surrounded the body.

Yet there are cracks in the conceptual armor forged out of labor. Marx insisted in his *Critique of the Gotha Programme* that “labour is not the source of all wealth. Nature is just as much the source of use values [...] as labour, which itself is only the manifestation of a force of nature” (1990 [1875]: 525). The key term here is *use value*. Benjamin Kunkel argues that capitalism’s ecological project is to enlarge the quotient of “unpaid nature,” like that of unpaid labor, in the total value of commodities. “The insight that commodity production will cost least where both work and materials cost least may appear obvious. But it’s not too obvious to have escaped most writers on Marx’s value theory, who typically concentrate on machines and other infrastructure (‘fixed capital’) in the means of production to the neglect of energy and raw materials (‘circulating capital’)” (Kunkel 2016: 25). The emphasis on labor and machines, to the exclusion of the natural resources on which they worked, is the most glaring omission in Marx’s writing. As the planet increasingly confronts ecological, rather than financial, technological or political limits to growth, the crucial role of the environment needs to be squared with Marx’s flipping of Hegel.

Writing against the anthropocentrism of labor in Adam Smith’s *Wealth of Nations*, Thomas Henry Huxley recognized that plants precede investments of human labor (which Smith had argued was the origin of all subsequent forms of capital). Huxley (1899: 154), in an essay titled *Capital – The Mother of Labor*, argued instead that plants are the “[...]”

² In reflecting on Marx’s dissertation, Jane Bennett notes, “Historical materialism would not be a phantasmatic ontological tale but a real social theory; it would focus not on matter per se but on concrete, social materialities” (Bennett 2004: 357).

work-stuff. They are the chief and, for practical purposes, the sole producers of that vital capital which we have seen to be the necessary antecedent of every act of labour.” For Huxley, this fundamental “work-stuff” is necessarily vegetal (as all caloric inputs are dependent on it) and human action can only modify and enhance it. The energy produced from photosynthesis is literally the fuel of life. Oil and petroleum products, the dominant fuel of contemporary economic prosperity, are merely the residuum of past plants’ success in trapping ancient sunlight. Recognizing the reliance of humans on the environment, Huxley insisted that “the plant either directly, or by some animal intermediary, lends us the capital which enables us to carry on the business of life” (Huxley 1899: 155). Huxley’s argument helps situate natural resources as the foundation for material and economic production, *a priori* of human labor.

Timely commitments

A week after Shadulo’s jeep dropped me off in the middle of Vanj valley, I learned that the civil engineers sub-contracted to oversee the project had staked out the canal at the wrong angle. Owing to this error, a major section of the canal had to be dug again by residents, by hand. I joined in on the laborious task a week after I had settled in. As we sat on pickaxes and shovels to take a break from digging the rerouted tranche of the canal, accusations and complaints flowed like the tea being passed around the communal thermos. Farrukh, a father of three young boys who embodied the bootstrapping spirit so prevalent in Vanj, appreciated the development agency for funding the water pipe. “We are willing to put in the sweat,” he acknowledged. “They gave us the wrong plans for where to dig but we are not angry. Even more, we will be ready for whatever ‘European

project' will come after this water pipe. We have been going to the climate seminars (*trainingi*) every time the Europeans come. We can do whatever work they want, we are ready." Residents were ready to transition from one development scheme to another, regardless of the funding sources or underlying justifications. They were hardly lazy and more than willing to put in the work.

But no one was naive enough to think that any of these externally-funded projects would do more than address minor breaches in the innumerable leaks of dilapidated Soviet infrastructure. "This is like a drop in the ocean, but you have to start somewhere," Farrukh said. "We know what real investment looks like. We lived through that. But these international organizations are not willing to put in serious money. Improving this place will be up to us." As I spent more time in the Vanj, it was clear that Shadulo, the project manager, had been mistaken regarding people's idleness. Farrukh and his co-workers had invested a great deal into rebuilding a landscape littered with the remnants of Soviet investment. Was he equally mistaken about their reversion into a bygone era?

When Shadulo told me they were regressing, rather than progressing in time, I began to wonder what that might mean not only for Vanj residents but for a planet facing an irreversible quagmire of carbon accrual. Johannes Fabian (1983: 12), in reflecting on the secularization of time, noted that for travelers/philosophers "relations between parts of the world... can be understood as temporal relations. Dispersal in space reflects directly, which is not to say simply or in obvious ways, sequence in Time." Would the compression set off by a reeling climate continue to collapse the distinctions of time mapped across space? Perhaps this would create, by fiat, the conditions of "coevalness" that Fabian had called for. If Vanj residents were on the bleeding edge of a universal

condition, then they might provide insight into living in a “reeling present” (Stewart 2007:1), where ephemeral forces constantly unsettle the unfurling of time. As Shadulo saw it, his fellow residents had faced a rupture with the past which had disjointed them spatially (out of the Soviet Union) and temporally (out of the future).

But rather than fall into a nostalgic malaise, Farrukh and his neighbors were committed to adapting the post-war landscape marked by a brutal civil war which lasted from 1992 to 1995. They fused together elements of rusted Soviet equipment, half-forgotten traditional techniques, novel yet limited development interventions, and scarce natural resources to adapt to the future. They were not stuck in the past, nor were they free from it. In fact, they had taken on the task of remaking their material environment by refiguring it. When land tenure reforms during the early 2000s distributed formerly collectivized state lands, the residents of Vanj hoped to reshape the terrain they had inherited with entrepreneurialism of their own making.

In Vanj, like most of post-Soviet Central Asia, where labor migration to Russia had become a lifeline and a drain on available labor resources, those left behind were forced to act within emerging capitalist logics to generate agricultural outputs supporting dispersed domestic households. The landscape, once the site of state-planned visions, had to be reinterpreted, accruing new layers of meaning, use and aspiration. As landscape theorist James Corner (1999: 5) argues, “landscape is an ongoing medium of exchange, a medium that is embedded and evolved within the imaginative and material practices of different societies at different times. Over time, landscapes accrue layers with every new representation, and these inevitably thicken and enrich the range of interpretations and possibilities.” These mental and manual labors necessitated an infusion of vital energy to

enliven and repurpose remnants of the past to nourish a landscape capable of producing for the future.

Vanj valley

Vanj is one of a half-dozen eponymous river valleys that flow down to the border with Afghanistan in the southeast corner of Tajikistan. The area is dominated by mountain peaks soaring over 7,000 meters (the tallest in the former Soviet Union) and the world's largest non-polar glacier (Fedchenko, which drains into the Vanj River). The Pamirs are steep, dry and difficult lands. The extreme topography meant that most inhabitants had lived in relative isolation before Soviet roads and wires connected them. As a result, most valleys have their own language. These linguistic distinctions are braided together by a common Islamic faith that stretches across the valleys of the Pamirs.

In the 8th century, the people living in the valleys of the Pamir mountains converted to a sect of Shia Islam known as Ismailism. Most Ismailis, as followers are called, were concentrated in East Africa and the Persian Gulf. Diasporic migration in recent centuries has led many Ismailis to Canada, Europe and Australia. As a result, the global Ismaili sect is led by a Harvard-educated *imam* who resides in Switzerland: the Aga Khan. He is not only the spiritual leader of the Ismaili people, who constitute nearly all the inhabitants of Tajik (and Afghan) Badakhshan,³ but he is also their primary financial benefactor – through the Aga Khan Development Network (AKDN). The

³ The Pamir mountains are the geological formation where the Pamiri people live, while Badakhshan refers to the cultural and cartographic region that encompasses them. In essence, Pamiri and Badakhshani are synonymous. GBAO (Gorno-Badakhshan Autonomous Oblast) was the Soviet designation for the Tajik region, which is still in use.

development arm of the AKDN is just one part of a far-reaching constellation of cultural, philanthropic, financial and social agencies based in Switzerland, Canada, and elsewhere (see Steinberg 2011). The AKDN started working in the valleys of GBAO in 1993, coordinating humanitarian aid to save residents from starvation when the five year civil war essentially blockaded the region. Vanj residents benefit from the AKDN's continued commitment, along with everyone else in the Pamirs. However, Vanj valley is different.

Most of the glacier-carved valleys of the Pamirs have their own language. These linguistic distinctions are braided together by a common Islamic faith that stretches across the five valleys of the Pamirs, before ending in Vanj. All the valleys east of Vanj, extending to the Chinese border, are Ismaili, a Shia sect. The rest of country, to the west of Vanj, including the valley itself, practices Sunni Islam. This distinction means that Vanj valley is both Pamiri and Tajik, Sunni yet Badakhshani, aligned with the ideology of the central government yet sympathetic to Pamiri desires for self-determination – Vanj is betwixt and between.

After being colonized by the Emir of Bukhara in the 19th century, the inhabitants of Vanj were converted from Shia to Sunni Islam and forced to abandon their own language (the *Vanji* language is now extinct) in favor of Tajik. Thus, Vanjis speak the official language of the state, rather than a Pamiri language, and follow the country's mainstream interpretation of Islam. Partly for these reasons, most people I met in Vanj look favorably upon the authoritarian rule of the Tajik president, Emomali Rakhmon (in power since the civil war), and recognize his sovereignty as legitimate. The valleys east of the Pamirs have much more antagonistic relations with the Tajik state and see the Aga Khan as a figure more worthy of respect and legitimacy. Since GBAO continued to hold its Soviet

status as an Autonomous *Oblast* (region),⁴ the far-reaching presence of the AKDN makes the organization seem like a para-state. The AKDN takes pains to “eschew politics,” as one of their directors assured me in an interview in Khorog, the capital of the Pamir region, during the summer of 2015. The transcontinental diasporic humanitarianism proffered by the AKDN is instead mediated through a robust and committed development agency.⁵

As a political territory, Vanj District is comprised of two valleys. Two river basins are separated by the Vanj Range: the Vanj River Basin in the northern part, and the Yazgulem River Basin in the south. The elevation of Vanj Valley ranges from 1,500 to 2,500 meters, while the mean elevation of the Vanj River Basin and the Yazgulem River Basin is 3,762 m and 3,892 m respectively. The mountains directly surrounding these valleys are massive, some soaring above 7,000 meters.

A wide and braided riverbed characterizes the middle and upstream part of the Vanj River. The settlements along the river Vanj are characterized by comparatively intensive irrigation agriculture on very small plots. Typically, homestead areas are mixed with orchards and vegetable gardens, including stands of poplar trees (Heergarten 2004). The fields and plots vary considerably in size, but rarely exceed 300-400 square meters. Half of the cultivable area in Vanj Valley is planted with cereals, and the rest with potatoes,

⁴ GBAO was first made into a ‘Special Region of the Pamir’ in January 1925, and then later that year into an autonomous province. In other cases such procedures were designed to enhance the status of ethnic minorities. This classification of their territory as an autonomous oblast gave the inhabitants the right to be represented in the Soviet of Nationalities.” (Bliss 2010: 245)

⁵ Their support is deeply appreciated and respected across the Pamirs but their reach is ultimately limited to scattershot projects funded by international donors. The AKDN does at times fund their own initiatives, such as the campus for the University of Central Asia, being built in the regional capital of Khorog. Many people see the work of this agency, and its myriad ancillary branches, as the personal work of the Aga Khan himself. The Tajik president similarly positions himself as being personally responsible for anything built or funded in the country in an effort to singularly embody and appropriate the workings of the entire state in the body of its leader. (Yurchak 2013)

pulses and orchards. As a result, “Vanj is well known for its climate favoring fruit trees, such as apricots, peaches, apples, mulberries and walnut” (Wölcke, Wegner and Bulbulshoev 2013). Livestock production constitutes a very important livelihood for the population, though the overreliance on livestock as an asset reserve has led to severe overgrazing of most pastures and harmful pressure on forest regeneration.

Furthermore, climate impacts are already having appreciable effects. At the headwaters of Vanj valley, the largest non-polar glacier in the world, Fedchenko Glacier, has shrunk over the last eight decades (Lambrecht et. al. 2014). Smaller glaciers are perched along the crest of the valleys and their runoff provides the small rivers that sustain life in the dry, mountain-desert environment. Some of these local glaciers are already extinct and most are not predicted to survive beyond 2050, according to climate model projections (World Bank 2011). On the whole, people in the Pamirs face privation from a harsh meteorological and political climate. As in much of post-Soviet Central Asia, people have turned to labor migration as a lifeline to maintain a modicum of income and wellbeing. Apart from remittances, intermittent development projects are the only outside investments that appreciably change the landscape in the Pamirs.

Grafting the future

Over the many months I lived in Vanj and waited for climate development projects to show their effects, I came to recognize the pragmatic and grounded ways households were dealing with uncertainty of all kinds. Family members working abroad could be swindled or deported at any moment by Russian authorities. Floods, avalanches, rockfall or mudslides could sweep down the mountainous terrain in any season. Local jobs were

scarce and they paid far below a livable wage (teachers like Azim made \$70/month). The only seeming stability rested on the land that had been distributed from decollectivized state farms to households (granted as 99-year land leases, the territories were still technically owned by the Tajik state). As a result, the long-term thinking around land and labor had shifted to horticulture, the cultivation of trees.

Connecting a scion to a tree, reimagining a development project, or keeping a son within a household's orbit demands grafting work. Horticultural grafting defines a variety of techniques in which a stem containing leaf buds (*paivand* in Tajik) is inserted into the stock of a tree (*hasakis*). Grafting is useful, however, for more than reproducing a cultivar (a plant variety bred selectively). It is also used to repair injured fruit trees or for topworking an established tree (grafting multiple cultivars onto a mature tree). However, grafting work impels a tightly woven interdependence with locality. For instance, the seed from a Red Delicious apple will produce an apple tree, but it will not produce a Red Delicious apple tree. Fruit trees cannot be reproduced "true" to the original cultivar from seed. While the soil will warp seeds into unexpected forms, only grafting can maintain the desired traits (Fleming 2017). By transferring genetic material onto the living infrastructure of trees, something new can grow. However, rootstocks that are endemic or native to the growing region provide the best base for growth. Growth is more durable once it has grown accustomed to place. There is an implicit reciprocity between people and place required for grafting.

Over countless conversations in Azim's yard, he would explain how grafting had become a necessity. "I have to nurture these trees like a child. By giving them a new life with new fruits—grafting a scion (*paivand kardan*) lets me add more useful foreign

varieties. If I'm lucky, I'll make a profit. But this work not only benefits me. I am building something for future generations. If I learned anything from going to all those *trainings* after the war, it's that you have to be clever and take every opportunity that comes your way."

Azim's optimism was scarcely dampened by the upheaval and trauma he had faced throughout his life. His accounting of his landscape was backed up by a commitment, born of necessity, to work on the land and make it profitable, nourishing and livable—in the face of constant uncertainty and degradation. The Soviet collapse, the ensuing civil war, and decades of labor migration on the part of Azim and his kin had warped his vision of the landscape, forcing him to be creative and resourceful. "I cannot rely on the government, foreign donors or even my own body. Everything is unreliable," he reasoned. "But this land will have to support my family if I can learn its secrets and create a space for life. I am still learning. Grafting gives me hope that maybe I will have something to pass on to my grandchildren."

In tending to orchards my informants were nurturing scions. The word scion can be understood doubly: (1) as branches of trees amenable to grafting and (2) as the descendant of a family. The scion's dual nature helps us recognize the twinning of ecology and family that is required in post-Soviet Central Asia. The products of this ecological labor grew into the gaps left by the state, widened by migration, and barely filled in by international development. When Azim would say things to me like, "the trees can tell when you are really committed, when you are giving them your all," I stopped taking them as simple platitudes about gardening. I began to realize that ecological sustenance was deeply bound up with human efforts to maintain families and households

in Vanj. Rooted investments of time and energy allowed families to imagine a self-sufficient future that could nourish and sustain them, albeit tenuously. The collusion of natural resources and labor provided the potential for growth, grafting new visions and materials onto a compromised landscape.

These horticultural efforts rarely occurred in isolation. A seed or an idea left by Canadian ecologists or German engineers could grow in unplanned ways, germinating unexpectedly years later. A U.N. World Food Program project had enticed Azim to grow trees in the woodlot beyond his nearby fields. The U.N. paid him in cooking oil, wheat, and a little cash to plant fruit trees on marginal land that was steep and rocky. “I realized that the trees in the woodlot barely bore any fruit in the five years since the project ended,” Azim explained. As a result, Azim had been systematically transferring the more profitable and longer-lasting apple varieties provided by the U.N. project to the more fertile fields near his house. He did this despite the fact that it was illegal to transform “productive agricultural” land into “orchard” according to the Tajik land code. “Every year I plant a nice new row down here by my house. I make sure no one notices. The trees are really starting to grow beautifully, aren’t they!” His cousin, an employee of the Land Cadaster Agency, helped him smooth things over during the annual land assessments. In the process, he undermined the original intent of the project, which was to develop marginal lands. Instead, Azim nourished the trees and soils that were most vital to him.

Adaptive varieties can be grafted onto new or old rootstocks. Both provide potential platforms for growth. Some residents of Vanj planned to reinvigorate Soviet-planted orchards with grafts of foreign varieties, while their neighbors wanted to start

anew on recently privatized farmland. Horticulturalists I met throughout the valley were open to either practice. They decided what to plant and graft based on instinct and informal consultations with neighbors and friends.

Jumbush, a period in early summer that is optimal for grafting saplings had found its way on to most people's calendars but was still an exercise in improvisation. Ideas and seeds are mobile and can grow in unintended locations, following the whims and desires of the caretaker and the dictates of the land. My informants did not set out to remake international assistance, reconfigure Soviet orchards or support a resurgence of local apple varieties. Reluctant horticulturalists turned to sylvan cultivation because it promised domestic earnings when the remaining rural jobs disappeared and outside development proved chimeric. The remnants of the past, the uncertainties of labor migration in the present, and the failed promises of development for the future led many of my informants to experiment with horticultural grafting. How did these arboreal practices take shape and what did they portend for climate adaptation more broadly?

Grounding the Past

The residents of Vanj did not take to growing trees on a whim, however. Soviet forestry experts had come to believe that there was a paucity of forests in Tajikistan, and worked to overcome those challenges by trying to terrace the landscape, rely on mechanization and heavily irrigate wherever they could (Kocherga 1966). But significant forest cover never took hold in the country (Vihrestok and Padalko 1983). Instead, small arboreal zones surrounded villages, marking the barren, scree-filled mountainsides with smudges of green. More than the agricultural fields, the forests protected habitations from

floods and winds and kept them shaded against the harsh sun. When I encountered a new home being built at the edge of a village, the saplings were planted at the start of construction, just twigs shooting out of the ground, ready to support life. In short order, trees helped turn a lifeless space into a home.

The apples, walnuts and other fruits and nuts that people have been growing in increasing numbers over the last few years had started fetching good prices in urban bazaars. Some even made their way to export markets. Horticulture was, to a certain extent, driven by market logics. Yet, with so many children circulating away from home, and other institutions failing to bear fruit, orchards provided a distinct grounding for households. Given decades of uncertainty, poverty, and instability, my informants needed a solid platform to imagine and enact the things they wanted to see in the future. The work of grounding helps explain how people prepared for the future, bringing elements that are fluid and unstable under control.

By engaging the landscape to stabilize ecological resources, development schemes and unreliable state services, my informants had to utilize whatever elements they could to ensure economic, ecological and familial gains. As I came to realize, grounding in Vanj required preparing the land, grafting desirable traits, and committing to their growth, in the absence of family members, state services or outside aid. Orchards offered an important way to hedge against the challenges that pressed close, their vital properties helping people adapt to trying circumstances. Orchards are always in need of tending, therefore unfinished, revealing “the process of becoming through things, relations, stories, survival, destruction, and reinvention in the borrowed time of an invisible present” (Biehl and Locke 2017: x).

Vital Materiality

Anthropologists have made significant efforts to bring the material world to bear on social relations. The heightened interest in the material world has framed the “ontological turn,” leading to an expansion of anthropological concerns with plants, animals, fungi, ocean waves, etc. (Raffles 2005; Helmreich 2009; Kirksey 2017; see also Escobar 2007). Scholars have focused attention on how practices and experiences are reflexively shaped by the actor’s surroundings (c.f. Povinelli 2016). They have highlighted how objects themselves operate as “vibrant matter” that has the power to shape political and social landscapes (Bennett 2010). For Tim Ingold (2013), the process of interaction between sentient practitioners and active materials allows them to “co-respond” through the process of formation and productive work.

In 1986, Arjun Appadurai argued in *The Social Life of Things* that scholars have to make the objects in the world a prime domain for ethnographic consideration:

“[We] have to follow the things themselves, for their meanings are inscribed in their forms, their uses, their trajectories. It is only through the analysis of these trajectories that we can interpret the human transactions and calculations that enliven things. Thus, even though from a theoretical point of view human actors encode things with significance, from a methodological point of view it is the things-in-motion that illuminate their human and social context.”

Thus, for Appadurai (1986: 5), the methodological issue of understanding the social world, populated and enlivened by objects, requires following their motion, their circulation among regimes of value, social relationships, and material states. Appadurai's

edited volume, however, was almost exclusively concerned with the class of objects that we consider commodities; those things that are formed through their circulation in market transactions. Interactions outside the market sphere, or not principally defined through it, were not of concern in his path-breaking work, which focused on the how the social history of things was determined by and constitutive of their cultural biographies. But in following “the things themselves” one wonders what propels objects’ motion through those spheres and guides their trajectories? What is the source of energy that guides objects through human lifeworlds?

A common anthropological emphasis situates this energy in *hau*, the Maori notion of the force inherent within objects, which compels their circulation. In a provocative rereading of Marcel Mauss’ *The Gift*, Stephanie Frank argues that *hau* is not the explanatory variable in the circulation of things that Levi-Strauss’s preface to *The Gift* had led scholars to believe. However, Frank argues, Mauss’ deep reading of Roman law and a long-standing concern with magic, which he articulated with Henri Hubert decades earlier, actually situates *mana* and *res Mancipi* as foundational to the circulation of people and things. “The conflation of the class of *res Mancipi* (whose exchange requires the treating of people as things) with that of *familia* (whose exchange treats things as people, members of the family) makes sense of Mauss’ vision of gift exchange as entailing a series of exchanges of things and people, everything mixed up together” (Frank 2016: 272). The resulting perspective highlights that *mana* is a broader category that supersedes *hau*, which is itself “a particular instantiation of the more general phenomenon of forces in things” (Frank 2016: 262). Thus, it is not a force attributed to objects, such as *hau*,

which compels their circulation, but rather the mixing of categories, the blurring of boundaries between subject and object, which propels their movement.

Annette Weiner (1982) has made similar claims regarding the power of objects arising from the Maussian notion that things are a part of oneself. “As they move between individuals, objects take on value, representing the histories of their movements and of the individuals who fashioned, owned and exchanged them... Like weighted arrows, words, objects and magic spells are projected towards another person's personal space. At the same time, words, objects and magic spells are the very projectiles that others are using to penetrate one's own personal space” (Weiner 1983: 690-692). Thinking about yams, shells and other objects of exchange on the island of Kiriwina in Papua New Guinea led Weiner to consider the way the circulation of objects necessitated a labor tied to the needs of others, where the difficulty of creating and attaining objects helped underlie their reciprocity. The work required in making objects was transmuted into the objects and then circulated between persons, helping to define the objects, the people, and the inter-relations between them all.

Likewise, Marilyn Strathern argues in *Gender of the Gift* that exchange between people “is not ultimately about fulfilling themselves as subjects,” rather, “ceremonial exchange works to make them objects in the regard of others” (Strathern 1988: 331). Individuals become objects not because they lose their corporeality but because “a subject can be turned into an object” (Strathern 1988: 338). This ontological slippage is due to a plurality in the composition of individuals that is not normally afforded in Western metaphysics. Anthropologists have continually prodded the boundary between

self and other, through the interaction of persons and things, to understand how both are relevant in the constitution of each other.

In light of these thinkers, Arjun Appadurai's (1986) consideration of objects as canvases encoded by human actors seems limited. Things-in-motion not only "illuminate their human and social context," but are constitutive of the context and the humans who act in it. In taking stock of recent work on the ontological turn, Appadurai (2015) has updated his original thinking: he has attempted to organize objects with particular contextual significance as belonging to the category of "mediants." Ultimately, he reaches the self-referential conclusion that "mediation, as an operation or embodied practice, produces materiality as the effect of its operations," while, recursively, materiality acts the site of mediation (ibid.: 224). Materiality and mediation require each other. Out of this interplay, some objects, mediants in his parlance, come to matter more than others, playing "a vital role in mediating the force of other mediants and actants, both human and nonhuman (and frequently combinations of the two)" (ibid.: 228). Desire embodied in objects gives them animacy and allows them to act in the world, through processes of mediation. I will return to anthropology's consideration of vitality, born out of the legacy of animism, in the conclusion.

This dissertation is concerned precisely with what might comprises a non-animistic relationship to nature's vital energy. People's engagement with the environment and the material world has to be read closely, allowing people's labors to "create holes in dominant theories and interventions and unleash a vital plurality" (Biehl and Locke 2017: 32). How can people engage nature without explicitly acknowledging ontological equivalence? While different materials are entangled in human efforts, the most vital

ones help enliven the terrain, grounding the uncertain and unknown in order to nourish new possibilities. The objects that matter, such as scions and soils, thus surface through ethnographic immersion that reveals a post-Soviet sociality that is irreducible to infrastructures and economics alone but acknowledges the plasticity of people and power to reconfigure systems in the making.

I observed committed individuals working to ground adaptation, revealing the interdependence of material conditions and social commitments needed to sustain life. Turning to fields and orchards that had been parceled out from disbanded collectivized state farms, families began to do the work development agencies had hired state actors and local NGOs to implement on marginal lands. Adapting to ecological policies, organizational structures, and remnant infrastructures set down during the Soviet Union, Tajik households worked with and without state and international donors to ameliorate rural depopulation and socio-ecological precarity. To ease this burden, they enlivened soils and trees, often by grafting favorable scions with desired traits onto existing Soviet orchards or to new rootstocks they had taken from neighbors. This grafting work increased the productivity of recently de-collectivized farmland, proving key in their post-socialist regeneration. In so doing, they tried to mitigate the violence, despoliation and fear that had gripped the region for decades.

However, I slowly came to realize that the human-vegetal entanglements that shepherded ruins across the shoals of time were not only important for households working to reinforce inconsistent migrant earnings and meager soils. By turning the landscape into a template for their aspirations and opportunities, by nourishing the land for their children, my informants laid the groundwork for the future. Post-Soviet

subsistence, climate-driven international development, and state-mediated resource management simultaneously employed disparate, at times overlapping, forms of grafting work.

Connecting development logics

As the water pipe was completed and turned on in subsequent months, plans for more grandiose projects were being discussed by a European development organization. Katie, a cheery European project manager I first met in the capital, Dushanbe, explained to me that she had travelled to Vanj two times in the past two years to conduct trainings in three pilot villages, one of which was my field site. She had worked in Africa for four years and had transferred to Tajikistan to head up a new climate adaptation initiative. She had joined the organization as an intern and had continued to pile on contract extensions, working her way up through the ranks. “I’m just trying to do my part. This is something we’ll all have to deal with at some point or another,” she offered with a smile.

Her agency’s current goals on the project taking place in Vanj was to gather climate-relevant data that could be integrated into future project outputs. In theory, these projects would improve state-managed territories to grow forests on what were essentially barren expanses of rock. Given the low level of state capacity, local people would be given 20-year access rights to individual forest plots in exchange for working and protecting the land. Through these Joint Forestry Management (JFM) projects, riverine ecologies could be stabilized, timber products could be harvested, and climate adaptation could be secured. For Katie, these tangible outputs were secondary, however. “Vanj gives us a way to experiment with a new approach to participatory project planning

that foregrounds climate change. I don't get to come to Vanj often, but the visits provide a wealth of data to generate new protocols for managing future climate adaptation projects elsewhere. This is really exciting stuff!" She was excited about the prospect of publishing reports that her organization could use to expand the reach of these novel techniques—raising her status in the organization and allowing other project teams to capitalize on an anticipated climate funding bonanza.

As useful as the participatory planning sessions in Vanj were for Katie to create climate protocols, and for her organization to expand into higher funding echelons, she realized that one had to be very careful in how climate change was discussed with local people. As we sat in her air-conditioned office on a hot summer day in the capital, she explained to me that the work of integrating climate was going really well. A few extra questions had been added to monitoring surveys and local NGOs sub-contracted to carry them out were well-versed in the importance of climate integration. But she realized that the issue could become "a culprit" for people's concerns. Katie worried that people might "start to think that climate change is responsible for a lot of their troubles. For the lack of water, the failure of crops, the lack of government accountability and that, given their limited understanding of the issue, there was almost nothing they could actually do about climate change. So we had to be very careful in how we brought it up." Katie had recognized that existing power dynamics and people's attribution of responsibility could all be swayed by adding in a new explanatory variable. In terms of development work, climate change was not only proving to be valuable but potentially volatile.

Climate change was not only a culprit to be shielded from residents, even as it provided access to massive funding opportunities for development practitioners. It was

also a new category of development logic that cut across existing project teams, sites and foci. The European agency's donors wanted to see greater integration across projects if they were going to dole out more climate financing. As a result, projects that had been focused on risk reduction in urban settings and forestry regeneration in rural settings were fused together by using climate change to synergize across the development agency.

This is how the notion of climate seemed to be having its strongest impact, explained Ryck, a European consultant who had several decades of development industry experience. "It makes project planning different from the outset but it also encourages links which were present but underutilized. Concretely speaking, someone now has a job focusing on climate which overlaps with the other project lines. So the connections comes into view once you put on climate goggles. If you're addressing climate in forest management and climate in disaster preparedness—then shouldn't you be working together!" As a result, climate change made development workers see many more things as potentially connected. Their projects were all affected by climate and thus new funding sources could be shared or redistributed throughout the organization.

Climate change acted as a bridge for disparate development activities. This connectivity was valuable because development, like many industries, strives to maintain institutional continuity in the face of desultory revenue streams. Projects come and go but the agency wants to stay active in each country and region. After a crisis, money pours in, agencies appear and then hold on for as long as donor interest can be sustained. A key element in this cycle is the internal agency incentives for project managers. High-achieving project strategists who are able to secure large funding targets improve their chance of moving up the internal career ladder within development organizations. This is

what motivated Katie to focus on creating climate-relevant internal documents before actually implementing the adaptation efforts themselves. Successful project managers try to ride the wave of popular development agendas. During the last decade there were no hotter trends than climate change. By wedding ongoing or dwindling efforts to new agendas, the development industry tries to survive by linking projects together.

A popular tactic used to turn haphazard funding into institutional stability is to graft new projects onto old ones. The goal is to string projects together to maintain the continuity of the organization and keep staff on board—to keep the entity alive regardless of the agenda. Such was the case with Joint Forestry Management (JFM) in Tajikistan, which witnessed project staff, locations and outputs woven into ascendant climate agendas. The justification, funders, and strategy may all change but the agency tries to maintain vital continuity throughout. In the years prior to my arrival, JFM was a policy promoted to improve ecological conditions and provide economic benefits. The initial idea had been adopted from Malaysia by an enterprising European project manager. It had been piloted in the eastern parts of the Pamir mountains, had expanded to Vanj, and was slated for expansion throughout Tajikistan. National forestry guidelines were being updated to accommodate this collaborative resource management strategy, where local users took over land from the state and grew forests which they could profit from. But just as JFM was gaining traction, a new set of project managers realized that this agenda could be easily folded in to climate considerations.

Rather than advocating for a clean slate of climate adaptation initiatives, Katie realized that “many of the things we’re already doing are climate-sensitive. We just hadn’t been looking at them in that way.” While climate change proved to be a

problematic explanatory variable that could unsettle local attributions of responsibility and risk, it was being used as a graft supplanted onto sturdy reforestation schemes. Though JFM was facing challenges on the ground, namely an inability to actually grow forests on barren, rocky, state-managed lands, it had been reinvigorated as the platform for climate interventions. Mutable development agendas, adopted from elsewhere, helped connect evolving projects and outputs to maintain the vitality of the enterprise. The development industry and its practitioners would take ideas from other venues, such as stories about the labor activist Cesar Chavez deployed in the service of Indonesian environmental agitation (Tsing 2011), to enliven local concerns. This mutability, the ability to graft ideas onto plans taking shape elsewhere, has helped promulgate development interventions around the globe while helping to mobilize and stoke interest from local stakeholders.

Damming nostalgia

Pilot efforts promoting climate adaptation, a pressing concern for development agencies, were deeply bound up with constraints set by the Tajik state. Not only had state forestry managers dictated what territories might be viable adaptation sites, they determined what could be done there. However, the logics of state bureaucrats and international development workers often diverged. Different images of what constituted an improved landscape prevented a cohesive application of adaptation across scales. The bureaucrats of the Tajik state were wedded to Soviet ideas regarding the harmful role of local residents and mechanized, “rational” ways to improve the environment (I consider the impact of these policies in Chapter 3). As Soviet concepts and parameters carried over

into project planning, past visions for how to enliven nature continued to guide post-Soviet resource managers and state bureaucrats. Climate projects were then grafted onto these misaligned forestry arrangements.

It was only a brisk twenty minute walk from Azim's home to the neighboring hamlet where the Forestry Agency had recently relocated their main office. I was fortunate to carry out a formal interview with Jabor, the director of the Vanj Forestry Agency (*Leskhoz*). He explained that the Agency was by far the largest land holder in Vanj, controlling 58,000 hectares, while most citizens had a dozen hectares if they were lucky. However, less than 4,000 hectares of this territory was designated as woodland (amounting to less than 7%), along with 1,000 hectares of pasture.

Most of the territory was soaring, rocky mountainsides that could barely grow a fringe of grass. As he moved his finger across a map from 1982, the last cartographic survey conducted in the region, he pointed to scattered plots of shrubby forest that grew spontaneously along river banks. Montane forests at higher elevations were left unguarded, accessible to local villagers for firewood and the rare medicinal herb gathering. But the scrub forests along the rivers were the primary source of lumber and firewood for the Agency. "We receive roughly 40% of our income from the central government. The rest we make up by renting land to locals, harvesting forest products, shepherding animals, and chopping firewood. We usually manage to balance revenue and expenses. But it's tricky because we are not allowed to chop trees without permission. And the Ecology Agency rarely grants it." Jabor's statement highlighted the bind the Forestry Agency was in. While they needed to harvest timber products to compensate for

meager funding from the central government, they also lacked the independence to make those ecological decisions themselves.

The cause of the conundrum stemmed from earlier Soviet planning. Limitations on local decision-making had been promoted because a limitless supply of Siberian lumber trundled down the railway lines to Central Asia each year. Tajik forests were spared from logging in Soviet five year plans because lumber imports accounted for over 95% of national needs (Vihrestok and Padalko 1983: 10). Soviet foresters were focused on afforestation, covering the barren hillsides with greenery. They had no need to cut Tajikistan's trees in sizable quantities. The guidelines of the current *Leskhoz* administrators closely adhered to the earlier conservation policies. Logging was to be kept to a minimum, ideally at zero. Existing juniper forests higher up the mountains were to be completely conserved while forest stands along the rivers could be logged only if they were concurrently expanded and afforested. Heavy machinery was needed to irrigate and protect those riverine assets. But whatever equipment the Soviet *Leskhoz* once had was rusted beyond repair. For several years running, the Vanj *Leskhoz* had no operating technical machinery at all, and one sputtering sedan.

In light of the collapse of heavy machinery and investment, new strategies were needed. However, no new plans had emerged since the Institutes and Forestry Research Centers stopped offering guidance or setting targets twenty years prior. Furthermore, several government officials explained to me that most existing guidelines were simply Russian laws translated into Tajik. Tajik officials were often not even sure what they had just codified in the translation. Therefore, the principles that appeared in the state regulation had almost no effect on the functioning of administrators and agencies.

Ultimately, the Forestry Agency continued to operate according to Soviet dictates, like a zombie agency running on fumes. They were not allowed to chop forests, yet they had to sell firewood to local government offices and residents in order to compensate for budget shortfalls.

I was not prepared for Jabor's intended resolution to the double bind his agency faced: "I need dams. That way new forests can grow and existing ones don't get washed away by floods." I was initially perplexed by Jabor's insistence on dams. But as I spoke with other foresters, I came to realize that dams had also been the priority in the Soviet era. "There is no other way," explained Hakrezo, a forester who regularly invited me to share a meal and stay over at his home. "Dams are the only solution to the lack of forests. Everyone understands this."⁶ Dams were a wishful fantasy to protect self-generating forests at the heart of the river valley. The meandering and powerful river shifted land in the valley bottom almost every year – not to mention the decadal floods that tore through with force. But it scarcely resolved the forestry agency's muddled priorities.

I discussed this confounding situation with Rozikh, a local NGO worker who had been hired by the European development organization to train the *Leskhoz*, the forestry agency, in computer-based record keeping. Rozikh acknowledged the paradox of contemporary forestry in Tajikistan.

"You see, [the foresters] are basically trying to reinstate a necessary activity that was lost after the fall of the Soviet Union. The forest managers of the Soviet Union had 5-year plans, which assessed what existed, what could be cut, and what could

⁶ There was a history of decadal floods that swept down the Vanj River with fury. Historically, every ten years, a smaller glacier (Bear Glacier) would block the river's flow beneath the world's largest non-polar glacier (Fedchenko). When Bear Glacier receded, the water buildup would be released and the resulting floods would wash away existing check dams and destroy significant riverine forests.

be improved. These were carried out by experts from Tashkent [Uzbekistan] and Leningrad. There was a whole apparatus, the *Leskhozstroï*; but we don't have this anymore. Our NGO has to help the *leskhoz* reintroduce this planning structure; using international donor funding.”

Whatever the motivations and justifications for the new funding streams, the NGO and state foresters were not interested in moving beyond Soviet rationales. In fact, they sought to reinscribe those planning structures, only with the benefit of wealth coming from the West.

As I pored through archival materials in the capital, at the Tajik Academy of Sciences and the National Library, I saw that dams had been touted decades earlier, when the foresters were trying to mechanize their way to verdant mountainsides. The archives revealed proceedings of the Forestry Institute in Tashkent, dissertation theses, and administrative dictums outlining a multi-tiered forest management complex, one that increasingly grew enamored of dam construction after the 1960s. Rozikh explained to me that new climate change interventions were simply going to correct what the Soviets had not been able to complete. “Once we make our way back to what the Soviet planners intended, the *leskhoz* will not only have dams to protect their forests but also start planting new trees by the hectare.”

Rozikh's optimistic assessment was one of several times people told me they were actively working to return to Soviet era realities. Charles Piot (2010) observed “nostalgia for the future” pervading parts of Africa following the collapse of the Soviet Union. A desire to escape limited opportunities through migration was coupled with a gnawing feeling that a better life could not be forged at home. This forward-oriented nostalgia was

also evident in Tajikistan. The possibility of reviving past schemes was constrained by the collapse in state capacity and then selectively reinvigorated by irregular development priorities.

Remnants of the past continued to guide possibilities for future endeavors. But who could tell when they might appear. As I explore in Chapter 5, residents generated their own sense of development futures to compensate for the limitations they experienced every day. State agencies sought to promote dams as a way to bolster community-managed forestry schemes because those visions had been prominent in the past. But the pull of past visions did not only color the vision of Tajik bureaucrats. The material remnants, schematic plans and persistent logics of past projects structured the landscape of what was possible, providing the foundational roots for what people hoped might come next. Infrastructural legacies and policies not only shaped post-Soviet state planning but also exerted their sway over international permutations of climate adaptation as well.

Conclusion: Grafting uncertainty

This dissertation explores the implementation of climate adaptation in a post-Soviet world through the subsequent five chapters and conclusion. Chapter 1, *Growing at the Margins*, tackles the legacy of the Pamir region as a vaunted frontier at the southern edge of the Soviet Union. Through conversations with neighbors, fruit traders and older residents, I trace how the region was meant to be a showcase for other Persian-speaking countries on the Soviet periphery and how the legacy of Soviet investment in the region created a foundation for future growth atop the ruins of the past. Chapter 2, *Reluctant Horticulturalists*, delves into the life histories of Azim, Sitora and their family members.

The compounding experiences of ecological precarity, international development failure and migratory uncertainty encouraged them to invest in horticulture with reluctance, yet growing optimism. Chapter 3, Patchy Sovereignty, dwells on the role of the Tajik State Forestry Agency, *Leskhoz*, in mediating the relationship between the past and the present; the efforts of international funders and local residents; and between the competing interests of stakeholders on the ground. Chapter 4, Desire for Development, considers why many people sought help in securing development projects (from myself and others), despite past failures. I consider the perseverance of, and continued interest in, the development enterprise as a result of people's ability to set aside cynicism toward the remnants of past interventions in order to graft their aspirations to outside promises. Chapter 5, Ethics of Adaptation, takes off from a chance ethnographic encounter with an agent of the Tajik State Ecology Agency, *Ekologia*. The agency's attempts to impose a normative codex of monetary valuations for every natural resource is set against how people actually made decisions in Tajikistan. The conclusion reiterates a key theme of the dissertation as a whole: vitality. The fruits of horticulture in Vanj underpin a discussion of how vital properties entangle and enliven the relationship between people and place.

One of the central analytics throughout is grafting, which highlights how adaptation will not only be required in the valleys of Tajikistan, but as a way to confront institutional and ecological constraints around the world. In my research, the work of climate adaptation often draws on grafting: a collaboration of components working together to cultivate nourishing conditions, through the concerted direction of humans and the remarkable bio-chemistry of nature. Life in Vanj required simultaneous resilience to changes wrought by the past and preparation for impending possibilities yet to come.

Tangible commitments to rural emplacement through the cultivation of hybrid forms stemmed the tide of familial and economic dispersion by engaging the environment as an active agent. The need to graft new ideas, materials, and aspirations onto existing infrastructures not only allowed people to repurpose Soviet ruins but was also foundational for the business of development and the work of the state.

My informants' grafting work gave life to scions in the hopes of establishing viable households. Taking up grafting proved not only to be a function of post-Soviet agrarian subsistence but a crucial tactic for all future-oriented projects. As the development industry tried to incorporate climate logics, its practitioners often found themselves beholden to state requirements and historical legacies. In trying to plot out new trajectories of development in the Anthropocene, planners and administrators had to navigate the remnants of past projects, existing materials and durable legacies. Meanwhile, reluctant horticulturalists were nurturing landscapes and livelihoods to address the schisms and ruptures opened up by ineffectual state and development actors.

Adaption to change, be it change that is projected or has already occurred, requires repurposing what is at hand to enable life in the future. In *Dreamworld and Catastrophe*, political philosopher Susan Buck-Morss argues that the Soviet and Western ideologies that marshaled unparalleled resources and political projects during the 20th century were not in opposition but actually converged toward the same, overlapping horizon. The Soviet project was not a departure from capitalism but formed a parallel dreamworld tethered to the same industrialized and militarized endpoint. These legacies linger as ruins on the landscape, yoking the future to the past. Visions of what had once been possible are the substrate out of which something new can grow.

Chapter 1 | Growing at the Margins Enlivening a Neglected Post-Soviet Frontier

The sound of hammering pierces the quiet of a crisp fall day in the Pamir mountains of Tajikistan. I find Adham working in a rough-hewn shed behind his home. As I step in to observe his handiwork, he admits his craftsmanship is limited: ‘Everything is a bit crooked, but I don’t care. I just need to keep the mice away from the apples through the winter.’ He was retrofitting his shed to store the longer-lasting, foreign apple varieties that he had started cultivating. As I helped shuttle in knotted planks of timber he had grown, felled, and planed himself, Adham lamented how rudimentary his efforts felt. ‘We were once part of a great empire. We had in-ground heating centuries before it appeared in Europe. Then, in the 20th century, we took part in a huge socialist project. So much changed so quickly. But what have we achieved as a country since those times? We are surviving on relics of the past.’ Adham, a former manager of the collective farm (*sovkhoz*), had taken over its orchards and grafted new scions onto Soviet roots. When socialism faded away, the residents of the frontier enlivened the ruins of past projects to transform the landscape.

The Tajik Soviet Socialist Republic (SSR) was positioned on the edge of the Soviet empire, wedged against Afghanistan and China. The mountainous terrain of Tajikistan (cradling the highest massif in the Soviet territories, Peak Communism) comprised the furthest reaches of a Tsarist era buffer zone. The region served as a check on the British empire’s ambitions, setting the stage for a spy war later popularized as The Great Game. As Soviet rule solidified, these marginal lands became a showcase for its ideological commitments. Remoteness proved a virtue. The Tajik SSR emerged as an

important platform to validate the global appeal of the Soviet Union's modernizing project. This immense effort took decades to carry out. Large-scale mines, tortuous highways, and towering factories were financed to usher the frontier toward industrialized modernity and tie the region to the Soviet core. However, the benefits of this largesse disappeared seemingly overnight. A horrific civil war came on the heels of Tajikistan's independence in 1991. The best laid plans withered on the vine. The vision set out for the Tajik frontier—where industrial enterprises and state farms put people to work in the valleys while carpeting the mountainsides with trees—quickly turned to rubble.

What is made of the frontier when it is abandoned and left behind? This chapter explores what happened when massive state intervention disappeared and an improvised commitment to enlivening the vestiges of the past took its place. The quest to make the Tajik frontier into a Soviet exhibition helped marshal immense resources and investments. However, Tajikistan's foreboding terrain presented challenges to planners seeking to enhance its ecological productivity. Five-year plans promised vast new tracts of forests girded by dams, irrigation canals and roadways – but the landscape failed to yield to the planners' will. As a result, bureaucrats promulgated disparaging views of local residents, blaming them for destroying natural resources and stealing from state farms. But when Soviet administrators abandoned the frontier following Tajikistan's independence and the outbreak of war, the projects they left behind were reimagined by Adham and his neighbors. The landscape of opportunity had been remade. The Tajik frontier's peripheral location left the region devoid of jobs and resources but afforded a favorable climate for growing fruit orchards without a meddling state. Residents

reworked the ruins of past interventions to nurture new assemblages that allowed them to mitigate the remoteness of life on the margins.

Fruit varieties and livelihood strategies were grafted onto Soviet roots and rubble, ushering in unanticipated human-vegetal relations that stabilized a new way of life. Gilles Deleuze and Felix Guattari's notion of assemblages is instructive for understanding a wide variety of social phenomenon in which wholes arise from heterogeneous parts. Since an 'assemblage continually passes into other assemblages,' its multiple parts interact without ever producing a seamless, organismic whole (Deleuze and Guattari, 1987: 325). Therefore, an assemblage helps elucidate processes of becoming rather than delineating an end form (Biehl and Locke, 2010) – helping to mark ongoing projects that engage their constitutive elements. As a result, assemblages place an emphasis on practices (Ong and Collier 2008: 17), ensuring that the resulting efforts are not 'an aggregation of the components' own properties but of the actual exercise of their capacities' (DeLanda 2006: 11). The resulting entities are always open to degradation and dispersal, held together by the commitments and affinities of their constitutive elements.

Conditions along the Tajik frontier amplified the sense of uncertainty, instability and "chaos" that plagued post-Soviet states writ large (Nazpary 2003), leading residents to revive frontier ruins through imaginative and unanticipated grafting practices. These ruins were the remainders of a Soviet legacy that sought to mitigate spatial distance through massive infrastructural and ecological interventions. The Pamirs benefited from Moscow's provisioning (*Moskovskoye obespecheniye*), a policy which sought to create 'centers' throughout the periphery (Reeves 2014). The Soviet state shared access to the benefits that were supposedly limited to the core by dispersing coveted foodstuffs, scarce

consumer goods and technical machinery to remote regions with critical resources (such as quartz, necessary for rocketry, in the case of Tajikistan). This legacy of robust frontier engagement, followed by shockingly abrupt abandonment occasioned by the Soviet Union's demise, forced the residents of the Pamirs to turn to new horticultural practices and labor arrangements. Residents reimagined their post-Soviet relations with the state by reworking the land in the absence of Moscow's provisioning. People brought emergent social and ecological dynamics to bear on the practices and experiences of life in a remote region.

As Adham pointed out to me outside his shed, 'we never expected to do any of these jobs ourselves. There were specialists in charge of every aspect of life, but now it's up to our hands and our will.' In place of a complex systems of planned distribution, Adham chose to store apples in his makeshift cellar in the hopes of fetching a higher price in the depths of winter. The orchards that he inherited required new scions to produce more profitable, resilient, and travel-worthy fruit. These improvised techniques came to replace the discarded schemes intended to rationally mechanize collectivized landscapes. The fruits of residents' labors connected them to distant state services and far-flung family members, helping to mitigate a sense of spatial dislocation when the frontier lost its vaunted status. With no way to revert to the extractive industries and collectivized farms that had once bolstered the region, residents reinvented marginal spaces as zones of horticultural promise. Maintaining and improving the landscape of a disregarded frontier required an invigorated interest in the land, encouraging residents to breathe new life into the arboreal, industrial, and ecological remnants of the Soviet legacy.

Prior to Soviet intervention, Central Asia enjoyed a long tradition of pomiculture (fruit tree cultivation). The origins of the apple tree have been traced to the mountains of southern Kazakhstan. Cultivation was common for centuries, but not organized for large-scale production. Under Soviet rule, the landscape became a proving ground for introducing rationalized and mechanized forms of industrial resource management. Agronomists on the Communist payroll used most of the arable land for tobacco, potatoes and, primarily, fodder for livestock (Nigmatov 1977). When the state turned its attention to orchards, they were primarily seen as a means of afforestation. The poorly yielding fruit trees that resulted were brushed aside by planners who privileged the number of hectares planted over the quality of fruit yielded. Furthermore, managers of collectivized agriculture saw the local population as the cause of deforestation and a burden on the land. Smallholder horticulture was discouraged and rarely practiced. On the eve of socialism's demise, not a single household grew orchards for sale. However, a quarter-century after the Soviet Union's collapse, fruit trees were flourishing. Through grafting practices, frontier landscapes were remade.

Fruit trees perfectly highlight the degradation of assemblages where schemes, hopes, and branches are liable to break down and wither. Assemblages offer an expansive conceptual tool to make sense of multiple scales, inputs, and histories. How can foreign apple cultivars, painstakingly-repaired tractors, and decades-old irrigation canals work together to produce a hybrid tree? The concept of assemblages offers a way for historical legacies, geographic conditions and committed actors at various scales to come into relief within identifiable composites.

Assemblages help to corral the multiple components of lived reality into working wholes. But it is the efficacy of their enactment, adding up to more than just the sum of its parts, that distinguishes an assemblage from any other agglomeration of things (Rubinov 2014). In so far as it enables actions, inhibits growth, or changes the underlying conditions, an assemblage is an active entity that makes use of the people, places and things that constitute it. But once those commitments fail or diminish, then the vital assemblage as a work-in-progress ceases to exist, allowing its constituent elements to be used elsewhere or recede into insignificance. At the margins of the state, productive assemblages often rely on the detritus of empires and the ruins of past regimes. There is often nothing else at hand.



Figure 1: Map of Tajikistan.

The Pamirs: A Showcase Frontier

The Pamir region had been a crossroads of Silk Road routes so foreboding that the region still retains its lasting moniker: the roof of the world. The troops of the Russian Imperial Army had taken over the region in the 1880s but had relied primarily on local khanates as vassals to manage the region. With an eye to the conquest of neighboring countries, leaders in Moscow decided to grant Tajikistan, then a part of Uzbekistan, the status of a full Soviet Republic in 1925. Soviet Tajiks would be promoted and their culture celebrated in the hopes of attracting their Persian-speaking neighbors across the border in Afghanistan and, eventually, in Iran as well. Apart from the fact that the Tajik language is closely related to Farsi, it was Tajikistan's strategically important location in a crucial border zone that provided 'the potential to showcase Soviet might and supremacy to Persian-speaking neighbors and their allies' (Kassymbekova 2011: 362). The steady march of progress was meant to act as an advertisement to the nations beyond the Soviet pale. These efforts were felt profoundly in the most remote, mountainous and under-developed part of Tajikistan: the Pamirs.

Comprising 46% of the country's territory but less than 5% of its population, the mountainous and isolated eastern half of Tajikistan is known alternately as the Pamirs or Mountainous (Gorniy) Badakhshan. The region was designated a 'Special Region of the Pamir' in January 1925 and then later that year became an autonomous province: Gorno-Badakhshan Autonomous Oblast (GBAO). Soon after, the Soviet authorities built the first roads over the main mountain passes connecting the isolated valleys, establishing supply

routes to urban centers (though these roads were still inaccessible for many months each winter). Several hydro-electric power plants were installed in the 1940s and electricity connections made their way to nearly every village in GBAO. Trucks brought nearly inexhaustible supplies of coal, lumber, diesel and other essentials. Medical care improved tremendously and life expectancy soared. The population of GBAO ballooned from less than 25,000 in 1917 to 170,000 in 1997 and 220,000 by 2008 (Bliss 2010).

Apart from tangible state interventions, social life was transformed as well. Women left the home to become comrades and co-workers. Nearly universal literacy was achieved (initially in Tajik and then, in later years, with greater emphasis on Russian). By the end of the 20th century, residents of GBAO's small capital, Khorog, began to think of their town as the 'Paris of the East.' They saw its relatively liberal values, abundant wares, and contemporary styles of dress as markers of a cosmopolitanism that elevated the status of the region. Even small villages dispersed throughout the glacial-carved valleys enjoyed movie screenings, travelling performance troupes, bustling houses of culture, and ubiquitous radio access. A formerly cloistered and inaccessible frontier region was infrastructurally, technologically and ideologically opened up.

For those who had witnessed the transformation in their lifetimes, the changes were hard to fathom. Murobo, Adham's father, had taken a fall that left him hobbled several years into his retirement. Over the course of 16 months of fieldwork spanning 2012 to 2017, I often found him seated in a chair outside his yard when the weather was fair. He would reflect on the transformations he had witnessed: 'We may be trapped between mountains, far from everything, but this is a special place.' The sense of being trapped made him bitter yet Murobo still appreciated the challenges that had been

overcome. ‘When I went to school [in the 1940s], my family could not afford pants for me. I sat in a freezing schoolhouse with only my *chapan* (overcoat). Then the Soviet Union brought in roads, factories and electricity. Our life was transformed. No one was cold or hungry and all the farmland was put to use.’ Murobo was aware of the limits of the Soviet experiment, lamenting the corruption, misallocation of resources, and the planning mistakes. But he could not help but appreciate the significant changes that had transformed the region. ‘The mountains and the river are still here but almost everything else has changed. So now we have to grow our orchards and build our lives on top of what they left behind.’

The changes that transformed Tajikistan not only altered the rocky landscape but underpinned an imaginative effort bound to far-reaching visions of what the frontier represented. The high-level functionaries in Moscow who signed off on developing the region, the engineers and managers who moved there to oversee it, and the local residents who manned the enterprise were not simply trying to reach production quotas or afforestation targets, however important those indicators may have been. Beyond the metrics, Tajikistan was a site for generating an imagined ideal, where people like Murobo could be touted as transformed Soviet subjects for the benefit of domestic and international audiences. Overcoming the physical limitations of the Pamir mountains provided evidence of the Soviet Union’s dominance over material as well as ideological realms. However, in thrall to visions of industrial grandeur, the work of creating a Soviet idyll was underwritten by immense structures of concrete, asphalt, and steel alongside sweeping transformations to water, plants and soil. When the vision of the imagined

frontier receded, the profound changes wrought upon the material and built environment persisted.

Reviving Frontier Ruins

Ruins and damaged landscapes are important spaces for social generation, economic opportunism, and emergent political formations. As Ann Stoler (2013: 11) highlights, “To think with ruins of empire is to emphasize less the artifacts of empire as dead matter or remnants of a defunct regime than to attend to their reappropriations, neglect and strategic and active positioning within the politics of the present.” The hulking farm implements, concrete irrigation canals, telegraph and power lines, and numerous infrastructures that increased living standards throughout the Pamirs were assiduously repurposed by residents. What emerged from Tajikistan’s landscape of imperial debris was a reversion to subsistence agriculture that creatively repurposed remnant artifacts for unplanned agrarian livelihoods. Tensions persisted between former managers of state cooperatives seeking to sell off equipment for personal gain and locals who needed those tractors, fields, and pumps to make productive use of their land. Strategic control of objects became a means of enrichment for some and survival for others.

The derelict resources of a forgotten frontier were a source of tension but also possibility. Anna Tsing situates the frontier as a malleable yet powerful symbol that draws actors into intimate engagement with a lively landscape. She goes on to note, however, that ‘not everyone is caught up in frontier schemes. The frontier could move on, and something else could happen in its place. The forest might regenerate’ (Tsing 2003:

5103). In the absence of a developmental state, residents had to grow something new out of the rubble of past projects. Unlike the Indonesian tropics, where Tsing observed a degraded and rapacious frontier complex, no get-rich-quick schemes made their way to the Tajik hinterlands. ‘Something else’ did happen. Residents of the Pamirs, observing the evacuation of their vaunted frontier status, resolved to become rooted to the land. Forests were in fact regenerating. Orchards were growing at significant rates, helping to improve ecological conditions in the face of widespread labor migration (Rubinov 2016). Though it required overcoming a variety of obstacles and impediments, residents of the former frontier began to invest energy in growing orchards and improving the agricultural output of decollectivized Soviet lands. The following section will explore the legacy of Soviet land management that laid the groundwork for the human-vegetal assemblages which became so crucial to residents of the Pamir mountains.

Rationalizing Forest Margins

At the outset of Soviet resource management in Central Asia, grand designs were hatched. Following the October Revolution in 1917, the Russian Empire’s holdings in Central Asia were lumped together into one large entity called the Turkestan Socialist Federative Republic. The furrowed knot of land in Turkestan’s southeast became the Tajik Soviet Socialist Republic – which was 93% mountainous (where the elevation was above 1,000 meters). While low-lying territories throughout Central Asia were geared toward cotton cultivation, the mountains were the repository for the glacial-fed rivers that slaked the thirst of the desert’s cotton boom. To help maintain the stability of the water

supply, one of the key concerns for the Tajik Soviet Socialist Republic became forest management.

State planners intended to cover their territory with forests to improve their water retention and reduce susceptibility to erosion. ‘Not only should trees be planted on mountains but also on all possible locations – along all canals, roads, and river plains. Especially forest-free territories of the republic can, in a few years, be completely forested (*oblesennimi*) in the next few years!’ (Botanical Institute 1948: 7). This was a risible goal considering the steep, foreboding terrain lacking year-round precipitation favorable for forest growth. Instead, Central Asia receives most of its rainfall in the colder months, creating significant snow pack at higher elevations but little rainfall during the warmer growing season. Despite these impediments, Soviet bureaucrats were nothing if not optimistic of their capabilities.

Foresters in Central Asia had to both improve landscape ecology and produce desirable crops for Republic-wide consumption. However, forestry agencies were measured by their success in acreage, rather than quality of yield. Mechanization and rationalization worked best when plantings were uniform and simple. Considering the problem in 1980, forestry scholars noted that, ‘all plantings of valued forests, fruit and nut trees, counted as if they were for defensive afforestation’ (Vihrestok and Padalko 1983: 38). These directives were set out by the Communist Party of Tajikistan, which required that foresters ‘not only establish rain-fed orchards and vineyards, but create a complete expansion of rain-fed plantations on an industrial scale’ (1983: 38). This strategy privileged quantity over quality. As a result, much of Central Asia’s forests were envisioned as industrial fruit plantations, geared toward covering the landscape with vast

swathes of timber rather than high yields of flavorful fruit. Diversification and intensification of horticulture was limited to meager household plots adjoining homes (Rowe, 2009).

The drive to standardize afforestation efforts was led by one of the key concepts of Soviet ecological intervention: rational management. The Soviet resource management paradigm centered on enhanced productivity through rationality. Forest economic studies sought to increase forest productivity through ‘complete rationalization’ of the study and conduct of forestry (Yusupov 1966: 220). Research institutes set plans, created priorities and provided biological materials to afforest Eurasian territories. Rationality was a core principle in achieving these goals because it tried to bridge the divide between plans and reality, seeking to make the unpredictability of nature a matter of knowledge and control. Rationality could not overcome the poor productivity of Central Asian territories, hampered by inadequate rainfall and rocky, meager soils. Significant forests never took root in Soviet Central Asia.

Therefore, in the face of consistent failure in the domain of Central Asian forestry, Soviet planners sought a villain to explain away the limitations of modernizing schemes. In the view of resource managers, there was one central culprit in this failure of local population: ‘the irrational actions of people, led to the destruction of a balance in nature’ (Vihrestok and Padalko 1983: 25). Irrationality was the bane of foresters and had to be stamped out. Soviet engineers and planners argued that local people damaged ecological conditions, precipitating the need for rational interventions and constant vigilance to assure their success. Such was the case with Soviet forestry policy. It rested on an overt distrust for local forest users. ‘In our view, there is no real doubt that at one

time the forest cover in the mountains of Central Asia was much greater. The best forests are those that are far from settled areas... from the beginning fire and axe, then livestock and plough, turned forest into bare, lifeless spaces' (Kocherga 1966: 29). Soviet land use policy not only sought to administratively distance individuals from land management but also created a moral lens portraying self-motivated users as damaging and deleterious to existing resources. These views engendered a distrust of residents, which continued to pervade state forestry policy following independence. Consequently, local residents maintained ambivalent and at times antagonistic relationships with state resource managers. These tensions increased in the post-Soviet period as local users became increasingly dependent on formerly state-run lands for their livelihoods.

Lacking experts but not effort

Despite the growing importance of horticulture in Tajikistan, hardly any of its practitioners had been trained in its execution nor enjoyed a legacy of horticultural tradition to turn to. The fruits of agricultural labor were the product of improvisation. The few remaining Soviet experts in the country after the civil war did not see promise in these improvised horticultural efforts. The scientists who stayed on at research institutes continued to see residents' efforts through the distrustful lens of bygone state projects. I experienced this unequivocal dismissal of local capacity when I spoke with Lyudmila, a Russian woman with large, thick-framed glasses who wielded an assertive chop to punctuate her sentences. I found her sitting at a conspicuously empty desk on the fourth floor of the Institute for Pomiculture in the capital, Dushanbe. She explained that she was a leading expert on pear tree cultivation but had not conducted new research in nearly 30

years. After taking stock of my questions about local horticultural capacity, she leaned back in her chair and responded:

“It’s nice that you’ve taken an interest in horticulture here in Tajikistan as it has become quite crucial for people. But the standards that we once had, which were quite high, have fallen dramatically. Important advances were made in our Institute and large, impressive orchards were planted across the country. But it’s all been abandoned to the local people now. What skills can you expect them to have! Really, it’s a miracle they can grow anything at all.”

Lyudmila was correct in stating that horticulturalists operated without significant support. Farmer Associations had been established in the 2000s to assist tenants holding newly-privatized land in the absence of previously well-funded collectivized state farms. These Associations were meant to have agronomists on staff to disseminate information to people forced into subsistence agriculture. In fact, there were hardly any agronomists to fill those positions. However, Lyudmila’s dismissive view of local farmers was not grounded in reality. Based on my research with over a hundred household farmers, the government’s absence did not preclude their success. Despite disparaging state experts harboring Soviet perspectives, grafters and farmers did not let their marginalization stop them from improvising and improving the landscape they relied upon.

Tajik citizens did not look to the state to supplant the absence of Soviet skills, investment, and ideological commitment. ‘The president is not such a bad guy actually, he’s just surrounded by corrupt people,’ a clear-eyed retiree in the Pamirs told me. ‘He

realizes that his government is weak. Not like what it was in Soviet times. So he let the people build things up for themselves by giving everyone their own land. This was the right decision. Whatever we want this country to be, it's up to us now. He has put the responsibility in our hands.' Tajik citizens had come to recognize that, regardless of promises, the only gains to be found would be those wrought from the land that had been handed over to them. The proliferation of horticulture in Central Asia did not owe its success to experts but to skills of necessity acquired by happenstance.

This was not the vision Soviet planners had set out. Soviet foresters had sought to mechanize the mountainsides and organize ecological resources according to 'rational use.' In the process, they had decimated the region's endemic cultivation practices and traditional knowledge. Before 1938, when Soviet involvement in the Pamir region was still limited, the harvest was estimated at 40,000 tons annually, including apricots, apples, mulberries, grapes, etc. (Bliss 2010: 286). By the beginning of the 1990s it had dropped to only 5,000 tons. 'The blame lies mainly with the political planners, who decided to slash the number of orchards in order to replace them mainly with fodder crops' (2010: 286.). Throughout Soviet Central Asia, extensive areas of historically widespread orchards were cleared for cotton production or other cash crops, such as tobacco. These policies led households to dedicate a large part of their kitchen gardens to fruit production (Rowe 2009). Century old walnut trees only survived through the Soviet period in 'small clumps kept by tree lovers' (Kasimov 1989: 58, although a few sizable government plantations were distributed to residents in Kyrgyzstan). But these skills were not put to use by Soviet planners. Instead, unexpected assemblages of caretakers and trees

flourished in the cracks of the now-defunct Soviet edifice. Residents directed their subsistence energies into strategies that bore fruit.

Frontier Schemes: Regenerating (Post-)Soviet Orchards

The government of the Republic of Tajikistan lacked the means to continue most Soviet-era policies, particularly those dealing with the environment. As a result, natural resource management devolved to local residents. However, the state still technically owned all the land in the country. Land tenure reforms distributed land through 99-year leases which could be transferred to other citizens but not owned outright. Therefore, apart from the 2.5 million hectare Tajik National Park at the heart of the Pamirs, the largest land holder in the Pamirs was the State Forestry Agency (*leskhoz*). *Leskhoz* territories began at the edge of village boundaries and continued up along barren swathes of mountainside sprinkled with the sparse juniper stands in upper reaches. Relatively level plots accessible to irrigation had been planted with (poorly producing) orchards during the Soviet period. After the Soviet Union's demise, most of these state orchards had been relinquished to households living close to the plots, determined primarily by whomever wanted the underperforming orchards. In making the choice, residents had to choose between one of two bad options.



Figure 2: A farmer takes pride in the trees which he grafted with more profitable apple varieties in an orchard that he inherited from a defunct Soviet collectivized farm in the Pamir mountains of Tajikistan.

They could try to modify *leskhoz* territories, which had potentially advantageous irrigation systems and land terracing, but required grafting or removing old trees and establishing fences to keep out livestock. Plus, whatever outputs they could eke out might have to be shared with the forestry agency in dubious profit-sharing arrangements. The other alternative was to start from scratch on lands that had been handed over from the decollectivized state farms. ‘We have to grow something useful from the land even if we don’t really know how,’ a neighbor explained to me as he watered a row of apple tree saplings on recently privatized land. ‘Whether it is *leskhoz* land or our land, it’s still all owned by Rakhmon [the president]!’ A few enterprising landowners turned the *leskhoz*

plots, overrun by weeds and shrubs, into flourishing tracts. They chose to make the investment of time, money and effort to graft newer, more profitable varieties onto the gnarled trees. However, it was more common for energy to be invested into the land they had recently secured through land tenure reforms, where improvements might yield dividends for decades to come.

Whether on state forest lands or on their own plots, my interlocutors regularly took hybrid varieties of tree shoots and conjoined them to existing rootstocks. Over the last few years, these hybridized trees became crucial agricultural assets for the families I lived with in the Pamir mountains of Tajikistan. Given widespread emigration from rural homesteads to find work in Russia, there was a need to keep families connected. Trees helped families stay rooted at the margins of a former frontier. Nancy Peluso outlines a similar investiture of effort and commitment in Kalimantan. People came to appreciate the value of durian fruit trees as urban demand for them grew, to the extent that ‘economic trees now dominate the landscape’ (Peluso 1996: 517). As families changed locations according to the dictates of swidden agriculture, long-living fruit trees marking past homesteads became an important component of the social, economic, and ecological landscape. People related to the landscape through the meaning and value imputed to these increasingly important trees.

In Tajikistan, economic trees were not carved out of a vast forested landscape but became part of fledging forest zones surrounding homes in rocky mountain valleys. However, like Sulawesi’s durian trees, Tajik orchards repurposed past infrastructures and marked ecological investments across newly vital terrains. What had once been state-run forests producing bitter fruits had become the material basis for growing delicious and

profitable varieties. As marketization penetrated rural spaces, in Sulawesi and Tajikistan, people began to take note of the particular properties of trees, seeing them as foundational cornerstones of new land use strategies. When sons came back from labor migration in Russia, they recognized the acute absence of work and economic opportunities. While a few of them took off again, many were encouraged to stay because of the promise of making a living with orchards. It was not that all other activities ceased, but rather that economic trees offered a way to rise above subsistence to try to make a profit and overcome the limitations presented by a marginal and remote region.

Fruitful Connections

A variety of factors encouraged horticulture in Tajikistan. The trees themselves ameliorated erosion, beautified and fortified the harsh landscape, and provided an inviting environment for life. Apart from the forested landscapes that trees generated, the most significant outcome was their fruits. Horticulture turned soil, water and air into things that could be eaten. These fruits formed the material components of transactional and social exchanges in the valley (and beyond). In so doing, they extended the efficacy and spatial reach of the human-vegetal assemblages that had come to dominate the neglected frontier. Fruits travelled beyond the boundaries of the emplaced nucleus, composed of rooted families and fields, reaching out to needed resources and connections. Whether bolstering health, assets, or status, the fruits of sylvan toil provided tangible links to make new lives amidst the deteriorating frontier.

Amon was one of the most genial neighbors in the village. He was genuinely upset every day that I did not set out to pay him a visit. One spring day, I did just that, as

we sat down with a jar of honey with our tea and bread. He lamented that not many apples were coming in that year but the cucumbers and potatoes were enjoying the strange weather. The unusual weather was also giving his heart some trouble. However, Amon would have to wait till the autumn for a checkup. He had a disability pension from a bullet that grazed his pancreas during the war—affording him free treatment once a year. I asked Amon why he waited to visit the hospital in the fall if his pain usually flared up in the spring. He smiled, ‘I always take a nice box of apples, big ones,’ he held up his hands as though grasping a chalice, ‘and some walnuts.’ Even though his medical care was technically free, Amon needed to supplement it with gifts of fruit.

When Amon sought to sell the majority of his fruit harvest, he relied on someone from outside the region to bring his goods to market. The uncertainties involved in trucking perishable wares over a dreadful road with an unreliable vehicle, not to mention negotiating a good deal with a retail buyer, were disincentive enough. Amon simply waited for a wholesaler buyer to arrive at his doorstep and offer to take his dried fruits, pears, walnuts and apples. He would have more leverage with buyers if he could warehouse the goods himself until the best time to sell. That was the reason Adham had been upgrading his backyard shed, hoping to keep his own apples later in the year, so that they might fetch a higher price. New infrastructures were emerging to buttress evolving livelihood strategies. These fruit management techniques underscored the importance of trees but also collapsed the distance of the frontier from urban centers. As Adham explained to me outside his shed, ‘I won’t even sell a lot of these apples. I need to send some to my son in the capital, save a few sacks for my niece’s wedding, and maybe try to get my youngest son transferred to a different military base with a few well-timed boxes

to the officer in charge.’ If fruits and nuts could be sent to market, an army base, or to a doctor’s office, then parts of the assemblage could circulate on behalf of residents—providing them with access to social services and economic opportunities that were woefully absent at a neglected frontier.

The horticultural assemblage that emerged out of the ruins of Soviet infrastructures warped the sense of remoteness that defined the frontier. The individuals who had invested their labor and capital into orchards were able to use these horticultural assets as extensions of their own labors and household connections. As the environmental and infrastructural legacies gave way to entrepreneurial imperatives, the frontier drew closer to the center as fruits warped the feeling of separation from urban centers and migrants abroad. Though growing increasingly more connected, life in the Pamirs was still a far cry from the feeling of contiguity that had been made possible by Soviet provisioning and ideological commitment. In its stead, people took the rubble of Soviet projects, enlivened them with their own tenuous commitments and used the outputs to overcome the separation and inaccessibility that still afflicted the frontier.

Conclusion

Growing desirable cultivars required a commitment to frontier landscapes through a close attunement to ecological conditions and improvisational techniques. Grafting hybrid forms enabled the remnants of the Soviet project to be appropriated for the prosaic needs of post-Soviet residents. My informants had to overcome the limitations imposed by frontier-making endeavors of the past along with the moral vilification those efforts smuggled into the present. Aspiring horticulturalists learned from neighbors, paid attention to trees, and experimented on the edges of fields. The unintended assemblages

bound people to plants as they struggled to remake frontier landscapes that had once been freighted with grand ideological visions. The ruins of those bygone schemes had become the substrate for articulating new visions and forging new livelihoods. The resulting harvests allowed residents of the Pamirs to nourish themselves, circulate the fruits of their labors, and create new opportunities along a neglected frontier.

Scholarship in science studies and anthropology has prioritized the technical and expert-driven connections that sustain and define assemblages (Ong and Collier 2005; Latour 2005; Li 2007). This chapter has highlighted the quotidian and untrained appropriation of material forms as a mode through which landscapes are remade, ideas contextualized, and vegetation grown. While the interventions of the Soviet state were expert driven, the pragmatic appropriation of their remnant materials was brought about by improvised human-vegetal collaborations that continue to be reworked. As Tania Li (2007) has noted, practices of assemblage are often organized into technical interventions in response to failures and omissions. I argue that such iterative work is not only done by state planners and development professionals but by local residents, who repurpose ruins of the past to create possibilities for the present and lay the groundwork for future collaborations.

Chapter 2 | Reluctant Horticulturalists Cultivating Roots in a Climate of Absence

Azim was nine when he was buried by an avalanche that came crashing down the cliff towering over the village. He was pinned for most of that fateful winter day under the collapsed wall of their home. The effects were still discernible from the lilt in his gait. He rarely acknowledges his physical handicap, often undertaking daunting feats of physical exertion. No one was surprised when he scrambled to the edge of walnut tree limbs 20 meters high as the rest of us scurried below, simultaneously husking green hulls from the prized nuts as we tossed them into metal pails. These overexertions haunt him in the form of chronic back pain and a bevy of ill-defined afflictions. Nonetheless, he finds them necessary since his household's welfare necessitates strenuous physical exertion, without the benefit of mechanized farm implements (which were abundant when he came home from college in the 1970s). Though he still recognizes himself as a "Soviet-trained specialist," he acknowledges that his livelihood is now dependent on agriculture. Azim's evolution from a Soviet worker to a self-sustaining farmer is a large part of the story of post-Soviet Central Asia.

At the age of 55, Azim is still a few years from Tajikistan's retirement age but definitely starting to feel the weight of decades of manual labor interspersed with stints of migrant work in Russia. He is startled by his current toil, often telling me that he never expected to farm, shepherd, or tackle the many duties he now took on with wizened resignation. "I was trained as a teacher and was sure I'd work that job till I retired," he says. Azim was raised under the Soviet system and, like most adults in Tajikistan, was proud of that upbringing. He startled me on the first day we met as we sat around the *dasturhon* (spread laid out for a meal): "Things are better now than in Soviet times."

Despite some puzzled looks from the other guests arrayed on pillows around the *dasturhon*, Azim continued unfazed. “Back then, the stores were empty. You couldn’t actually get anything. Everyone had money but nothing to buy.” He was one of the few people in Tajikistan to openly criticize the rampant shortages of those halcyon days, as opposed to the relatively well-stocked shops of 2014. “Nowadays we might be lacking cash but you can get anything you want. All you need is money.” Azim was not only critiquing the common wisdom that everything was better in the Soviet era, when the Pamir mountains enjoyed robust, targeted investment from Moscow. By flagging the nagging deficits of the past, he was also highlighting the entrepreneurial imperatives of the current era. But unlike many other Tajiks, who might situate this latent wealth in the bazaar, taxi driving, or the ubiquitous pull to find work in Russia, Azim highlighted that it required ecological resourcefulness. “Just look around. There is money growing on the trees.”

This chapter explores what households like Azim’s have done with the formerly Soviet lands now entrusted to them. The bodies that shoulder the burden of sustenance in post-war Tajikistan have taken up the dual-headed strategies of emigration and ecological rootedness. With access to arable land relinquished by disbanded Soviet collective farms over the last decade, a subsistence-oriented economy has emerged, with households at the core. I lived and worked with families struggling to develop their economic prospects by improvising environmental tactics. Extended family members relied on households as a material, social and economic nexus, in the absence of Soviet beneficence, meaningful international aid or effective state institutions. While young men went out in search of work in Russia, the reluctant horticulturalists who stayed behind called upon a wide

repertoire of skills and vital assets to slowly improve their lives after years of staggering decline. The predominant livelihood in the Pamir region thus comprised “combined mountain agriculture,” characterized by a coupled system of crop cultivation on irrigated land and seasonal stock-rearing at higher altitudes (Herbers 2001). The migration of family members, the indifference of the state and the tribulations of international interventions made agricultural production essential. As a result, family members organized their efforts through an adaptive ecology suturing family relations to environmental endeavors.

Calculus of Living

Leaning into the well-worn handle of his shovel, giving his leg a much-needed rest, Azim scans the field adjoining his house. It was often after a task was completed and the materials set back in their place that an impromptu accounting of household affairs would commence. Looking out from the front porch, through the newly-planted pear saplings straining beneath the yawning canopy of the walnut trees, we could see Azim’s agricultural field. Beyond it, separated by a neighbor’s field, was the woodlot where he occasionally grazed his dairy cows. Rising in the background were the communal pasturelands, a sea of dun-colored scree and parched grassy stubble. In the springtime, just as a hint of green emerged, the mountainsides were set upon by voracious livestock, eager to improve their meager winter fare while impeding soil generation and precipitating erosion. Azim considered where to graze his animals, taking into account the damage they might do to the budding orchards, how much timber he wanted to cut for an upcoming renovation of the outdoor kitchen, and a myriad of other considerations

regarding the best allocation of the natural resources that were under his control. This calculus of living came up on an almost daily basis.

The hectare that spread out from Azim's front porch sat on land formerly run by the Soviet collective farm, and still technically owned by the Tajik government. Land reform in Tajikistan was initiated in 1992 by reallocating state-owned agricultural land among individual producers. There was little progress on account of the civil war. Most reforms were pushed back until the 2000s when relative stability prevailed in the wake of the president's autocratic consolidation. The post-war period witnessed a drawn-out debate over how to equitably distribute formerly collectivized state farms. Ultimately, the state-run farms were broken up into *dekhan* (peasant) farms, that could be managed by individuals, families, or a group of families. By 2015, 82% of arable land was farmed by 108,035 privately owned *dekhan* farms (Lemon 2016), with state and collective farms accounting for the other 18% (Theesfeld and Klümper 2016). Despite the reforms, problems with governance and corruption persisted. Many former farm managers failed to relinquish control. This was particularly problematic in cotton growing regions where access to irrigation and farm implements continued to be centrally controlled and large farms were privatized in name only (World Bank 2011). In such instances, state farms gave the worst land to villagers and expected them to meet quotas equivalent to Soviet party plans (Bliss 2010: 306).

The situation differed in Tajikistan's mountain regions, which make up the majority of the country's terrain. Rather than facing pressure to meet unrealistic cotton production quotas, mountainous rural households were essentially left to invigorate the environment on their own. The defunct collectivized farm surrounding Azim's village, "50 Years of

the USSR,” had gone up in a puff of smoke, almost literally. The director had purportedly set the office alight to destroy records and avoid debts just before land tenure reform. The state farm ceased to function after the arson. The remaindered tractors, cultivators and plows were sold off to businessmen from southern Tajikistan. Vanj residents had to sort out their planting agendas on their own.

A key consideration was the optimal allocation of land. Arable land is very limited in the Pamirs. Soviet planners had encouraged stock rearing and the production of fodder. While in 1965, 76.3 per cent of the cultivable area was devoted to the production of foodstuffs and only 23.7 per cent to fodder, by 1987 these figures had been reversed so that, 69.8 per cent was used for fodder, 4.8 per cent for tobacco and only 25.4 per cent for foodstuffs (Herbers 2001: 371). As a result of this export-oriented focus, only around 10 to 20 per cent of the region’s food requirements could be met locally. This dependency not only applied to food but to the region’s fuel needs, which had to be—and continue to be—imported.

From a legal and practical point of view, farmers and land holders in Tajikistan had only recently begun to view their land as their own, even if they were not its owners outright. According to Chapter 1, Article 2 of the Land Code of the Republic of Tajikistan, all lands comprise a single state land fund which is “an exclusive ownership of the state. The state guarantees its effective use in the interests of its citizens.” Thus, while the Tajik government still technically “owned” all this land and could determine its ‘effective use,’ it exercised those rights infrequently and inconsistently. This *laissez faire* arrangement guaranteed minimal meddling in farmers’ agricultural activities — and little support. The introduction of neoliberal land reforms

across the former socialist bloc had reverted practical management to a more granular level. For the majority of rural households, managing the land required a series of calculations that few had been prepared for. In the 1980s, Azim recalled, “all the fields we have now were under tobacco cultivation. The *sovhoz* [collective farm] had stopped trying to produce meat and grow hay because the Pamiri winters are too long.” Cash cropping tobacco was a last ditch effort by indebted state farms to make up for failed livestock operations. Tajikistan, as a country that produced few industrial products, was designated as a net exporter of meat products under the Soviet system. However, its lack of precipitation meant that it could scarcely live up to that promise, failing to support livestock in the numbers possible across the wind-swept steppes of Kazakhstan or the relatively lush mountain pastures of Kyrgyzstan. As subsidized state farms turned into *dekhan* small-scale farms, they could no longer import animal feed at a loss. Fodder cultivation plummeted as people turned arable land to subsistence crops such as wheat, potato and vegetables. In turn, livestock grazed the mountainsides as each family tried to maintain as large a herd of goats, cows and sheep as possible — offering a livestock bank to host *tois* (festivities such as weddings) or for unforeseen expenditures.

This democratic era coincided with Azim’s graduation from the National Teaching College. Instead of entering a guaranteed state-run labor market, his trajectory started to unravel almost immediately. After the collapse of the Soviet Union, Tajikistan, which had been the poorest Soviet republic, was beset by calamitous violence. Following independence in 1992, five years of civil war ripped the country apart until a Peace Accord was signed in June of 1997 (Nourzhanov and Bleuer 2013: 323–335). The country was torn into rival factions, with the lowland southerners squaring off against

mountain communities in the northeast and southeast of the country. The Pamir mountains, comprising the eastern half of the country, sheltered the oppositional groups which were at times aligned with *mujahideen* from abroad. The key battleground was the capital, Dushanbe, which sits roughly in the center of the country. The mountain groups took control of the capital and its government bodies for roughly six months in 1993 but were violently pushed back, retreating to mountain redoubts, such as Vanj. Azim recalled how a group of a hundred or so fighters took refuge in Vanj valley's main town (also called Vanj), without injuring to anyone. A virtual blockade was imposed to ferret out the ragtag band of fighters and emergency supplies of rice, oil and sugar were distributed by the U.S. government through the border with Kyrgyzstan. The fighters were only in Vanj for one winter season before they disappeared over a pass when the spring thaws gave them access to trails to skirt the blockade and return to fighting in the heart of the country.

Had those fighters continued over a set of twin mountain passes to Dushanbe's north, they would have reached the country's wealthiest region, Sughd. This primarily Uzbek-speaking region was spared almost all the fighting and emerged from the war relatively unscathed, with most of its Soviet orchards, carpet and canning factories, mining operations and basic infrastructure relatively intact. The rest of the country, the capital included, fared far worse. The next two decades were spent straining to lift Tajikistan back to its pre-independence levels. That task was still unmet when I began fieldwork in 2014. Tajikistan still maintained the lowest per capita GDP in Central Asia, since most industries and enterprises contracted or disappeared during the course of a war that claimed over 40,000 lives, with some estimates suggesting up to 100,000 fatalities

(Epkenhans 2016). Because of the disruptions to livelihoods, severe poverty befell nearly two thirds of the population (Bliss 2010, defined as subsisting on less than \$1/day). As in neighboring Uzbekistan and Kyrgyzstan, labor migration emerged as a lifeline. The bodies that shouldered the burden of rebuilding post-independence and post-war Tajikistan took up the dual-headed strategies of emigration and ecological rootedness. While young men left to work in Russia, the reluctant horticulturalists who stayed behind called upon a wide repertoire of skills and agricultural assets to slowly improve their lives after years of staggering decline.

Farrukh, one of Azim's most enterprising neighbors, finds fault with the privatization process but acknowledges the opportunities it presented. "The government is weak, they have no choice but to hand over the land to us. It's the right thing to do. We may not have the skills to deal with it, but we are learning. Soon we will make this place very fertile." Although land ownership was not fully privatized, use rights on the land were transferrable to individuals. The resulting allotments varied considerably in size, but rarely exceeded 300-400 square meters in the Pamir region (Heergarten 2004). People could lease their land, or use it for a lifetime along with the right to bequeath it to their kin. Land that had been run by the state according to government quotas was now being managed according to economies of household scale, where the imposition of land ownership demanded entrepreneurial ingenuity, lest it lay fallow.

Azim was the head of his household, a burden that weighed on him yet bolstered his pride. His father had perished in the avalanche of 1967, along with his three sisters. His mother had raised her remaining two sons alone, never remarrying. Azim's younger brother, the third survivor of the avalanche along with his mother, had risen through the

ranks of the Soviet army and stayed in Russia permanently. With only an ailing mother waiting for him, the property was Azim's to take. Azim took over as the bulwark of the family once he had returned from his university studies in the capital. He had trained as a math teacher and upon returning to his natal village was promptly given a classroom and a steady salary. Reflecting on his early days back in Vanj, after returning from teacher's college in Dushanbe, Azim was startled. "I learned to teach students, not throw seeds. As it is, we rotate three crops a year: wheat, corn, and potatoes. And keep as many cows and sheep as we can in the pastures. We are trying everything."

Azim, like most men of his generation, returned from college trained in a specialty. "Being a teacher was a highly respected position and I never intended to take on any other kind of work," he explains. "Everyone always did repairs around the house but we never expected to be responsible for everything! I even have to climb the electrical poles when the alternator breaks." Following the Soviet Union's demise, Azim became a generalist, a jack of all trades. His skills came to encompass carpentry, auto repair, cattle rearing, non-mechanized farming, plumbing and electrical, shepherding, and silviculture, to name a few. Most of his neighbors did the same, to varying degrees of success. Despite his poor health, Azim took to this work with gusto. In Tajikistan, after the abruptness of independence and the trauma of war, few employment opportunities, social safety nets, or educational opportunities emerged. These transformations came as a significant shock to the families who stood in for the mechanized, collective farms across rural Central Asia. "We did not want to be farmers nor expect to be, but that is what we are," reasoned Azim.

Embodying the Household

The household where I lived in Vanj comprised a woman in her 70s, Dinara, her middle-aged son and his wife, Azim and Sitora, their daughter-in-law, Difuza, and her two young children. Azim and Sitora's four biological children were dispersed across Tajik cities and Russian work sites — such that the only age-mate of mine in the household was Difuza, the daughter-in-law (*kelin*). Difuza's husband, Zafar, was in Russia for nearly all of my fieldwork in 2014 and 2015. His brother, Hakrezo, had been forcibly conscripted into the Tajik army for two years just before my arrival. Azim and Sitora's adult daughters had also left three young children under their care as they sought jobs elsewhere so that there were five young children under the age of six. Without realizing it at the time, my decision to rent an empty room in the back of their hand-built home as a base for fieldwork had made me a member of their household. In the place of two young men, roughly my age, whose absence almost exactly coincided with my fieldwork, I became a valued member of the household: as both a fieldworker who paid a generous rental income (that had never been requested) and worker of the field (where my presence was also not expected).

With no easy resolutions to local resource constraints, Azim's five children continued to spend significant amounts of time working abroad or in Tajikistan's urban centers. They visited home on occasion as they tried to establish their lives away from Vanj. The household not only acted as a base for the circulation of family members but also distributed goods and incomes to meet individual needs. This included non-monetary remittances, which are key to the sustenance of households trying to sustain family members across multiple sites.

One morning, as we survey a mound of potatoes after the harvest, Azim begins to designate their destinations: “We’ll need to keep a third for the winter, a third will be seeds for next year and those three sacks are going to my daughter in Dushanbe.” From the window looking down, Sitora adds wryly, “Good thing we just wore ourselves out in the field. After everyone gets their share of these potatoes, I doubt there will be any profit left over.”

The ability to exchange agricultural outputs, migrant earnings and housing needs allowed family members to support each other in their varied struggles. I will explore this process of exchange later in the chapter. However, this responsibility also taxed the core members of the household who provided a backstop for those taking more distant risks. Sitora and Azim worked long days despite nagging injuries to generate necessary foodstuffs and bring home middling incomes from the few jobs in the community, such as teaching.

Households extend across space by corralling bodies to a collaborative and, at times, conflictual process of laboring. In Tajikistan, dispersed relationships are centered on rural households, underpinned by labor performed at home and abroad. The predominant livelihood in the Pamir region comprises “combined mountain agriculture,” characterized by crop cultivation and horticulture on irrigated land coupled with seasonal stock-rearing at higher altitudes (Herbers 2001). However, maintaining capitalist livelihood strategies on formerly socialist lands requires managing expectations across generations, genders and international borders. As a result, family members organize their efforts through an adaptive ecology suturing family relations to environmental endeavors.

Mother and daughter, father and son, *kelin* and grandmother did not always see eye to eye. Arguments arose regarding planting schedules, livestock numbers or timber uses but the most common concerns centered on the use of money. Could gifts be sent to a relatively distant relative? Would car expenses outweigh home repairs? Would money be sent to a migrant son abroad who was having trouble finding a job? Differences of opinion usually deferred to hierarchies of age and gender, but what was seemingly non-negotiable was that everyone had to pitch in. The children started to do basic tasks around five years of age, finally having reached a point where they could be “helpful” around the house. With the dissolution of the Soviet Union’s significant capital and agrarian inputs, daily chores of heating, feeding and raising household members became physically demanding. This toil fell to calloused hands, weary backs and hobbled legs.

Sitora suffered a stroke the year before I arrived, spending many months under bed rest in the hospital, and continuously struggled to organize all the forms and doctors’ signatures needed to secure state disability payments, meager as they were. Despite her illness, Sitora still counted a long list of tasks that fell to her gendered domain. Dressing the kids, cooking over an open flame, sweeping the yard and milking the cows were just the start of the day. The work was wearing her down. Azim and Sitora's health woes were part of the reason that they insisted their elder son, Zafar, marry a seventeen year-old girl when he returned home a few winters ago. Traditionally, the youngest son would take over the household and take care of his parents. “Nowadays, there are no guarantees that the youngest son might not just stay in Russia,” explains Bahrom, a neighbor with a heart condition who always strolled past my room as part of his daily exercise regimen.

Bahrom had retired from a long career as a chauffeur for the Soviet geologists who had scoured the Pamir mountains for precious ore in the middle decades of the 20th century. The uranium mines the geologists helped establish in Vanj justified the Moscow provisioning (*Moskovskoye obespicheniye*). Three of his sons were in Russia and their prospects were uncertain. He continued, “Then you have to figure out which ones will stay at home and take care of us old folks. Or, just as troubling, what if all my sons end up having to settle back home. Where am I going to put all of their families?!” His children’s ability to generate income was limited by small land plots and the prohibitive expense of home construction. Although most buildings were built out of local mud bricks and stabilized by local timber, requiring a massive expenditure of manual labor to construct, all of the adornments, appliances and furnishings that his sons would come to expect would have to be purchased. Beyond the building itself was the question of where the sons would work and how they could each maintain a large enough agricultural plot to sustain their family. Migration was meant to palliate the uncertainties of limited rural prospects, but often exacerbated the challenges.

Salvaging modernity

Remittances to Tajikistan are immensely important to its citizens. The median amount remitted per migrant in 2008 was 3,608.2 somoni (USD \$1,080) (Mughal 2007, 12), effectively doubling a Tajik household’s annual income (ADB). The latest figures suggest that 36.6% of Tajikistan’s GDP came from remittances in 2014, totaling \$3.3 billion – down from an all-time high of over \$4.2 billion the previous year (World Bank 2017). This remarkable inflow of wealth is fueled by an estimated one million Tajiks

residing or moving seasonally abroad for work, by men like Azim in the 1990s and later his son, Zafar, since 2012. But these are imprecise estimates of illicit flows. Many young men from Central Asia are saving up for a marriage ceremony and the economic springboard they will need to start a family (Rubinov 2014; Reeves 2014). Most Tajiks struggle to find steady work in Russia, while trying to avoid extortion at the hands of the police and deportation by the Russian Federal Security Service. The men who are able to find good work and a decent place to live regularly marry Russian women and tend not to return. In the long run, they often cease to send money back home.

The young migrant men streaming to Russia were born just as the imposed Soviet solidarity of the “brotherhood of nations” faded away (Sahadeo 2007). As young boys, they watched the Russian army protect their valley from *mujahidin* during the Tajik civil war and continued to learn the Russian language in school. Held within the orbit of Russian media through widely-consumed television and pop music, Zafar felt like his life had only one trajectory. The perception of easy wages in a land that “we had once been a part of” made emigration to Russia seem obvious. “What is there for us here,” Hakrezo, Azim’s younger son, wondered aloud while on leave from the army base. As we chopped firewood to prepare a soup for lunch, he admitted that he was not excited to be back home: “I can’t just stand around herding sheep and growing potatoes without making any real money. Where am I going to get the cash to marry a girl?” Securing the money needed to establish your own household — including the bride price, multiple celebrations, and buying an apartment or constructing an addition to a house — was only possible if the young man went to work in Russia. Joining the million other men streaming out of Tajikistan’s villages, Zafar and Hakrezo were trying to bring provisions

from Moscow by going there themselves. Rather than waiting for the funding for socialist transformation to come to them, as it had to their parents, they were willing to seize capitalist opportunities to supplement their prospects.

“You think I didn’t learn anything up there,” Farrukh asked me rhetorically as I watched him level the soil with a pair of bull oxen. Farrukh was several years older than Zafar and had put his migratory days behind him. “I worked in the infamous Cherkinskiy bazaar in Moscow, where all kinds of illicit activities happened. I sold livestock in Rostov and ran a taxi in Yekaterinburg.” Then he considered the life he was leading in Vanj. Over the last few years things had turned around:

It’s because capitalism was pressed upon us. It has come to us and we have mastered it. We used to live under socialism and work by different rules but now we know how to make things work. Early on, when I got back from Russia, I planted 25 bags of potatoes in this field and my harvest was only 24 bags.

Negative! Last year I planted 12 and got 200. We know how things work now.

But it was not only capitalism that had infused Farrukh’s sense of what was possible in rural Tajikistan. He had come back from Russia with hardly any savings. However, he strove to project a positive social image by committing himself to the land that had been allocated a few years earlier to his deceased father. By investing in improving the soil and building up a large herd of livestock, he took on the burden of his household’s wellbeing.

Farrukh was married off to a woman a decade his junior within a month of returning from Russia. Rather than being burdened by his failures and missteps abroad, he came to appreciate and embody the “truth” (*istina*) that he found there. Farrukh had

become a more devout and outwardly pious Muslim after squandering his hard-won migrant earnings. Migrants that travel to Russia from the Caucasus and Central Asia regularly encounter different interpretations of Islam than those of their host country (Laruelle 2007). Piety did not negate capitalist entrepreneurialism and the horticultural prowess it required. Instead, he had integrated profit-seeking considerations into his role as leader of the household. His father passed away two years prior and now the household looked to him for guidance, capital and leadership. Russia had changed him, giving him a new perspective on the life he had settled into in Vanj. Muslim exhortations to prioritize piety through familial fidelity had opened up a conduit to channel his entrepreneurial zeal. Land, wealth and family had been woven into rural domesticity through the forge of migrant precarity and religious awakening. Farrukh tossed out the last drops of tea from his cup, walked a few feet away from the candy splayed on a cloth at the edge of his field and proceeded to read *namoz*, the five-times-daily Muslim prayer. He then put his sweater and shoes back on and finished leveling his field in preparation for planting.

Uncertain harvests

Azim had also spent a few years in the late 1990s traveling to northern Russia to sell wares in small-scale outdoor bazaars on the outskirts of second-tier cities. Those trips had never provided significant windfalls and he resigned himself to a steady but paltry teacher's salary and whatever he could make from the land he had inherited from his parents. He had never managed to place himself on secure economic footing from those labor excursions nor had the land provided for all of the household's needs. Azim and his family often found themselves in debt, be it to relatives, neighbors, or, as had grown increasingly common, to micro-lending banks in the valley's center.

During early fall harvest, when the cherry trees were only beginning to ripen, Azim's wife, Sitora, brought up a loan that Azim had been fretting over, one of several that were coming due. With Azim absent as we picked, I learned that the loan was not for a car payment — as Azim had once casually mentioned. Difuza, the daughter-in-law, directed me to pull down a long branch of the young cherry tree and, with everyone reaching up, it snapped. The kids squealed with delight but Sitora fretted that Azim would reprimand her for the damage. "He is so attached to every limb, you'd think it was his arm that snapped." Azim's elderly mother, unfazed by the broken branch, grabbed at the tumbling cherries before they were squished under the feet of her great-grandchildren. The cherries were to be dried and used in *kompot* (fruit juice), made into jam, or scooped into satchels and sold to middlemen. The harvest was meager, Sitora noted with a sigh, as we walked with four buckets of cherries and heaved them to dry on the roof. As we trod back to gather fruits from the next tree she turned to me with some concern. "The fruits may be plentiful but no one wants to stay in the village. There is so much work every day. The women especially have so much on their plates. Sometimes you have to wonder if the debts piling up are worth it, if we'll ever be able to climb our way out." The cherries would certainly fail to cover the loan of 3,000 somoni (\$600) that paid for her son's flight to Russia. The cherries were just one input in the uneven balance of payments held by transnational households spanning formerly Soviet Central Asia and the Russian labor markets that drew them, representing a vegetal component of dispersed household labor. Zafar had promised to come back with the borrowed money plus more but her son's peregrinations had so far only added to their credits. He had never really sent home much money to begin with.

Zafar had been working in Russia for twelve years but never seemed to have enough to remit. He rarely wanted to speak on the phone anymore, hoping to avoid his father's pleas to pay for some festivity (like his own son's circumcision) or a new roof. Zafar finished college and, like the overwhelming majority of his classmates, could not find work in the city and certainly not in the village where he had grown up. Since most of his school friends and relatives from Vanj were already working in Tver oblast, between Moscow and St. Petersburg, he followed the migrant networks and tried his luck. The options were limited to intermittent construction gigs or work as a security guard. Ultimately, he found himself dabbling in all these options and more. In the last year of his Russian sojourn, he managed a series of gyro food stalls while trying to secure the paperwork (and the "fees") for a Russian passport. With this pivotal citizenship document secured, he hoped to free himself from constant harassment by Russian cops and find more stable employment. He never managed to get it. The steady remittance stream that Tajik families rely on did not materialize.

Despite Zafar's consistent assurances that everything was fine, his parents were skeptical. "Instead of paying off his personal debts, Zafar was gathering up more of his own, except now it's with Russian creditors. Apparently the Tajik ones aren't enough for him," Sitora lamented, "maybe the coming walnut harvest might help extinguish (*pagasit*) some of the ones he has picked up abroad." Or more likely still, the constant circulation of bodies and debts would stay tethered to the uncertain outputs of marginal lands. Sitora, not wanting to dwell on her son's failings, simply ceded the fact that the young men do not want to stay. Their absence is hard on their elderly parents, almost forcing their sons to take on a *kelin*. Taking a rest on her low work stool (hand-built by

Azim) and wiping her brow on her shoulder, she pointed her gloved hand past the field “... my house, her house, her house, that one has two...” She went around the village noting who had taken in a *kelin* (daughter-in-law) while the husband was absent abroad. Unlike in neighboring Kyrgyzstan, where the gender ratio of migrants is nearly equal, relatively few Tajik women migrate to Russia. The resulting gender imbalance among migrants was skewed to over 90% men (Danzer and Ivashenko 2010). The *kelins* were picking up the slack, tending to the children, trees and fields while their husbands struggled abroad.

The wellbeing of many households was determined by a son’s ability to navigate Russia’s mores and markets. Their bodies were the most valuable asset in the household and having it sent abroad left everyone vulnerable to risks and hopes. The expectant optimism draped on their labor outcomes was of course tempered by the brutality and uncertainty of living as an illicit migrant. With visa-free borders open to all citizens of the Commonwealth of Independent States (which includes the former Soviet republics in Central Asia), Tajiks could hop on a train or plane and cross the border into Russia on a day’s notice. However, acquiring residency and work permits a few days or weeks after arrival was a costly bureaucratic morass. A majority of migrants from Central Asia chose to forego these legal machinations – preferring to hide from the authorities as undocumented workers (Reeves 2014). They relied on close friendships and work connections, commonly with neighbors and kin from the far-flung valleys and villages where they hailed from, to survive Russia’s notorious urban gangs and corrupt police. They learned to navigate Russia’s alternative marital dynamics, scarce urban rental

markets and inequitable transactional economies. Marriages organized by parents gave way to dating and live-in relationships.

It was an open secret that Zafar already had a child with another woman in Russia. Many partnerships in Russia were marriages of convenience: for paperwork, companionship, or an affordable place to live (Olimova et al. 2010). But like most migrant men pressed into marrying a local village girl on one of their return visits, he had acquiesced to his parents' desire for a *kelin*. Soon after the marriage he had departed to Russia again, leaving Difuza behind to help his parents. Difuza, from the neighboring village, did not enter the household with the same urban aspirations as Sitara had. Having been married off as soon as she finished high school (like many rural brides), the family assumed that she would not question the duties of her station in life. A conjecture she validated every day. She helped tremendously with domestic labor, joining the collective efforts of a household that mostly worked as a self-sufficient enterprise. When she could free herself for a moment from the house, which was rare given the ceaseless toil, she went out to the fields, completing most tasks at twice my speed. Though she tried to be supportive and friendly with her daughter-in-law, Sitara acknowledged that “*kelins* are like slaves in the village.” The opportunity to critically reflect on or work against patriarchies and gender disparities did not lead to concerted action on the part of my informants.

As I held conversations with older women who were past those strenuous years, such as Sitara, they conveyed to me that the accumulation of toil had hobbled their bodies. But they were proud of the households that they had nourished through challenging circumstances. They also sought to transfer the physical burdens onto the

new entrants into their household. Sitara bent low with difficulty and rested deeply whenever possible. Having just passed 50 years of age, she was ready to retire. A household holding on to subsistence afforded no such luxuries. Her bodily work was needed in the household. Sitara's major struggle, as the secondary female household head, was not to advance her career but to carry the family through this difficult time and allow her grandchildren to flourish. In precarious economies, her individual needs expanded to encompass the household, stretching the roles and relations of its constituent members.

Returning to the Household

Not every circulating migrant developed enthusiasm for rural toil. Regardless, there were successful migrant returnees who parlayed their diligence into viable homesteads. Some bought a used Toyota jeep or Mitsubishi van to ferry passengers from Vanj valley to the city. Another young man from further up the valley bought a mechanical flour mill.⁷ The goal of returning migrants was to elevate themselves above rural toil. Not only to make an income but to extricate themselves from the backbreaking daily labor it entailed. Unless the leap could be made to an urban homestead, where incomes were not based on manual labor, toil accumulated upon the bodies of household members.

When the migrants did return, they often established or started orchards, tended to livestock and plowed up the agricultural land allotted to their family. Reunited with their wives, who had been helping to keep the household humming in their absence, the returning migrants took time to adjust to their household commitments and activities.

⁷ The few remaining antique mills that were powered by glacial water barreling down the *aryks* required careful calibration of the mill stone. The elder men who had maintained them had lost the will or interest to keep them going, though a few mills scattered throughout the valley still continued to make hearty dark wheat flour.

Farid, a gregarious and rotund young man of twenty-three, was not interested in the daily struggles that rural life necessitated. He had been deported from Russia for participating in a massive brawl, “to defend my Tajik brothers,” he claimed. Farid’s older brother continued to trudge the cows out to pasture early each morning, chop firewood and dig new holes for the small orchard he was starting. “Farid wasn’t in any fight,” his mother corrected after a lull in our conversation. “He just never got his papers in order. Maybe getting back to Vanj will sort him out, his wife should keep him from going astray (*idti po levomu*). Sometimes you just need to rip out the old and start anew.” Farid only lasted three months before he took off to Russia again, neglecting to tell his family the details of his departure.

The household was a destination for migrant earnings but also a launching pad for such endeavors. As a result, reverse remittances (in the form of wire transfers, potatoes, walnuts or apples) were occasionally sent out to finance the distant labors of absent family members. For some, this outflow occurred more often than remittances came back in. Extortion, gambling debts, theft, or even death could easily sink the prospects of unfortunate Tajik laborers in Russia. The ecological work required to maintain rural fields and orchards helped fortify the household against such missteps by enabling support mechanisms that would help those in need. More than a base for the circulation of family members, households distributed goods and incomes to meet collective needs and overcome shortfalls. This included non-monetary remittances, which are key to the sustenance of households trying to sustain family members across multiple sites (Udry 1996). In late summer, upon surveying the mound of potatoes we had picked after an ox-drawn plow unearthed them, Azim began to designate their destinations: “We’ll need to

keep a third for the winter, a third will be seeds for next year. Those three sacks are going to my daughter in Dushanbe and I owe the mechanic another six.” The ability to exchange agricultural outputs, migrant earnings and housing needs allowed family members to support each other in their variously situated struggles.

I came across Farrukh several times a day while walking along the dirt path leading out to his field. He had worked as a taxi driver in Moscow for four years after receiving a diploma in gemology that failed to land him a job. He had come back to Vanj to embark on the agrarian life that he had sought to avoid as a former recent college graduate. “Every day I swing a shovel over my shoulder and pick at the ground. It makes you feel like a chicken, pecking at little bits of mud and sending the water running this way and that. But there’s no way to make do without it.” The nascent apricot orchard Farrukh watered depended on his continued intervention. When he gathered with a half dozen of his neighbors to redirect one of the major water channels (*aryk*), an entire section of scrubby alluvial forest along the riverbank dried out. They had decided to redirect more water to the downhill villages where inadequate water access was a more pressing concern. Azim threw out his back that day while helping with the irrigation channel, an oft-used communal collaboration known as *hashar*. Sitora was not surprised that her husband was hurt, “he’s just a teacher, and with a failing leg no less, he can’t handle all this manual labor. But that’s the life we lead now.”

Prized Orchards

Tajikistan holds a population that is 73.3% rural (World Bank 2011), a statistic that shrinks every year, on territory that is 93% mountainous, an immutable figure. This statistic is *de rigueur* in nearly all texts on the country, often as evidence of the country’s

poverty and ‘vulnerability.’ It can be misleading when cited as “only 7% of the land is arable” (Wölcke, Wegner and Bulbulshoev 2013), since a lot of cultivation occurs on the 93% that is mountains. The figure seems to have emerged from Soviet assessments (Nigmatov 1977) that defined mountainous terrain as anything more than one kilometer above sea level, regardless of the condition of the terrain. Azim and Sitora benefited from steady salaries at the school where they both taught around 20 hours a week. 600 somoni for Azim and 450 for Sitora; though these sums were often withheld for months at a time.⁸ Teachers in Vanj did not hold full-time positions, allowing more residents access to one of the coveted steady incomes available in the valley. Azim's mother also received a small monthly pension, just under 200 somoni. Considering the daunting balance of payments allayed against him, Azim still managed to get excited about how his household was faring. It was the fruit trees that buoyed his assessments, as they did for almost everyone I spent time with up and down the valley.

There are six massive walnut trees towering over the corners of Azim's property. Their planting preceded the Soviet collective farm, though not all of them survived it. The ones still standing tall are at least two hundred years old. A single tree can yield 350-400kgs (Kasimov 1989: 57), sometimes over 600kgs in a bumper year, selling for 12 somoni [~\$2] per kg. They are also just as likely to come up empty the next season. Because of their massive crown, each walnut tree (*chormagz* in Tajik - meaning four brains) takes a large piece of solar real estate. If a tree has not produced for a few years in a row, Azim might whisper to it, warning of eminent thinning or felling. Sometimes the

⁸ The exchange rate was about 5 somoni/1USD in 2014 and 6:1 in 2015; their salaries amounting to roughly \$100 and \$75 a month, respectively. Azim was paid more because he has a teaching degree while Sitora only holds a teaching qualification. The currency, somoni, is also colloquially referred to as a “som.”

tree will ‘get the message’ and start to produce more. If not, the walnut trees will lose their venerable place — usually yielding to hybrid varieties of apple trees. These newer plantings use local rootstocks, already adapted to the soil, with typically foreign scions grafted on top. The resulting hybrids, locally rooted but internationally selected, produce the best harvests. Such hybrid fruit trees are the jewels of Azim's household economy.

Fruit trees are demanding of the horticulturalist when they are planted, then require adequate watering, timely pruning and appropriate pest control. For most households who had embarked on a horticultural path — which included every single home that I encountered on my walks and visits throughout Vanj valley, excepting a small handful in the center of the valley’s district capital (Vanj township) — watering was the only activity they felt knowledgeable about. Information regarding water and soil management had been gleaned from trial and error after the Soviet Union disappeared, seemingly overnight. Pruning and either natural or chemical disease management were rarely practiced. Even the selection of varieties for planting was more or less left to chance.⁹ The trees grew bushy and knotted, all the more so because they were well-spaced and watered. The greatest exertion was expended in the orchards during harvest time in late fall, when family members across the valley, buckets in hand, took to ladders and pulled down branches to pick the fruit. Because of the limited physical demands of orchards, and the steadily increasing value of their outputs, fruit trees have emerged as the backbone of Azim’s household accounts.

Apple trees were by far the most dominant in his orchard but there was a delicious profusion of cherry (*gelos*), mulberry (*tut*), apricot (*zardolu*), pear (*nok*) and cherry plums

⁹ Although pruning and thinning are considered requirements of commercial orchards, this labor-intensive activity was neglected by almost all mountain horticulturalists I met.

(*olucha*). While the other fruits were primarily for domestic consumption and gifting, apples (*seb*) had emerged as a cash crop. Output per tree varied widely within an orchard and between them. A 20 year old apple tree in full vigor might produce 50kgs while a young tree could have 5 apples.¹⁰ Overall, Azim's orchard had over a hundred trees, and counting. A few of his trees were entering their second decade of life but the majority of grafted hybrids were still in their adolescence. With good fortune and committed care, it might be possible to earn a few thousand dollars per year from a well-tended orchard.

The most common tree species in Vanj are walnut, willow, juniper, apple trees, birch, poplar, sea buckthorn and pear trees. Fruit trees include apricots, peaches, apples, mulberries, sea-buckthorn and walnut. Environmental services provided by forest ecosystems are essential for maintaining stability in an uncertain landscape beset by worsening climate conditions. The mountains receive most of their precipitation in the form of winter snow, relinquishing their yield during the spring and summer snow melt. If the glaciers continue to shrink, as they have in recent years, then the entire landscape becomes a desert. Trees can help secure more groundwater for lower water scenarios. The budding forests being grown by Azim and his neighbors provide a nutrient supply, water infiltration and storage, suitable micro-climates, and soil and water conservation. In addition, woodlots and forests are key elements of the risk management strategy of Vanj District, since they have the potential to reduce the frequency and severity of risk events, such as flooding, mudflows, avalanches, and rockfalls.

Azim's flourishing orchard was larger and more robust than other plots in the valley, but it was fairly typical. In fact, almost all households in Vanj (and Central Asia

¹⁰ A kilogram of good apples were being purchased for 4-5 somoni (\$1) by middleman during the harvest of 2014.

more broadly) have practiced horticulture (orchard cultivation) and pomiculture (fruit growing) for centuries. Nearby Kazakhstan is considered to have been the birthplace of the genetic forbearer of the world's apple stocks. While a few families have taken over Soviet orchards from state institutions, for the most part, large stands of fruit trees were a recent phenomenon in the valley. Despite their novelty, Azim and his neighbors were growing increasingly committed to them. Orchards beautify the surrounding environment, offer shade and wind protection, and provide much needed vitamin supplements to a mountain diet comprising primarily wheat, rice, oil and, on special occasions, meat (Bliss 2010). The trees surrounding every single homestead in Vanj are what make a plot of land hospitable. They formed a key part of the landscape, the diet and the economy.

The agricultural plots beside the orchards are plowed by oxen in April, seeded, weeded, tended, and watered regularly throughout the warmer months. Ideally several crops are planted throughout the year so the land is worked full-time until October, just as the fruit trees begin to yield. A long winter looms, which will require that a fire burn all day in the warmest room of the house. In preparation, copious firewood is collected in the autumn (axe in hand) in addition to the truckload of coal most families hope to purchase, finances permitting. In light of all the work there is to be done, orchards provide a welcome reprieve. After the first few tenuous years, the trees send down deep roots, requiring less intervention.

Each of the last few years, Azim endeavored to plant new rows to expand the orchard. Technically, he needed approval from the Land Cadaster Agency to alter the land from "agriculture" to "orchard." The government, as the legal landholder, did not permit

land status changes without their approval — which would mean paperwork, bribes and a hassle. He would periodically confer with me to see if I thought adding another row would be a good idea. I cautioned him to get permission but wondered if anyone would notice yet another row of trees. In reality, Azim did not hesitate to undertake this transformation on the sly because the local surveyor for the Land Agency was his cousin. The field beside Azim's house was formerly run by the *kolhoz* (collective farm) and enjoyed amendments from seemingly unlimited inputs and powerful tractors. Previously unworked plots were full of rocks and had less organic matter in the soil. Now, without access to such machinery for his own agricultural labor, his fruit trees benefited from those past Soviet efforts. Rows of apple trees stood proudly, ascending in age along the gentle gradient of the field. They marked how over the last five years his orchard had slowly encroached on his productive, though less profitable, agricultural plot.

Azim figured the trees, along with everything else, into his mental ledger. These moments of fiscal reflection were often accompanied by laments of his sons' continued absence. In their stead, households were being remade and burdens reallocated. All this was possible because people felt secure enough in their land holdings to invest in horticulture. Households were able to patch over the failings of the state and the circulation of their able-bodied family members with ecological supports. The household, as a node for resource management and transnational livelihoods, wove ecological resources across gaps in the socioeconomic fabric. By marshaling human resources within dynamic households, new ecological terrains were forming, forests were taking root, and incomes were slowly rising. But the toll this process took on bodies was significant, and there was little certainty that their efforts would ultimately succeed.

More than a few times I came upon Azim swinging an axe or planting a shovel as I set off for the fields. When I sought to take over the task, he would occasionally acquiesce. But more often than not, he would plod ever further, acknowledging that “maybe this isn’t the best thing for my back but who else would do it. If I start to let this slip, then the whole place goes.” While *sovhoz* tractors would have once helped maintain the land, it was now up to the residents to manage the larger tasks such as water distribution, farm grading, and land planning. At times a communal work party (*hashar*) was called together, with the beneficiary serving a meal to those who came to help. Scattershot NGO projects tackled glaring infrastructural needs, like a drinking water pipe or crumpled bridge, but the void of expertise and investment remained. Limitations on farming knowledge and equipment had to be offset by brute, unmechanized manual labor. Not everyone wanted to subject themselves to a lifetime of heavy toil.

Conclusion

A generation has come of age in the former Soviet republic of Tajikistan. Political possibilities have been perpetually smothered by a repressive authoritarian president who secured a firm grip as the guns went quiet on a five-year civil war. The war extinguished whatever hopes had flickered as the country stumbled into independence. Industrial and agricultural enterprises withered as the basic assurances of state planning fell to pieces. Men and women, like Zafar, Dilduza and Hakrezo, have started to raise families without the prospect of reliable employment or functioning state institutions. In the face of these uncertainties, a perpetual stream of labor migrants crossed northern borders, leaving worried and anxious families in their wake. A staggering percentage of Tajikistan’s young

men travelled to Russia in search of work (upwards of 60% of the working-age population, Olimova and Bosc 2003), leaving behind the most remittance-dependent economy in the world. Family members wonder if elusive Russian passports can be acquired in order to follow their sons or husbands abroad. However, most men continue to circulate between their natal villages in Tajikistan's arid mountains and their taxing workplaces in Russia. Translocal labor migration has come to underpin the post-Soviet economy and fuel the social imaginary of Central Asia.

The parents of these young adults are mostly rooted to rural lives. A transition to the city is stymied by an urban housing market that is too expensive for all but the most successful migrants. Mothers and fathers wonder when a text message with wire transfer details might pop up. While these money transfers are critical for meeting households' basic needs and large expenditures they are hardly a substitute for the astounding investment that Communist Party officials in Moscow had promised for decades and, in the mountains of Central Asia, often delivered. The family members who stay behind work the formerly collectivized lands allotted to them. The effort to compensate for the Soviet largesse has led to a strategy that pulls at the very fabric of Tajik households: migratory dispersal coupled with domestic rooting.

In the case of Tajikistan, this reconfiguration of relations is mediated through ecological work – social obligations invested into the land and maintained with concerted toil. Ecological labor enables households to root downwards while also growing into the gaps left by ineffective institutions. As a result, while tending to fields and orchards to sustain their households, my informants were often nurturing scions. Scions can be understood doubly: as branches of trees amenable to grafting and as the descendant of a

family. Keeping households afloat in a precarious environment without government support required a reliance on ecological resources. In striving to overcome a knot of challenges people were left to graft branches of trees and families to the land – tenuous as those connections may have been. The scion’s dual nature helps us recognize the twinning of ecology and family that is required in post-Soviet Central Asia. Bodies, tethered to investments in the land, share the burden of circulation and rooting.

Chapter 3 | Patchy Sovereignty Governing the forests of Tajikistan

Walking out each morning from the patio where I slept to the front yard of Azim's house, I would come to a large field ringed by towering walnut trees. A sparse wood lot rose along the shallow foothill of the mountainside framing the back of the property. Through a boundary line of shrubs, crisscrossed by brambles and twigs to form a fence, I could make out the neighbor's early buds of corn rising neatly in green rows. The land laid out before me, comprising fields and homesteads, was neatly demarcated and carefully managed. It was vibrant, nurtured and lauded. Running alongside the fields was an old dirt road which bisected the village of Ardobak, halfway up Vanj valley, in the Pamir mountains of Tajikistan. This road had mostly turned into a walking path after the Soviet Union built an asphalted road in the early 1980s, skirting around Ardobak's ten homes. The new road abutted a short cliff that looked down over the Vanj river. Over that precipice the landscape changed drastically. An alluvial fan of glacial debris was scattered in a wide V-shape that eventually reached its way down to the river. *Sangov*, the rocky scree field beyond the village boundaries, provided a limit to the extent of arable village lands. This terrain was sparsely vegetated, unmanicured and generally devoid of life. The *sangov* was also the site where individuals' schemes, international development projects, and past Soviet visions had been projected onto the desiccated landscape, with limited success.

I never thought much of the *sangov* when I first arrived to the Pamirs in 2014. My initial research interests focused on glaciers, floods, and water management, recognizing hydrological resources as key targets of outside interventions and emplaced survival.

From the outset, I asked a lot of questions about the Vanj River, hearing that it was tempestuous and powerful. As a result, the inhabited villages in Vanj valley were situated on banks well above the unpredictable and meandering river's course. People would explain to me that the meager riverine forests down in the basin, composed mostly of flimsy poplars, sea buck thorn and other brush, could be washed away at a moment's notice. My neighbors would harvest some firewood there on occasion but mostly used it as inadequate but tolerable pasturage for their livestock. I saw that territory as merely a buffer zone against floods far below village lands.

In light of the *sangov*'s insignificance, I was surprised when Azim explained that there used to be a forest user group overseeing the strip of land just below the cliff, stretching down to the river. "Adham and I used to water the forest down below Ardobak all the time. We would go with shovels over our shoulders and water here and there. The land is like a baby, you have to mother it. You have to water it all the time because, unlike the huge topsoil we have up here [in the village], the topsoil there is thin. You can see the area around Dildod's shop – after 5 years nothing is growing there even though water flows through day and night, day and night."

Azim was referring to a small shop on the far edge of Ardobak, beside a stream fed by the glaciers behind the village. Glaciers which were likely to disappear, if climate projections held true. Dildod had worked in a factory in Ekaterinburg, accruing steady wages over a period of several years. He had set up the shop, offering basic staples to the residents of this cluster of villages, as a vindication of his hard work and an investment that he hoped might continue to yield dividends. However, after letting water run through the property outside his shop for several years, the area still looked barren. Out there in

the *sangov* between the villages the shop's tiny saplings provided no shade, the sliver of their shadows highlighting the desolate, harsh earth. But Dildod and his father, Adham, continued to water the trees around the shop, hoping they would break through and establish roots.

Despite its starkness, Azim did not discount the *sangov* altogether. "One day I went over there to gather some twigs and someone yelled 'Hey, that's my forest.' I yelled back, 'Who are you? Am I not *mestniy* (local)!' Eventually they told me the *leskhoz* [State Forestry Agency] had doled that territory to people in 1,000m shares. So then I stopped going in there. Apparently there was a caretaker [*khozyain*] of the *sangov*. I figured now someone was looking after it. In the Soviet era, the *sovkhoz* had also been trying to grow something in there. The foresters to this day pretend like they can get something out of it. After some time it all fell apart and there's no trace left of their efforts." Looking down onto the *sangov* from the cliff's edge, along the ancient banks of a river which had now carved itself deeper into the marrow of the valley, it was hard to see that anyone had ever invested care into that land. Upon closer inspection, I made out several thin irrigation troughs dissecting the stony ground, linking unexpectedly and petering out at random. A few slender trees appeared to stand in rows amidst the sea of grey-brown pebbles. What I had thought was an empty patch of gravel had the traces of past efforts, some that perhaps were still ongoing. What was the fate of these liminal lands arising out of the cracks of the former Soviet edifice? Was there anything to be gleaned from what seemed, by all appearances, a desolate landscape of failed projects and barely visible ruins?

Patchy state

For nearly seven decades, the Soviet state had been the caretaker of the territories of Central Asia. When Azim came home from college in the early 1980s, tractors, threshers and harvesters (and the fuel on which they ran) were legion. The *kolkhoz* (collective farm) owned all the land surrounding the homesteads (except for modest kitchen gardens directly adjacent to each house, see Rowe 2009). The *kolkhoz* — a portmanteau of *kollektivnoe* (collective) and *khozyaistvo* (caretaking; economy; farm) — employed a majority of rural residents, providing its workers with a share of profits (if there were any), as it strove to meet state plans. Throughout the 1960s and 70s, *kolkhozes* were superseded by *sovkhozes* (state farms) in the Tajik Soviet Socialist Republic — which guaranteed salaries regardless of yield. Both types of collectivized farms coexisted until the collapse of the Soviet Union. The directors of these enterprises struggled to meet unrealistic production targets with limited inputs and perverse incentives, while seeking to maximize their own personal gain and power. Local residents often turned to theft to get what they needed from the collective enterprises.¹¹ “Whenever the tractor would finish its run, people would hop out from the edge of the fields and grab a hay bale for their own animals,” Azim recalled. “How else could we feed our few goats and cows with absolutely no land of our own!” Thus, as the planned economy plodded along, individuals at the top and bottom of the labor hierarchy devised enterprising strategies to make rural institutions work for them.

Most Vanj residents I talked with about the former agricultural system often had to think about whether their land neighbored a *sovkhoz* or *kolkhoz* and struggled to recall the

¹¹ Katherine Verdery (2003: 69) recognized similar lawlessness in the context of Romania, arguing that theft allowed unrealistic plans to be adapted to local circumstances and residents’ basic needs.

differences between them. As Azim liked to say, “all the Soviet organizations were one and the same.”¹² The *sovkhos* continued to function until 2007, when an unexplained fire burned all of the agency’s records. This unresolved arson happened just as the process of privatization was set to disperse state land to the local population, along with the few remaining assets that had not already been sold off by the *sovkhos* director. Any corrupt and hidden dealings that could have been gleaned from the farm’s bookkeeping went up in flames. The embers of the former state farm office left a vacuum of power in its place. The *sovkhos*, named 50 Years of the USSR, had been the most important institution in Vanj: overseeing employment, land management, transportation, cultivation and consumption. There were other institutions which were ancillary to the state farms. The most important of these had been the *vodkhoz* (water [*voda*] agency), *leskhoz* (forest [*les*] agency), the mining operation at the valley’s upper reaches, and a marble factory at its mouth.

Compared to the pervasive state presence of the Soviet regime, contemporary institutions were husks of formerly powerful, sprawling, and well-funded agencies. The factories and mines shut down promptly upon the dissolution of the Soviet Union — they had likely always operated at a loss, thanks to subsidies from Moscow to ensure universal employment in every valley.¹³ Adham, Dildod’s father, was nominally an employee of the current *vodkhoz*. “We had unlimited funding back then. We had millions of rubles and

¹² By the 1980s, the *sovkhos* in Vanj turned most of the land to tobacco cultivation, creating what one local doctor insisted was a valley of poor health with a crisis manifest in birth defects. I was unable to find evidence supporting his claim but my informants told me that they regularly drank liters of milk each day in an effort to “cleanse” their bodies of the harmful effects of harvesting, drying and sorting tobacco leaves.

¹³ This industrializing imperative was central to the development of the Pamirs, and Tajikistan as a whole (Rubinov 2017). The region was meant to be a showcase frontier for Persian-speaking neighbors to the south (i.e. Afghanistan and Iran, see Kassymbekova 2011), which the Soviets had dreams of wooing and later ended up invading.

all the machinery we could want. Water projects were so important to everything in Vanj; very prestigious. But now there is nothing to do. We don't even have our own bulldozer. The only agency still doing anything is the foresters, but even they barely have anything to work with. Everyone is just filling in the patches (*darbeh*) of a system that no longer works.” In the post-Soviet era, the *vodkhoz* had been reduced to serving as a feeble emergency response to floods, begging other organizations (like the State Road Agency) for a bulldozer to manage the damage. As we shall soon observe, the Tajik State Forestry Agency (from here on referred to as *leskhoz*¹⁴) was the only institution in Vanj with assets and connections to operate with visible effect when I conducted fieldwork in 2014-2015. However, after the state farms had dispersed their relatively productive lands to local households, most of what the foresters held under control was unproductive *sangov*. What could be done with such fruitless land and who stood to benefit?

Forestry management provides an example of patchy sovereignty, when existing forms of governance are abandoned or degraded, leaving an opening for new arrangements of power and control to emerge from the existing armature. Patchiness is an ecological term that upended classic notions of landscape equilibrium to describe heterogeneous ecosystems where disturbances created openings dispersed across time and space. A forest can be viewed as a patchy ecosystem composed of gaps in the canopy, surrounded by clusters of trees of different generations that emerged during past disturbances (Picket and White 1985). When a tree is felled, diseased or uprooted, an opening is created in the canopy, initiating a forest succession at a small scale, where

¹⁴ This is still the name people in Tajikistan still use, despite the official agency title: Агентии хочагии ҷангали назди Ҳукумати Ҷумҳурии Тоҷикистон (Agency of Forest Management under the Government of the Republic of Tajikistan).

pioneer species move in and the gap is eventually covered by a mature tree. Patches are the drivers of a dynamic landscape. After each disturbance, new relationships of existing and newly arriving actors produce an evolving patchwork. In a patchy ecosystem, different communities coexist, compete, and overtake each other, failing to establish clear boundaries or a consistent hierarchy.

Anna Tsing (2015: 4) considers patchiness as “a mosaic of open-ended assemblages of entangled ways of life, with each further opening into a mosaic of temporal rhythms and spatial arcs” which allows for the appropriation and manipulation of various forms of capital (both natural and man-made). For Tsing, the gaps and overlaps of labor and governance at the margins of capitalist production help underpin capitalism as a whole. By following the harvesting and circulation of matsutake mushrooms, she figures marginal production as a form of “salvage accumulation,” a process that produces value from degraded, fire-ravaged landscapes. While acknowledging her insights positing forest gathering as a constitutive component of, rather than a network outside of, global capitalism, I aim to extend the concept of patchiness beyond the economic sphere in the direction of governance. What does patchy sovereignty look like and how is it enacted in conditions where allocation is contentious and unclear? I seek to elucidate how modes of dispersed sovereignty are enacted in spaces of rupture and neglect by exploring the histories embedded in the landscape and the contemporary practices that they make possible in the mountain valleys of Tajikistan. While patches allow for novel economic arrangements, they also reframe constellations of power and control that allow seemingly empty land to nourish various endeavors.

War on Deforestation

At the outset of Soviet resource management in Central Asia, grand designs were hatched. These took on geographically-specific dimensions. Following the October Revolution in 1917, the Russian Empire's holdings in Central Asia were lumped together into one large entity titled the Turkestan Autonomous Soviet Socialist Republic (initially, the Turkestan Socialist Federative Republic from 1918 to 1924). Following quixotic czarist schemes, the desert plains of Turkestan would to be irrigated with mountain-fed rivers (Pravilova 2009). As for the mountains holding the glaciers that would slake the thirst of the desert's cotton boom, state planners intended to cover them with forests. This was a risible goal considering the steep, foreboding terrain, which does not enjoy year-round precipitation favorable for forest growth. Instead, Central Asia receives most rainfall in the colder months, creating significant snow pack at higher elevations (leading to the formation of Fedchenko Glacier, the largest non-polar glacier in the world) but little rainfall below treeline during the warmer months. However, Soviet bureaucrats were nothing if not optimistic of their capabilities.

“The state of the mountain forests of Central Asia quickly improved after the accession of Turkestan to Russia, the designation of “state-owned forests” and the start of their safeguarding, inadequate as it may have been. In these years the work of reforestation began” (Kocherga n.d.: 30). The mountainous areas of Turkestan were later sub-divided into national territories that ostensibly gave each ethnic nationality its own territory. The states drawn throughout Central Asian Turkestan were in fact ill-matched, erratic. The borders so grossly failed to encompass their titular populations that it seemed by design. As a result, Tajikistan was cut off from the largest Tajik-speaking population

centers (in the contemporary urban centers of Samarkand and Bukhara in contemporary Uzbekistan). But the Tajik Republic did get a lot of mountains, such that the state is 93% mountainous (considered where the elevation is higher than 1,000 meters). Thus, one of the key concerns for the Tajik Soviet Socialist Republic became forest management in mountain regions.

Prior to the Soviet era, forest stocks had been a concern for those administering Tajikistan's territory, primarily because there were so few of them. Work on erosion and afforestation began in the 1880s, when parts of the region were conquered by the Russian Imperial Army (Yusupov 1966). The first research entity dealing with forest management in Central Asia was established in 1927: the Central Asian Forest Research Station (SATsLOS). ¹⁵ SATsLOS was then reorganized in 1934 and placed under the control of the Uzbek Soviet Socialist Republic. Shortly thereafter, the Uzbek Institute for Forestry was created in Tashkent in 1936. By 1948 it had become the Central Asian Research Institute of Forestry (SredazNIILH [СредазНИИЛХ]). For the most part, forestry policy was uniform across Central Asia, dispensed from the SredazNIILH to the associated research stations and institutes throughout the republics, which in turn set the parameters for the State Forestry Agencies (Leskhoz) and other ecological resource managers.

To enhance the study of erosion effects in mountainous regions, the Chatkalskay Mountain-Amelioration Experimental Station was established outside the Uzbek capital city of Tashkent and another in Varzob, in a gorge just north of the Tajik capital. These

¹⁵ The Central Asian Forest Research Station (среднеазиатская центральная лесная опытная станция [SATsLOS]) included Tajik and Turkmen stations, along with 5 other stations focusing on specific regional needs. SATsLOS fell under the All-Union Scientific Research Institute of agroforestry [всесоюзная научно-исследовательского института агролесомелиорация] [VNIALMI], and worked on 34 different research themes. The first Proceedings of the of the Forestry Institute were published in 1936.

centers had experimental plots to study the types of growing conditions and forest properties that would produce the most productive species and mechanized terraces to determine ideal technical growing methods (Kocherga 1966: 18). These research centers also organized “major complex research expeditions to mountain territories in all the republics of Central Asia [involving] specialists from various branches of knowledge: hydrologists, soil scientists, foresters, forest ameliorators, agronomists, hydrotechnicians, mechanizers and economists” (ibid.: 19). The policies focused on afforestation of mountain slopes, growing tree borders along irrigated fields (particularly in desert regions), greening city boulevards, leisure parks and health resorts (Yusupov 1966). The emphasis was on meeting annual and 5-year quotas, which dictated the amount of hectares to be planted, in order to combat erosion and protect against lands slides, maintain the water table and improve air quality.

However, the Tajik station closed and was not reopened until 1963 (Yusupov 1966: 5), bolstering the sense that Tajikistan’s forests were mostly managed from afar. This dependency, in ecological and administrative matters, stemmed from the fact that the Tajik Autonomous Soviet Socialist Republic (one step below a Soviet Socialist Republic) was formed from a portion of the Uzbek SSR in 1924. As a result, many of the non-essential administrative entities continued to operate out of Tashkent, in the Uzbek SSR. Many government entities were not established for some time in Stalinabad, the capital of Tajikistan (renamed Dushanbe in 1961). Stalinabad was built on the site of a small village, so it took several decades following ascension to full SSR status, on December 5, 1929, to build up the trappings of a full republic. It should be noted that because of the

challenging and remote geography of the Tajik SSR, it had always been the poorest Soviet republic, an ignoble distinction it continued to hold in the post-Soviet space.

With access to a nearly limitless supply of Siberian timber for construction and industry, Central Asia was always understood to be a net importer of forest products. However, from the outset, Soviet foresters and planners recognized the many benefits of forest protection, citing a need to wage a “battle for afforestation” (Nigmatov 1977). The study of afforestation and its practical application were primarily focused on mechanized planting on terraced steps of pine trees and fruit orchards. Such an endeavor meant that monocrop forests would typically be grown to enable mechanization to the greatest extent possible. Although a great deal of Central Asia’s territory is low-lying desert and steppe, the Tian Shan mountains in Kazakhstan and Kyrgyzstan and the Pamir-Alai mountain ranges across Tajikistan and Kyrgyzstan provided ample mountain terrain. While Central Asian urban plantings and narrow tree bands alongside fields have held up well, most mountain forest plots failed planned targets (Fleming 2017). While the planners in Moscow and Tashkent strove for industrialized efficiency, the meager soil and climatic conditions thwarted their grander ambitions.

For all of its inefficiencies and missteps, the Soviet forestry complex was well-funded, held adequate technical resources and maintained useful maps of its territories and species distribution. By the 1950s substantial numbers of specialists were trained to work in the forest institutes and the forestry sector – many of whom were native Central Asian residents. The first graduate degrees in forestry studies were initiated in 1944. As outlined above, the center for regional forestry study and management for Central Asia was in Tashkent, the capital of Uzbekistan. In 1948, the Uzbek Institute for Forestry

became the Central Asian Research Institute of Forestry (SredAzNIILH

[СредазНИИЛХ]).¹⁶ According to the director's introduction to a research report, the institute had 11 tasks set out under its auspices:¹⁷

- 1) Improving Central Asia's forests to enhance their productivity through "rational management"
- 2) Improving the "water regime," through battling erosion, flooding and land slides by planting fruit trees and vineyards
- 3) Securing and foresting the sandy deserts to enhance their productive output
- 4) Establishing protective forest cover on irrigated and rainfed territories
- 5) Researching ways to grow high-yielding artificially modified plants; analysis of methods to establish forest swaths; kolhoz groves and linear plantings along roadsides
- 6) Determining scholarly methods for 'green building' specific to Central Asia: entailing green zones around cities and industrial sites, to provide pleasant conditions for work and play of the workers
- 7) Selecting and introducing better types and sorts of plants that are faster growing, higher yielding and more pest-resistant.
- 8) Providing seeds and seedlings for forest productivity and silviculture
- 9) Protecting forests from pests and diseases using chemical and biological methods
- 10) Mechanization of forest efforts to enhance output, particularly developing machines for mountain regions, deserts, etc.
- 11) Economics and organization of forest efforts under Central Asian conditions (Yusupov 1966: 9)

There are several things to note from this list of forestry administration priorities in the Soviet period. The most important is raised in the first of the Institute's eleven tasks:

"rational management." The Soviet resource management paradigm centered on enhanced productivity through rationality. Forest economic studies sought to increase

¹⁶ The other republics of Central Asia also provided research on forestry and forest protection through Leskhozes, nurseries, kolhozes and sovhozes (Yusupov 1966: 8). The SredAzNIILH maintained 6 experimental forest stations and 7 reference stations (опорных пунктов) throughout the republics. By 1966, there was a staff of 258 at the Institute, 125 of which held graduate degrees, 1 had a doctorate, and 25 were doctoral students (ibid. 10).

¹⁷ These issues were tackled by several departments in the Institute: forest management, mountain melioration, desert development, forest planting for field protection, forest plantations, green construction/building, selection and introduction, forest protection from disease, mechanization alongside construction-studies bureau, economics and organization of forestry and laboratory for radiobiology, Forest Soil Science and Agricultural Chemistry.

forest productivity through “complete rationalization” of the study and conduct of forestry (Proceedings of SredAzNIILH 1966: 220). The institute itself was the conceptual and scientific phalanx that would guide the rest of the state’s efforts. The institute set plans, created priorities and provided biological materials to afforest Eurasian territories. Rationality was a core principle in achieving these goals.

The Ministry of the Leskhoz in Moscow set norms for mechanized, manual and horse-led work for the sector. Given the unforgiving terrain, these plans were never met in any year in Central Asia. The Institute recognized that the Ministry’s plans were “unacceptable” for Central Asia (Proceedings of SredAzNIILH 1966). The solution was more rationality. In response, the institute set out new norms for outputs and productivity, had to work out a “more rational organization of labor and output norms for all forms of work” (Nigmatov 1977: 215). Setting out these norms involved studying the organization of productive processes, the structure of operations and the use of work time in their completion in typical Leskhoz operations. “To account for time and output norms photocronometric observations were gathered on Leskhoz workers” (ibid. 215-6). These assessments began in 1955 and by 1958 were broadened to other sectors, such as consumer goods. The results were instituted as a means for defining workers’ salaries in Leskhoz across Central Asia in 1961.¹⁸ But, for all the hard work enhancing

¹⁸ From 1958 on SredAzNIILH tried to work out the rationalization of the organization of labor and production in the Leskhoz for each type of natural condition (mountainous, valley, desert and mixed Leskhoz). These rationalization involved three dimensions:

1. Overall decrease in the number of workers doing seasonal work, carrying out seasonal work in their spare time, mechanizing labor-intensive processes, and improving the organization and use of workers.
2. Increasing the material concern in improving the workers’ daily lives (bita rabochih) by implementing new systems for valuing labor, building public housing and separate apartments, organizing trade, medicine and cultural opportunities in living quarters, dropping off workers to distant work areas and providing special clothing for dangerous conditions.
3. Strengthening work discipline, raising production standards, streamlining accounting and payment requires of the managers: constant control, securing work areas, accurate and total dispensing of attire

productivity, the results were not promising. “Applying clear-cutting to these forests did not allow for their natural regeneration. As a result, the forest area over the last 20-30 years in the majority of Leskhozoes and forest zones has decreased by 30-55%” (Nigmatov 1977: 135).

As was the case with many plans set out during the Soviet period, the realities on the ground could not match the optimistic vision. In the face of these setbacks, the Central Asian researchers sought help from the center: “In connection with an unsatisfactory organization of remuneration in Tajikistan, Turkmenistan, Kyrgyzstan and Kazakhstan, from 1964 SredAzNIILH developed common standards with the guidance of LenNIILH” [Leningrad Research Institute of Forestry] (ibid. 216). Unable to meet all the goals on their own, Central Asian foresters struggled to meet the far-reaching assignments outlined in the 11 bullet points above. Botanical institutes were established to find ideal crops for local conditions¹⁹, dozens of graduate researchers were funded to study pests, grafting, terracing of mountain slopes, planting in sandy soils, and a host of other endemic challenges. Slowly, the Soviet academic apparatus chipped away at the 11 points. Reaching these goals meant moving beyond the rationalization of labor to the mechanization of it.

Given that increased rationalization of work flow was inadequate, planners turned their attention to extending their capabilities through mechanization. “The main factor in the growth of productivity in forest management rests on the increased use of technical equipment, better use of machinery and lowered expenses of manual labor” (Nigmatov

and from the workers: increase the battle (bor’bi) with filling up the working day, competing for the highest ranking brigades of communist labor. (Nigmatov 1977: 217)

¹⁹ One such botanical park still stands proudly atop a hillock overlooking Khorog, the capital of the Pamir region. The park boasts being the second highest botanical garden in the world.

1977: 220). Rationalization also meant mechanization. “An important provision of the rational use of land resources of the Republic’s GosLesFond is based on mechanizing all labor processes of forest production” (Vihrestok and Padalko 1983: 39). But rationality also required extending modernist techniques to overcome natural ecological limits. “Research shows that the new task will be to increase the level of mechanization to work on even more challenging forest growing conditions” (ibid.). In order to meet the plans set out for afforesting thousands of hectares, forestry managers had to reconfigure how they valued or measured different kinds of plantings.

Consequently, the efforts of foresters in Central Asia diverged among two complementary though competing spheres. They had to improve ecological conditions of the landscape (Tasks 2-6) and produce successful and desirable crops for Republic-wide consumption (Task 7-9). However, forestry agencies were measured by their success in acreage, rather than quality of yield. Considering the problem in 1980, a forestry scholar noted that, “up till now, defensive afforestation of certain territories towards the overall problem of mountain amelioration has not existed. All plantings of valued forests, fruit and nut trees, counted as if they were for defensive afforestation” (Padalko 1980: 38). Mechanization and rationalization worked best when plantings were uniform and simple. This privileged quantity over quality. Thus, orchards were folded in to “defensive afforestation,” increasing the number of trees in the deserts and mountains, to the detriment of quality. These directives were set out by the Communist Party of Tajikistan, which required that foresters “not only establish rainfed orchards and vineyards, but create a complete growth of rain-fed plantations on an industrial scale. This means that large-scale marketable orchards must be established with the latest agro-technology and

with industrial labor methods” (ibid.). One conceptual outcome of Soviet forestry was the fusion of forests and orchards. Central Asia’s forest lands were envisioned as industrial fruit plantations, geared toward covering the landscape with vast swathes of timber rather than high yields of flavorful fruit. Quality silviculture was limited to small household plots adjoining homes and interspersed in paths amongst them.

Muddled work

To try to understand how forestry institutions operated in Vanj, I spent a good deal of my time trying to get a handle on what foresters were doing. However, they had often proven elusive as an object of inquiry. I struggled for months to find out what their forest stands held, where they were located, how they were managed, and how affairs with local residents were negotiated. Adham often grumbled that “the foresters force us to keep cattle out of decent grazing locations. They think they run these government lands as though they were the king. They always threaten me with fines whenever I step in the forest, not that I listen to them, but when you hear axes chopping down by the river you can be sure it is the forester down there.” Yet on my many rambles throughout the valley, there were few forest plots to visit and fewer foresters overseeing them. Most of the forest cover to be found in the Pamirs was maintained within the boundaries of villages, in patches of greenery that clung to the banks high above the river. The *leskhoz* held control of the lowlands, despite their paucity of those arboreal zones. To understand how the *leskhoz* made use of these meager spaces, I cultivated relationships with high-level *leskhoz* administrators and became friends with the low-level staff thrashing through the thorny brush with razor-toothed scythes. Slowly, an image of their dealings came into

view. Forestry management indexed broader forces at work in everyday interactions between citizens and state, workers and institutions, people and plans. There were no clear pathways of control, but rather a negotiation as different actors took advantage of openings to sustain the vision that they wanted.

It usually involved some serious bushwhacking to find the foresters at work. After the elation of a successful search wore off, I would spend the rest of the day trying to help, but I mostly ended up observing them chopping down trees that seemed too small to be worth the effort. It was nasty, small-scale logging, due to the prevalence of thorny and spiky undergrowth – dominated by sea buckthorn. The foresters worked in brigades (*brigadi*), like they had under the Soviet labor regime. During intensive forest cutting, one man chopped down the tree at the base while a helper or two separated the small branches into bundles. The first man worked with an axe with bare hands while the second one used a leather hide glove on the left hand and a sawtoothed hand scythe in the right. The small bunches were held together with two long twists of willow (*bed*) branches girdling the bundle. Each bundle would heat the clay oven (*tandir*) twice for bread baking, while the larger boles were stacked for the institutional buyers.

Sometimes when I found them in the brush they would be working individually, slashing vines and tangled branches to reach trees of meager girth. They would reconvene for long cigarette and tea breaks with their boots splayed in the dirt. Working in a forest covered with sea buckthorn was horrible. “I have to pull out the thorns every night,” Shirin complained. “The thorns stick to my hair, under my clothing, and their tips snapped off and left itchy remains under the skin. Some days I am just trying to make it to lunch.” One of the foresters would go off and supplicate a neighbor to bring them a big

pot of something for a mid-day meal, along with bread and whatever candies the workers had brought along in their satchels. Invariably, a bottle of vodka emerged with the meal, which either numbed the pain or put an early end to their workday, or both. The thin logs were the sum of what would be provided to the agencies in the valley center who had ordered the wood from the *leskhoz's* meager river-side territories. Their scraggly timber provided a winter heat source for the municipal government, the police, and the schools.

The foresters primarily chopped wood in the early fall. In the heart of a dense, riverside forest plot, Shirin reiterated the number: “250 cubic meters. This is how much the army base had ordered from the *leskhoz* this year. We all have to pitch in and meet a portion of the quota.” Another 100 cubic meters of timber were on order for the smaller agencies in the administrative center of Vanj valley. As the foresters were completing the army base’s timber order, a massive URAL transport truck swung down into the clearing being hacked out of the woodland. The conscripted teenage army recruits, music blasting on their cellphones, loaded up the misshapen logs every day for two weeks. Fifteen cubic meters at a time. “The *leskhoz* got 40,000 somoni (\$8,000) for the army contract,” someone tabulated as we sat in the shade in between chopping sessions. Business-to-business connections filled the *leskhoz* coffers beyond the base salaries foresters were promised by administrators at headquarters in Dushanbe. The new director, Jabor, had a high-ranking brother providing him crucial cover (known colloquially as a roof — *krisha*), which allowed him to organize a slew of new cross-institutional business arrangements without fear of someone else trying to take a cut. Jabor’s brother had been the governor of the Pamirs in years past. The director had negotiated these sums directly with his counterparts and some of the foresters grumbled as to why their salaries had still

been cut last month even when the agency was getting paid. Shirin said he had been promised \$70 that month, but only received \$62. “I am supposed to be getting a salary from the central government to protect the forest,” Shirin noted, “but somehow my salary is getting cut even as I am making money for the agency. I’m not in a position to say anything to the director but something doesn’t add up.” As a result, the *leskhoz* operated as a for-profit timber company on marginal lands while trying to assure their overseers in Dushanbe and international donors that they were conservationists.

This type of forestry was a far cry from what Soviet planners had envisioned. There was nothing systematic, mechanized or “rational” about it. When I interviewed the executive director of the *leskhoz* in Dushanbe, he explained that the agency was now upholding its long-standing mission. “We have always been a protection agency. We have very few forests in our country and the job of my workers out in the regions is to protect what we have from people who don’t understand their value. We had an important job in the Soviet era and our new regulations follow that — we don’t cut trees, this is not allowed in my agency.” What the foresters were really doing, when I visited them at their work sites, was chopping shrubs and brushwood that had grown wild along the riverbank for local government agencies that needed firewood. Hardly ecological preservation. When the foresters were not working in brigades to meet those institutional orders, they were scattered among their villages, overseeing their own homesteads, and letting neighbors access *leskhoz* resources for a nominal fee, or with a blind eye. The *leskhoz* was fundamentally muddled in its purpose, working to preserve ecological resources while harvesting them for its own income.

Fluid lands and fiery tenants

In the Tajik Soviet Socialist Republic, land was held by the government in a state fund, and subdivided by use: agriculture, industry, forests, etc. Under this arrangement, forests were split into two types, also by use: forests of government origin and forests managed by collective farms.²⁰ Paralleling efforts to irrigate Central Asia's desert floodplains in the tsarist (Pravilova 2009) and Soviet period (Peterson 2011), Russian managers in Eurasia wanted to increase the productivity of their upland territories. Glacial runoff from the mountain zones needed to be controlled and deployed throughout the vast desert and dry steppe. "Not only should trees be planted on mountains but also on all possible locations – along all canals, roads, and river plains. Especially forest-free territories of the republic can, in a few years, be completely forested (*oblesennimi*) in the next few years!" (Botanical Institute 1948: 7).

As I explored the archives in Dushanbe at the Academy of Sciences and the National Library (which had requisitioned resources from across the country to help fill the "largest library in Central Asia"), I recognized a singular focus among early resource managers. They sought to wage a "war against deforestation" in the early years of the Tajik Soviet Socialist Republic (Botanical Institute 1948: 3). This prerogative perpetuated the mentality of Soviet managers on the heels of the Great Patriotic War (WWII) to keep a wartime footing, seeing the vast steppes and sweeping mountains of Central Asia as another frontier to conquer. In the lowlands, efforts were concentrated on irrigation. In the mountains, this meant afforestation on a vast scale, a project which

²⁰ The total national forest territory as of 1983 (the time of the last forest census) constituted 1,784 million hectares. Only 2.9% of the Tajik government territory was covered in forests — 52,000 hectares (Padalko 1980: 5). The entire national forest stock, inside and outside the Leskhoz, 292,100 hectares or only 2.1% out of the total land area of Tajikistan (Khusamov et. al. 2009: 15).

ultimately never panned out. The landscape of Tajikistan was simply too dry and intractable to satisfy Soviet visions.

Two important characteristics of land use were introduced that would influence land management a quarter century after the Soviet Union's demise. First, imprecise and exchangeable land swaps between forest and farm managers left uncertainty surrounding where boundaries were drawn and who had control of particular plots. This was less problematic during the Soviet era because administrators frequently redistributed resources and territories between state entities as they pleased. Boundaries between institutions were fluid, only as significant as the *blat* connections (Ledeneva 2009) keeping managers connected. “The main administrative mechanism created to manage socialist property – the allocation of administrative rights – worked only through a complex system of informal exchanges and reciprocity” (Verdery 2003: 46). The application of Soviet bureaucracy was remarkably consistent across Soviet space, even as it allowed for an iterative “feedback loop” between the purveyors of the state control and local conditions (Luehrmann 2011). However, the ability of upper-level bureaucrats to requisition resources was consistent during the Soviet period (Rosner 1986). As those administrative rights were exercised, the fluid interdependencies and relations based on corrupt appropriation became very problematic for land users. As Verdery went on to note in Romania, individuals had not taken this creative allocation of resources sitting down. The seizure of resources by managers “set them at odds with the people at the bottom of the food chain, the collective farm peasantry, who engaged in constant struggle to appropriate some of that product for themselves” (Verdery 2003: 47). This “constant struggle” is a crucial second dimension.

Soviet land use policy not only administratively separated people from land management but also portrayed them as damaging and deleterious to existing resources. Such perspectives painted locals as the primary danger to Central Asia's supposedly abundant past resources. In the archives, I found that forestry documents prior to 1955 were committed to disparaging local users as the reason for ongoing forestry failures. "The cause of the deforestation of the mountains of Central Asia resulted from the predatory use of their wealth [*bogatstvo*] by past use... Inhabitants of the mountains and piedmont plains gathered construction and ornamental woods and fuel from mountain forests, grazed cattle in them, and cleared forested areas to plant agriculture. Thus, from the beginning, fire and axe, then livestock and plough, turned forest into bare, lifeless spaces" (Kocherga 1951: 30).

The portrayal of dangerous residents compelled the ameliorative intervention of the Soviet state. This perspective undermined the possibility that whatever forests, irrigation systems and pasture lands had been in place when tsarist and Soviet forces surveyed the landscape had actually been the *product* of local users. As Fairhead and Leach (1996) assert in their seminal paper on African deforestation, colonial legacies continued to hold sway in contemporary ecological assessments, leading to the misrecognition of the role that local users had in growing, rather than destroying, forests. Similarly, Tajik residents maintained ambivalent and, at times, antagonistic relationships with state resource managers. They were the enemy rather than the saviors. These tensions were heightened in the post-Soviet period once local users came to depend on formerly state-run lands for their livelihoods. As institutional managers continued to espouse mistrust toward the local population, people maintained a "constant struggle" to control ecological resources.

Caretakers of farms and forests

There is very little arable land in Vanj valley. Of the total area of 480,000 hectares, only 0.02 percent was cultivated, less than 10,000 hectares. “There are rocks everywhere,” Adham sighs. As the director of the *sovkhos* in the 1980s, he cultivated a huge orchard in the hamlet of Dasht, further up the valley. “My workers had to remove all the rocks ourselves. It’s a lot of work to make the soil workable. The land needs to be treated like a child.” During the Soviet era, the *sovkhos* managed almost everything in and around rural villages, including a sizable fleet of agricultural machinery and productive buildings (Bliss 2010: 278). “You can’t believe what we could do back then. Now even getting this shop open at the edge of Ardobak was a huge effort.” The assets Adham held under his control were supposed to have been divided among residents following privatization in the early 2010s, and then managed through the collective mechanisms established through Dekhan Farmer's Associations. Though they were meant to coordinate and support self-sufficient household farmers, the Associations provided little benefit. Most of the farm implements and structures that they could have benefited from were either sold for scrap or laid to ruin by post-Soviet *sovkhos* directors. Instead, farmers turned to oxen, wooden ploughs, and manure to enrich and prepare the land and their own hands to remove the stones. Piles of rocks girded every good farm plot, serving as testaments to the hard work of local farmers who continued to add to them with every pass through their fields.

After the fall of state-led resource management, the *leskhoz* ended up with the majority of the landholdings in Vanj. “There are 58,000 hectares of land in Vanj and less

than 5,000 of it is what I would call good quality land,” the *leskhoz* director, Jabor, explained to me at a later meeting. “On most of that we can only grow wild grasses (*alaf-i tabi*) for fodder. At most, a few hundred hectares of our own property can handle potatoes for planting. Another 1,000 hectares are probably only good for pasture.”²¹ Jabor was forced to contend with the vast, rocky terrain separating villages, *sangov*. Jabor explained that his hands were tied. “We cannot really make any improvements to the *sangov*. We are waiting for donors to give us trucks, bulldozers and excavators but we've already waited for two decades and nothing has appeared. I don't trust local people with forestry -- they don't have the real skills. But if they at least put in some effort, maybe we can achieve something and make this land productive.” At the conclusion of fieldwork in 2015, a national “Strategy for Developing the Forest Sector” was being drafted in Dushanbe spanning 2016 to 2030. The strategy foresaw broad participation from civil society with a heavy reliance on community forestry management. The Tajik state was being encouraged by international development NGOs, who were drafting most of the content of the strategy, to relinquish control of the underperforming territories to residents. This strategy mimicked the process that had taken place with arable land (when *sovkhoses* were decollectivized) and was now shifting to secondary resources, such as forest zones.

The *leskhoz* controlled territory extending out from village boundaries along barren swathes of mountainside, sprinkled with the occasional sparse juniper stands in upper

²¹ The official forest area in Tajikistan is 410,000 ha (three per cent of the total land area of the country), but according to experts it is likely closer to 250,000 hectares (Kirchoff and Fabian 2010). The Tajik Forest Code states that “a forest is a complex of natural vegetation ... [in which] no less than 10 per cent of the area should be covered by woody plants, with a total area not less than 0.5 hectares” (Tajikistan 2011).

reaches. Relatively flat land, with access to irrigation, had been planted with poorly producing orchards during the Soviet period. Over the previous decade a majority of these orchards had been distributed to individuals living close to the plots (on a per household basis), as the *leskhoz* was not capable of managing them on its own. This distribution was guided mostly by whoever wanted to deal with the underperforming orchards. Many plots had been overrun by weeds and shrubs, while a few enterprising landowners turned them into flourishing domains. Some had chosen to make the investment of time, money and effort in grafting newer, more profitable varieties onto the gnarled trees. It was a challenge to find committed caretakers for the mismanaged old orchards of the *leskhoz*. In contrast, individuals had painstakingly improved the land that was nearest and dearest to them, that which had been acquired from the disbanded collective farms.

Residents became the *khozyain*, the caretakers. Douglas Rogers' (2012) thorough interrogation of the concept of *khozyain* on a de-collectivized farm in the Ural Mountains reveals how notions of morality were freighted with the legacies of state responsibility that often cohered around figures of authority. When the resources of the *sovkhov* were still under the control of the farm director, people looked to the authority figure to resolve disputes and manage affairs. Caroline Humphrey has also noted how these administrative powers were often congealed within a leading authority figure: "the cultural concepts of 'domain' (*khozyaistvo*) and the state (*gosudarstvo*) encode in themselves from the beginning the reification of political entities in which a central personification of power creates order" (Humphrey 2002: 28). However, in Tajikistan, the decollectivization process had reached a point where authority was no longer under centralized control. The

leskhoz director, the *sovkhos* director, and other heads of institutions had few resources to marshal for the benefit (or harm) of the population. *Khozyains* were limited to the dispersed, individuated household territories and whatever spaces they could convince the foresters to lease temporarily. Caretakers were no longer in charge of state-planned institutions but were masters of very circumscribed domains, maintaining control over 90-year land leases reluctantly divulged by the state to households throughout the country.



While Vanj residents were in charge of their household plots, this only constituted a minority of the total land area. The *leskhoz* was the largest landowner in Vanj valley — controlling 58,000 out of 72,000 hectares. Maintaining control over this area rested on personality and neighborly connections. One forester in particular oversaw his territory like a fiefdom. Mubor handled the land entrusted to him with a firm grip, managing to collect sizable returns for the head accountant in the main office, and for himself. I spent a few days living in Mubor’s house, which was several hours drive up the valley from the main *leskhoz* offices near Ardobak. As a result, he was burdened with less oversight, allowing him greater leeway in his dealings with residents. He still felt burdened all the same. “The work of the *lesnik* isn’t only physical but it’s also psychological,” he tells me over fried potatoes in his living room. “Sometimes people get angry because they don’t like the contract or the crops aren’t coming up. They don’t want to give you what they had promised; what they had set down with their own signature in the contract with the economist.”

These quarrels were acceptable to Mubor because in the autumn the *lesnik* (forester) is the “lord” of the community. “Did you see how people put their arms around me and whispered nice things to me at the funeral? They all wanted to get a good deal with me. If I don’t like someone then I won’t give them any access to firewood, land, whatever. So everyone is nice to me. Then, in the spring, whoever has the oxen to plough the fields, or a functioning tractor, is the ‘king’.” In running his *leskhoz* territory with impunity, he was able to distribute coveted land parcels to family members and close relations. His role as an intermediary of the forestry agency hinged as much on his control of agricultural land as it did on access to timber.

Mubor also sold rights to collect firewood in the brushy, meager forest lands that spread along the river bank and up into the side valleys. Households would typically order firewood by the truckload, cut the wood themselves, and hire one of the few neighbors with a functioning Soviet truck to haul the bundles to their yard. The teenage boys were often the lead workers on these tedious and thankless tasks. Residents also harvested firewood without consent. Firewood was essential in Vanj, and most of rural Tajikistan, since electricity was too sporadic and the voltage too low to power electric heaters. Coal was purchased by most households, but it was of poor quality once domestic coal mines had been reopened in recent years.

“It’s like trying to burn rocks,” Azim would often complain, “is there any coal in there or just black cement.” Regardless, coal on its own was too expensive to heat the inner rooms of the house through the long winter. For those families with surreptitious

access to the public forests, or with their own woodlots, firewood was the best substitute.²²

I came across Furuzon shearing his sheep in his yard one day when I noticed a stack of freshly-cut wood in the corner. “Do I ask anyone permission for this wood, are you joking? The *lesnik* hands out 'contracts' to his friends but I don't need that. I walk into the property by my house. No one can stop me.” Along with firewood (gotten legally or not), and coal purchased from middlemen, families also used dried cattle manure in the small metal pipe stoves that functioned as both a cooking surface and heating source in the inner sanctum of winter quarters.

Apart from leasing land for agriculture and selling small timber rights, the *leskhoz* also owned vast tracts of the surrounding mountainsides, which were used for grazing cattle for a couple months in the summer. Not everyone recognized the *leskhoz*'s authority over those pastures (claiming ancestral rights or common pool access), and even fewer paid the small fees per head of cattle. Despite their small staff, meager salaries, and utter lack of equipment, residents spoke of the foresters (*lesniki*) as visible instantiations of a state presence. At the same time, international agencies promoting climate change adaptation considered the *leskhoz* the backbone of many of their projects. As a result, foresters continued to be thrust into the middle of social and ecological negotiations over land and resources. Sovereignty did not rear emerge at the national or regional scale but was rather situated in the zones surrounding fields and pastures – in the minor struggles and allowances allowing access to meager, immediate resources. These

²² Most of the families in the village I lived in had their own woodlots which they had acquired through privatization and distribution of the collective farm's territories a decade ago. This was not a widespread asset throughout the Pamirs.

localized instantiations allowed the *Leskhoz* to practice its role as local sovereign (thanks to the agency's legal ownership of nearly all land that was not directly surrounding homesteads).

Tajik Forestry: Rational and Mechanized

The investment of toil onto *Leskhoz* lands by local farmers was further muddled by confusion over land status. A good deal of land had commonly been loaned to the *sovhozes* in cross-institutional exchanges and arrangements. Agencies owned vast territories which were at times more beneficial for the skills and needs of other agencies (or the machinations of Communist Party and farm bosses, see Verdery 2003). Further completing the arrangements, some *Leskhoz* land had been loaned to the collectivized farms for pasturage that both agencies could use (Vihrestok and Padalko 1983). The *Leskhoz* took on land that was more suitable for orchards only if the farms could not take up the work upon itself. However, many collectivized farms did take on arboreal and silvicultural tasks. Forestry became so important to *kolhozes* and *sovhozes* that they established an inter-farm farm forestry fund (*MejKolHozLes*) and held All-Soviet meetings for their directors.²³ Because of these exchange agreements, many of the best timber plots and orchards had actually been taken over by the collective farms and then, in turn, passed onto local residents through post-Soviet land distribution agreements. As a result, there were occasional disagreements over whether some property had been owned by the collective farm and should be distributed to households, or was instead owned by the *Leskhoz* and should be

²³ Across the Soviet Union, 22% of all forests (10 million hectares) were traded between *Leskhoz* and *sovhoz* lands, using up 17 million cubic meters of wood annually (Lenizdat 1970: 5).

rented by contract to those households. Soviet roots took circuitous paths to grow post-Soviet fruits.

Furthermore, the disinclination to use existing Leskhoz orchards had to do with fruit type. Orchards planted by Soviet institutions in Tajikistan were typically large apricot plantations. State silviculturalists found apricots to be best suited to their needs, evidenced by the title of a book about apricot cultivation in northern Tajikistan: “Fruit Conveyor of the Golden Valley,” which was filled with praise for the fair apricot (Kasimov 1989). The output from apricot orchards could be sent to juice, fruit jam, and dried fruit processing facilities in the valleys. These processing facilities were dismantled or destroyed during Tajikistan’s civil war. Local and international markets for these crops had to be found anew. The apricot varieties were also chosen because they satisfied plans and quotas, rather than for their flavor or salability. Thus, apricot orchards were often on the outskirts of villages and beyond the reach of limited irrigation infrastructures.

As mentioned before, Soviet foresters simply wanted to get hectares of land covered with trees, regardless of the quality of yields produced. These characteristics did not meet current needs. The households who took over Leskhoz orchards in Vanj commonly tethered milk cows in the spring, begrudgingly harvested a few sacks of bitter apricots in the fall, and hand scythed a few bunches of wild grass for winter fodder. According to the contracts, they were supposed to give 30% of these outputs to the Leskhoz, but almost everyone just paid a small cash fee, the Leskhoz accountant told me. Complete transformations of the orchards were needed for significant fruit production and few people made the effort because they did not own the land.

Patchy Forests

While the *leskhoz* administrators and staff utilized forest resources in the valley for their own machinations, the residents of Vanj had turned to the patchy forests to graze their cattle, as part of a broader complex of vegetal, sylvan and animal husbandry. These requirements often came into tension with plans forest managers had set out for communal land holdings. The politics of resource management necessarily introduce fissures between the subjects enacting the toil and the planners seeking to regulate them. “When resources devoted to enforcement of institutions are limited, resource use patterns are far more likely to diverge from what rules specify” (Agrawal 2003: 257, see also Mosse 2013). The institutions of Vanj were indeed lacking in resources. The *leskhoz* did not have funds to buy gasoline for its sole truck, the Farmer’s Association could not hire an agronomist (as it was required to), and the Village Organization which was supposed to oversee resident-run development projects had failed to maintain a minimum balance in their bank account, temporarily losing its status as a viable recipient of donor funds. Resource control was a haphazard collection of unenforced rules and variable demands without a clear hierarchy of management.

In the spring of 2016, conflicting resource claims came to the fore as I stood on the roadside watching owners taking their livestock home. The collective village herd, with every household adding their animals and then taking turns looking after them, had been shepherded back down to the village from the barren hillsides and the children shooed their household’s flock back to their stables. A different household held a rotating responsibility to oversee the flock each day, until the ground was snowed over and the animals retired to the barns for winter. Before the cold set in, there were constant

arguments between the foresters and the local people over where their animals could actually graze. This tension dated back to Soviet concerns. “Protecting existing tree growth requires the necessary regulation of animal grazing, and in other cases their complete banning, both in summer and winter pastures of the GosLesFond” (Government Committee 1982: 3). The government's forest lands (GosLesFond) were thus always under grazing pressure, which were only compounded as Tajik households turned to livestock as a form of savings. Azim explained that, “during the Soviet system, we only had two cows and two goats. Now, I have seven cows and twenty-three goats. Some of my neighbors have forty sheep. This is our bank account.”

Since low rainfall and meager soils continued to bedevil Pamiri residents, there was never enough vegetation to feed the herds. Every morning, from each village, a swarm of goats, sheep and cows would wander out in search of a meal, nominally herded by whoever was in charge for the day. After eating through the new grass that followed the spring rains, the animals would turn to nibbling on tree bark, the shoots of tree saplings and whatever leaves they could reach on low-hanging trees. Exacerbating the effects of this “plague of hoofed locusts” (as John Muir called livestock that roamed the Sierras), was their growing numbers in post-Soviet Tajikistan. Apart from growing orchards, most rural households in Vanj continued to increase their livestock numbers as a way to hedge against future uncertainty. The Tajik government ensured that meat prices adhered to a narrow price band. Thus, families could always sell a cow or some goats on a moment's notice, regardless of the season or market forces. These household strategies placed significant pressure on forest resources.

One mid-summer day, walking back from a wedding with my host, Azim, and a loquacious fellow teacher, Mehrob, we came across five cows grazing lazily in a forest just off the main road. “Shouldn’t be in there,” Mehrob and Azim said quietly to each other. “So what should we do about it,” I inquired. They promptly started to whistle at the cows, which promptly led the small herd to start walking further *into* the forest. I protested, shouldn’t we be trying to walk them out? “Ah forget it,” Mehrob cautioned, “let them be. The *leskhoz* is the real enemy here. The cows aren’t the problem. It’s the foresters themselves. I know that they cut down 250 cubic meters annually for the army. That’s a huge amount of wood. Cows don’t have axes, foresters do.”

I found his argument to carry a political force and before I could reply Mehrob became even more animated and voiced his own moral anthropology of the forest: “the forest and people are supposed to be together. God said that nature was created first to nourish people. We help the forest and the forest helps us. The *lesniks* are the ones chopping down huge swathes. For what — for money, that’s what. They are just looking out for themselves. It’s shameful really. Our cows barely do anything. It’s their job to be out here managing the cattle.”

I was intrigued with the way Mehrob had flipped responsibility for the errant bovine activity, which they themselves had initially admonished. Once they had established their own innocence in the matter, they had gone on to question the rights of the *leskhoz* to oversee the forest while simultaneously blaming them for mismanaging it. The muddled purpose of the *leskhoz* was highlighted by the teachers’ conversation. The greatest threat to the forest was the foresters’ axes, despite the Soviet and post-Soviet insistence on conservation for the forestry agency. The local users, Mehrob and Azim,

were expected by all parties to try to abuse common pool resources. As a result, the foresters and the village residents all wanted to make use of the forest and no one was in a position to stop them. The foresters and the cows were both holding axes.



A few weeks later, as the winter was starting to roll in, Azim was called on to drive a bride to her wedding. His car zoomed from the natal village to the home of her betrothed. Azim was proud to have his car kitted out in ribbons, racing up and down the valley on this assignment. As a result, I took over for his shepherding duties that day. We conferred as to the best place to take the animals; there were not many options. The high, steep hillside directly behind the village was the usual option. But there was basically no more grass there, not that there had been much to begin with. Otherwise, there was the *leskhoz* land downhill from the village, where the herd (of roughly 300 goats and sheep) could root around for something, anything. But Azim had been caught trying to shepherd down there last year. An administrator from the capital had been passing through the village and Azim had to muster every ounce of braggadocio to get himself out of a serious fine. He didn't want to repeat that embarrassing episode, when a high-ranking official actually enforced national laws. So I walked the herd to a no-man's land that was next to the village. This was the *sangov*, a field of rocks.

As I spent the day trying to keep the animals in a visible cluster, a few neighbors passed by. They wondered why I didn't just send their cattle down to the riverside forest. I told them that it was technically not allowed and Azim discouraged me from doing it. "It's totally fine," they assured me. A few hours later, Shirin the *lesnik* who oversaw the sub-district where I lived ambled by and wondered why all the animals had been down in

the riverside forest yesterday. He saw them through his binoculars. Azim had returned from the wedding festivities by that point and responded to Shirin directly. “Listen, the animals were barely in the forest. They were on the margins, right along the river’s edge. That territory is open to use and our village has been using that land since before our grandfathers. You know and I know that you’re not going to fine anyone so just be happy that I’m keeping the animals out of there today. I’ll have a talk with the other guys and make sure they don’t send the animals down into the forests anymore.” That talk never happened. The rotating shepherds continued to move their animals wherever they pleased until the snows came.

Pitching people power

As the foresters continued with their labors into late autumn, such as chopping firewood for the valley’s elementary schools, the *leskhoz* was approached by international aid organizations who saw the agency as a frontline force to facilitate climate change adaptation projects. The *leskhoz*’s role as an ecological resource manager was viewed as the best launching pad for improving environmental conditions. But the international agencies recognized that engaging the local population was also necessary. I sat in on an interview with Jabor, the director of the *leskhoz*, as a European aid worker tried to convince him to implement a “Joint Forestry Management” scheme. Under this scheme, people would plant trees on formerly unproductive lands (of any variety they wanted) and the *leskhoz* would take a 30% cut of the harvest from new growth (payments beginning once the trees had a chance to grow—after 5 years). The foresters lacked the capacity to do this work on their own, the aid worker insisted. By granting 20 year leases and partly

funding local residents' efforts with donor money, forest resources might take root — ameliorating ecological precarity and taking a load off the *leskhoz*. This arrangement should not have been unexpected to the foresters given that it mimicked the tenant farming arrangements the *leskhoz* already had in place, except the goal was to grow forests rather than crops. Some of the *leskhoz* territory had been maintained as farm land which the foresters doled out to neighbors and friends. However, there was a substantial difference in the European scheme: after 20 years the land would be converted from state to private hands, becoming the property of the renters.

The *leskhoz* director cut off the development worker's pitch abruptly to make two points. First, "we don't need any further involvement from local people — it is our job to manage the forest not theirs! They can't be trusted. They are the ones constantly destroying the forest anyway." Second, "where is the money for us?! In the Soviet period we had all sorts of technical capabilities: excavators, trucks, you name it. Now we have nothing and it's no surprise we can't police the forests. These problems are a direct consequence of the Soviet collapse." The director made it clear that he was not impressed by these new collaborative forestry schemes. He wanted to highlight that the impediments of history had forced the *leskhoz* into the situation it found itself in. Only by returning to Soviet funding levels, and the mechanization it had enabled, could expert-led plantations afforest the future. The director objected to the loss of control that such community-led forestry schemes would entail.

The director's dismissal of local capacity follows a longstanding dismissal of local practices in Central Asia on the part of the forestry administrators.²⁴ The *leskhoz* and

²⁴ Efforts to promote communal resource management across the developing world frequently ran up against entrenched interests unwilling to yield authority (Brosius et. al. 2005; Wunder S. et al. 2014).

other Soviet entities had long operated under the principle that local populations were the antagonist to successful resource management policy. Only planned, rational management (backed by heavy technical and mechanized investment) could improve ecological conditions. By following rational plans, the *leskhoz* continued to wage its battle against seemingly nefarious local populations. Outside funders, with stipulations for community-controlled resource management, hoped to convince Tajik forestry administrators otherwise. The director had stubbornly delayed the implementation of donor projects for months. The European NGOs had convinced the *leskhoz* to go along with the scheme by promising significant outlays for machines and equipment. If the transfer took place, the *leskhoz* would start to replenish the technical capacity they had been missing since the disappearance of Soviet investment in 1991. They would then use those machines on the meager, unproductive lands outside the boundaries of well-tended villages.



As the sun crested the spires of the mountain ridge on a late autumn morning, it settled on the rocky hillside below Ardobak. Looking downhill I noticed Firuz dipping his hands into a slowly meandering rivulet. Firuz had also run the *sovkhos* in the last Soviet decade but had recently been appointed the deputy director of the *leskhoz*. He was eager to take the job because he was trying to stay busy he said, “if I don't leave the house I look like a monkey, totally unkempt.” He was also aligning himself with the only institution that had any income and was expecting a new wave of resources from international funders. He pointed to a row of tiny sprouts that were growing up from poplar branches that had been laid length-wise in the rocky soil. Lying beside a streamlet

meant to irrigate them, this form of horizontal planting was a measure being undertaken by the *leskhoz* to appease the European aid agency. If the shoots survived and set down roots, the foresters would be able to show that they could help generate forest growth. According to state plans, the *leskhoz* was meant to create hundreds of hectares of new forest each year — schemes which were never fulfilled. But the *leskhoz* needed to prove that they were reliable resource conservationists. If their efforts were deemed adequate, then the European organization promised a host of new machinery and technical support, which the *leskhoz* in Vanj had not seen since the Soviet Union closed up shop over twenty years prior.

The foresters promised European donors that they would fill in the patches exposed by years of neglect. They would plant trees, irrigate them and protect the saplings from errant cows, guaranteeing the growth of new forests that would transform the *sangov* into a flourishing and productive green zone. In return, they would have access to machinery, enabling them to expand the other side of their business—selling firewood to other state agencies. However, this was not a uni-directional process of restoration. Governance was far patchier than the pitch they made to the donors. The *lesniks* gave out desirable land parcels to family members and looked the other way when neighbors made forays into forests. Such compromises routinely undermined the larger work of the *leskhoz*, that of conservation.

As a result, Firuz was not ready to think about new tractors and jeeps. There were more pressing issues that troubled the organization he helped oversee.

I'll tell you what the real problem is. It's the leadership. Now this is a secret, you can't talk about it. Everyone is out for themselves. I'm not only talking about the *leskhoz*. I've worked in several government agencies. The problem is everywhere. I think this has to do with capitalism. Before we used to have a Soviet mentality

that was something like — have you heard the phrase — one for all and all for one. But in capitalism the main thing is, well, capital. People just want to take everything they can. The biggest crooks are down there in Dushanbe. They sit in their leather chairs and scoop up anything that comes their way. When the bosses tell us to plant new forests, no one does it. I'll tell you what happens. The *leskhoz* administrators come from the city and get treated at the *dasturhon* (table spread for guests). They don't give a damn about the trees or the cows. They just want something for their own pockets.

Though Firuz may have painted himself as a paragon of virtuous toil above the greed of his supervisors, he had made the rounds of several post-Soviet institutions and was in power at the *sovkhos* when many of its assets “disappeared.” He often entertained family and friends on a raised seating platform beside his house, under the shade of a pear tree. Around the *dasturhon*, corruption dissembled into back-scratching, gift circulation, and special use rights for land, animals, and orchards. When dignitaries from afar or neighbors from next door needed to be feted and fed, plans and policies were often swept under the rug. Corruption had filled in the patches of unrealistic state planning and continued to operate in the spaces of institutional uncertainty. While directors in the Soviet era had to barter and scheme with other agencies and their own employees, they were now only accountable to the visiting dignitaries who could be bought off with some vodka and a filling meal.

This chapter has stressed how different actors repurposed historical notions of resource management through the muddle of contemporary policies. In the thorny forest brambles, the foresters hacked away at institutional contracts and doled out the more promising plots to kin. The poorly regulated forest margins offered a patchwork of interests and modes of control. In this peopled description of environmental governance, we do not find a self-interested bureaucracy but rather “a horizontal tapestry of partial

sovereignties: sovereignties over terrains and their inhabitants...” (Comaroff and Comaroff 2006: 139). The tapestry of sovereignty in Vanj were not new constellations as much as they were repurposed legacies that dissembled control.

The *leskhoz* operated as a for-profit agency that did not improve the forest, but rather sought to fulfill its yearly quota to other government agencies. They struggled to show any success in conservation or enhancement of natural resources in order to secure international funds. Drawing on the case of Laos, Keith Barney (2009) argues that state agencies attracted transnational investment to legitimate the conversion of uplands into capital-intensive resource extraction zones. Barney applied the notion of the “patchworked frontier” to signify the link and interaction between new global investments and previous regimes of resource governance which produced an overlapping mosaic of governance and control (Barney 2009: 147). The patchwork tapestry of control that existed in Vanj was a product of Soviet priorities that persisted in the vacuum of a developmental state, with input from international donors and residents’ commitments. As I walked through the tangled forests of Vanj, it was possible to see how “government, as it disperses itself, becomes less an ensemble of bureaucratic institutions, more a licensing- and-franchising authority” (Comaroff and Comaroff 2006: 146). The *leskhoz* was the last Soviet enterprise standing, operating as a licensing agency for land rights to tenants, a source of donor funds and a check on individuals’ interests. The agency met none of these obligations fully, instead plugging in the holes left by failed attempts and promising opportunities. The barren land of the *sangov* encouraged optimistic visions for some, while collapsing and stifling the aspirations of others.

Chapter 4 | Desire for Development

Hailing climate adaptation projects in Tajikistan

Since the fall of the Soviet Union, and cessation of violence following civil war (1992-97), international development projects became a staple throughout the valleys of the Pamir mountains of Tajikistan. Local residents had taken them to be a frequent interjection into their daily activities, but lamented the sense that far more was promised than delivered. Near the beginning of my long-term ethnographic fieldwork in 2014, the family I was living with invited me to observe a presentation happening at the bottom of Vanj valley. The presenters had driven 16 hours by jeep from the capital to provide a half-day “training” about the dangers of migrant trafficking.²⁵

Halfway through the presentation, a bearded man with a dusty cap waived at me to join him outside. Haidar was only at the meeting for the 20 somoni (\$4) he would receive in exchange for penning his signature at the end, he admitted. “No matter what they want to teach us about the dangers of migration, there is very little to be done. They can't really help my son working in Russia when he gets on the wrong side of the law.” As we stepped out, Haidar explained that he had been educated as a chemical engineer but now tended to some land at the upper reaches of the village. He was a reluctant horticulturalist. He had already planted close to 6,000 trees on only fifteen hectares of land but there were another hundred hectares nearby where the cascading glacial water did not reach. Then he made his request: “Could you help bring a project so that the necessary half kilometer of pipe can be purchased? I can find a truck to bring up the rocks, sand and cement. We can easily hire all the day laborers we'll need for the heavy

²⁵ Tajikistan had nearly 1 million of its residents working abroad in Russia, out of a population of 8 million, and as a result had the highest dependence on remittances in the world, at 43% (World Bank 2017).

work. If you help with this then we can water this wonderful land and make things grow.” I struggled to offer a reply that would not deflate his enthusiasm. I told him I would try to think of some way to help and added his number to my phone.

As we drove home, Farzona and her husband, Hayom, with whom I was staying for my first week in Vanj, grew excited when I told them about the irrigation plan Haidar had suggested to me. Hayom pleaded with me: “can’t you talk to the embassy and figure this out, don’t you know someone who can make this project happen? It’ll be great for our small organization because we can oversee the funds. Then I can collect a salary as a worker or a driver or, who knows, even an accountant. Farzona will make a great project manager. Those international people love women as directors.” If I could help initiate a project intervention, it might ripple through the local economy, infusing much needed capital to horticulturalists, non-profit organizations, and a latent labor force. This request proved to be just one of numerous occasions when residents hoped I could initiate an elusive project for their benefit. Whether it was a dam to create a lakeside resort, an irrigation system, a bridge-building project or any number of schemes, people would regularly propose a course of action and inquire about my capacity to support them.

These attempts to circumvent what seemed to my informants as impregnable logics of international benevolence could be seen as efforts to overcome the relative weakness of the Tajik state compared to its Soviet predecessors. Government agencies have had limited impact on people's lives in Vanj since independence. In the intervening two decades, international development organizations have come through seemingly at random, leaving little in their wake. A flurry of development projects were implemented after the Peace Accord quieted the civil war in 1997. However, despite the assurances

made by international donors, who put up sturdy metal signs to advertise their impact, these interventions failed to palliate the seemingly intractable gulf between what had been done by the Soviet state and what could no longer be achieved. When I asked Haidar, who had requested the irrigation canal above his village, how he had come up with his plan, he explained: “First of all, we had lots of projects like that in Soviet times. They would irrigate the farthest corners of the mountainsides, but they often relied on [diesel-powered] pumps and that’s why most of them don’t work now. The current government can’t do anything like that and all these new development projects give us nothing but meetings and empty talk. We need some funding to put in a gravity-fed irrigation line (*aryk*). We’ll be able to grow so much fodder for the animals and maybe even put in some long-lasting orchards.” Having seen the impact of Soviet efforts firsthand, while living amidst the infrastructural debris those schemes left behind, residents of Vanj regularly wanted more robust development interventions.

After fielding over a dozen requests to help secure “a sponsor” over the course of a year and a half living in Tajikistan, I began to wonder what people thought I could achieve and what motivated their requests. As this chapter shows, while the development industry strove to meet its own climate-focused agendas with novel schemes that promised a new direction, residents hoped to corral any efforts they could to support the “tactics of the habitat” they had already forged out of necessity. This desire persisted despite the fact that the contemporary development industry consistently failed to offer them succor, especially when their efforts were set in comparison to the immense transformations precipitated by Soviet state projects. My informants were critically aware of these shortcomings every time they noted, “this is not how things used to be.”

The growing emphasis on climate change and ecological management in development circles was not readily apparent to the intended beneficiaries, though they caught inklings of how policy was evolving. Regardless, attempting to hail development involvement from state or non-governmental entities to support local endeavors became a common tactic among my informants. They sought to corral seemingly elusive projects while around them swirled a lot of talk and anticipation of climate change. Residents of Vanj wanted projects regardless of the climate-related justifications because they had seen a social order where tangible improvements were possible. People saw that socialism had given way to sporadic development, and they wanted to make sure that this transition offered them at least a modicum of support.

Development desire

The possibility of significant commitments arising from outside the region was not merely a fantasy for the people I lived with in the Pamir mountains of Tajikistan. The Pamirs had enjoyed the special status of a frontier region (Rubinov 2017) on account of strategic mining reserves such as quartz (for rocketry) and uranium (for nuclear reactors and weapons). Targeted Soviet investment in the form of Moscow's provisioning (*moskovskoye obespicheniye*) was highly regarded and sorely missed in the area. This status not only referred to "the kind of generalized benefits, salary additions (*nadbavki*), and compensatory payments that were enjoyed by Soviet employees in a variety of exceptionally cold, high, or remote sites," but as Madeleine Reeves (2014: 114) goes on to note in her ethnographic study of a mining town along the attenuated border between

Tajikistan and Kyrgyzstan, Moscow's provisioning conveyed a sense of "the center in the periphery."

In the Soviet effort to create centers all throughout the Union, and in the Pamirs in particular (Mostowlansky 2017), people felt as if they were living in the remarkable heart of a transformational Soviet experiment. Endless supplies of sugar, tinned meats, condensed milk, and the like were shipped in by truck convoys that snaked past ever-more ambitious dam projects, irrigation schemes, roadways and bridges. Those who worked in the mining industry were given preferential access to many "first-class" goods, which rippled out to everyone in the small mountain communities. These well-stocked warehouses and distribution channels, not to mention the millions of rubles in infrastructural investment, vanished once independence blanketed Tajikistan in 1991. Through a jaundiced quarter century of hindsight, the unique impact of that bygone era was sorely missed.

In the absence of Moscow's beneficence, residents of Tajikistan saw in the international development projects that followed a pittance of the original promise. Nothing but endless meetings and empty talk, as my informants had insisted. Yet, given the failure of international development projects and the continued absence of a robust and committed state, what drove people to seek out those projects nonetheless?

Arturo Escobar has argued that development insidiously perpetuates pre-existing hierarchies. With an eye to Latin America, he argued that "there was an important connection between the decline of the colonial order and the rise of development" by which the institutions of development provided a way "to remake the colonial world and restructure the relations between colonies and metropolises" (Escobar 1994: 26). However,

the Bretton Woods institutions were not the driving factors determining post-Soviet economic and political formations. In fact, the imperial benevolence the Russian core bestowed upon its Eurasian periphery, which Bruce Grant likened as the “gift of civilization,” ultimately came to be appreciated in Tajikistan (once several decades of resistance during the Bazmachi rebellions of the 1920s and 30s had been violently tamped down). Many post-Soviet residents wanted to return to the Soviet past and pined for “a leader like Stalin,” a view espoused by many (particularly elderly) residents of Tajikistan. This favorable reflection on the colonizer sets the Soviet relationship in contradistinction to other postcolonies (see Kandiyoti 2011). Therefore, the perpetuation of an inequitable global order through the Trojan horse of the development industry does not seem like an apt description for contemporary Tajikistan. If anything, residents desire to rekindle past linkages suggests an alternate reading.

The anthropologist James Ferguson has argued that development interventions continue to be enacted despite widespread evidence of their failure because ulterior motives generate unintended consequences. “Again and again development projects in Lesotho are launched, and again and again they fail; but no matter how many times this happens there always seems to be someone ready to try again with another project. For the ‘development’ industry in Lesotho, ‘failure’ appears to be the norm” (Ferguson 1990: 8). Turning to Michel Foucault, Ferguson asks if perhaps what from the outset seems to be failure is anything but: “one should reverse the problem and ask oneself what is served by the failure of the prison” (Foucault 1979: 272 in Ferguson 1990: 254). Ferguson points to the spread of bureaucratic rationales through seemingly innocuous development projects that help extend the reach of the state through seemingly unintended “side

effects.” While claiming to alleviate poverty, the development industry helped the state of Lesotho police its own population through heightened access to rural populations.

However, this argument also fails to account for the situation in Tajikistan.

The Tajik government continues to be led by the increasingly authoritarian President Emomali Rakhmon, who secured leader-for-life status in 2016. However, he has not shown evidence of bolstering his rule in the autonomous Pamir region, which constitutes 46% of the country’s land mass. If anything, his bureaucracy has siphoned off vast funds from the development apparatus (Economist 2015; which has lead multilateral donors to block some state agencies from being able to accept funds) without converting those efforts into greater control over rural residents. “Rakhmon is really just surrounded by a bunch of crooks,” Murobo, an elderly neighbor exclaimed to me while we sat at a *dasturhon* breaking the evening fast during Ramadan in 2015. “He is actually a good man who wants the best for this country—but corruption prevents him from reaching us. That’s why he decided to dole out land parcels and let us handle our affairs by ourselves. It’s really not his fault.” Rather than using development to manage populations and distribute resources, the government distances itself from the population, encouraging international agencies to do the work on the ground while the president’s cronies and close relatives siphon off development funds from their padded chairs in the capital. Precisely because they receive so little state support, and are arguably undermined by the Tajik government in the process, international development agencies have had remarkably little success in Tajikistan since independence. And yet people still sought me out all the time to bring development projects to their doorstep.

Pieter De Vries was similarly puzzled by the paradox at the heart of development. In his article, “Don’t Compromise Your Desire for Development!”, De Vries ponders why people continue to want development despite its continued track record of failure. He finds the views of Ferguson and Escobar to be wanting. Rather than seeking answers in the discourses of power or a perpetuation of colonial inequity, De Vries interrogates the gap between promise and reality as a driver of the development process. “The desire for development fills the gap between the promises and their meagre actual realisations, thus giving body to a desiring machine that also operates in between the generation and banalisation of hope” (De Vries 2007: 30). Incorporating insights from the psychoanalyst Jacques Lacan to explain what he calls the “desiring machine,” De Vries finds that the virtual dimension of development is the key to its perpetuation, not only from the perspective of its practitioners but even more so from its purported beneficiaries. By highlighting *obritas* (small, tangible development efforts), De Vries explores how meager objects were a failure in practice but successful in terms of encouraging more intervention. “Desire then is the faculty to produce dreams and utopias that are both evoked and betrayed by actual development projects” (ibid.: 32). In what follows, I engage De Vries’ argument in several ways as I think it offers an important and unique intervention in the voluminous (post-)development literature (c.f. Mosse 2013). I offer a critique of his elaboration, as it pertains to development in Tajikistan, and then extend one of his key points as a springboard for the rest of the chapter.

First the points of contention. De Vries (2007: 29) argues that “desires for, and imaginations of, development stand for an ‘impossible’, utopian world... [involving] a negative dialectics ... in the precise sense that it points to the possibility of a radical

break with the present.” Lacan's assertion that each individual, and, by extension, society as a whole, is motivated by a negation that impels all other drives provides the motor powering De Vries' theorizing. However, (development) desire need not always be framed as a vision for an impossible utopia that either forms a complete break with reality or exists in some distant, inaccessible land. The Soviet history that Tajik people lived through, and recall with striking clarity, was not always cast negatively or ephemerally. Soviet improvements were not flagrantly utopian but practical and eminently possible. For my informants, past interventions were often seen as flawed in execution but reasoned in purpose. Thus, development desire can have multiple sources — not just a Lacanian lack or negation. These desires can originate from travel abroad (as is so common among labor migrants to Russia), media accounts, and historical memory.

For those who had witnessed transformation in their lifetimes, the changes were hard to fathom. Murobo, who had made the forgiving comment about the president, held many such opinions. He had taken a fall that left him hobbled several years into his retirement from the Soviet propaganda ministry. Over the course of my multi-year fieldwork, I often found him seated in a chair outside his yard when the weather was fair. He would happily offer me tea and reflect on the transformations he had witnessed: “We may be trapped between mountains, far from everything, but this is a special place.” The sense of being trapped made him bitter, yet Murobo still appreciated the challenges that had been overcome. “When I went to school [in the 1940s], my family could not afford pants for me. I sat in a freezing schoolhouse with only my *chapan* (overcoat). Then the Soviet Union brought in roads, factories and electricity. Our life was transformed. No one was cold or hungry and all the farmland was put to use.” Murobo was aware of the limits

of the Soviet experiment, lamenting the corruption, misallocation of resources, and the planning mistakes. But he could not help but appreciate the significant changes that had transformed the region. “The mountains and the river are still here but almost everything else has changed. So now we have to grow our orchards and build our lives on top of what they left behind.” Imaginations for development do not stand in for an ‘impossible’ world but can also replace visions that continue to tantalize out of the past.

The element of De Vries' argument I would like to explore more fully deals with the reciprocity between development (as failure) and the desire for its idealized form. As De Vries has it, this relationship exists in the “double movement of the generation and banalisation of hope that constitutes the dialectics of desire. The critical point to be made is that the mundane world of actual development intervention cannot subsist without its virtual supplement” (ibid. 32). He focuses on the reaction to development projects themselves. Rather than discouraging interest, the ubiquity of failure arising from development projects created hopes that only stoked further desire and motivated inventive new tactics. In the remainder of this chapter, I consider how development failure became banal, particularly under the aegis of climate change. The mundane world of development continued to generate hope while its ongoing failure made that hope seem banal without diffusing the desire that sparked it. The *obritas*, small bits of development success, are actually what maintain the possibility that something substantial could still happen. They are the kernel for limited tactics that try to usher in a new landscape.

A seed of development possibilities can germinate in unexpected ways. For De Vries, the virtual supplement operates through the hope for a particular future that can

never be achieved. In Tajikistan, the virtual is drawn from memories and experiences that are spatially and temporally displaced but not outside of reality. This virtual dimension has become overdetermined by climate change from the perspective of development actors. But the post-Soviet experience, particularly as it draws Central Asian migrants into illicit labor arrangements in Russia where they guard fancy supermarkets or build extravagant summer homes, helps develop visions of different development trajectories. In particular, the legacy of committed Soviet involvement in the region harkens to a period when transformative changes in the landscape of opportunity were possible. The consistent experience of development failure, inundated by its banality and ineluctability, is belied by exposure to the possibility of other worlds. It is this double movement across time and space, rather than across the virtual and real, that I seek to further explore.

Trickle down development

After staying with Hayom and Farzona for a week in 2014, I moved to a village higher up the valley where I had discovered that pilot climate adaptation efforts were underway. Having conducted a series interviews with NGO and government officials in the capital of Dushanbe early on, I was eager to observe how development projects were going to approach what some interviewees told me were a new set of risks and unknowns. Climate change was going to usher in a new era in the development apparatus. This was the story that I had been told by many of the people seeking to deploy climate adaptation through their work in international and state agencies. This optimistic perspective was particularly evident in reports issued by the World Bank, European donors and international organizations. I hoped to ethnographically interrogate this

evolution and understand what adaptation actually entailed and how it could be implemented in a situation as tenuous and challenging as that evinced by Tajikistan.

A month after I settled in, I heard that a climate seminar would take place in the nearby village. After helping to cut and stack wheat in preparation for threshing and milling, I set out for the meeting with several neighbors. They had warned me that these climate seminars were going to be a lot of talk and not a lot of action. “They want to scare us about the climate, but we don’t scare so easily. Let’s see if they have anything to actually offer us,” exclaimed Farrukh, who held a disparaging view of development workers. “We are the ones out here working every day, I don’t even understand what they are getting paid for,” he chortled as we made our way to the chairs arranged in a horseshoe. The short remarks by the European organizers soon gave way to a participatory planning exercise run by a Pamiri NGO sub-contracted by the Europeans, that I call Zamin.

After holding conversations in break-out groups about what environmental changes people had witnessed in the area, the group of two dozen men reconvened. When Farrukh stood up to explain what his neighbors thought needed to happen in the area, everyone held their breath. “We need a new road, we need a factory to work in and we need irrigation channels to water the hillsides behind the villages. Are you ready to do this for us,” he demanded. The Europeans explained that these opinions were all extremely valuable and would be taken back to headquarters for evaluation. “We are the experts, who else do you need to ask about life in Vanj,” Farrukh retorted. After a bubble of chatter arose, someone from Zamin stood up and quieted the crowd. “Yes, you are right. We need your input, that’s why we are here. Climate change is going to make things

harder for everyone. We have to find local solutions. But first we have to take your ideas back to our donors. Anyway, the irrigation work you can all start yourselves. If you show initiative, the donors really like that.” Then the conversation turned back to climate change and a survey was conducted regarding rainfall, the frequency of pests and temperatures during the growing season. On our way home, Farrukh wondered aloud, “if we keep talking about climate change, why can’t they actually do anything about it. They just want us to do everything ourselves.”

What counted under the rubric of climate adaptation would determine how billions of dollars in future development funds would be allocated. When global funding for climate adaptation (as opposed to much larger sums for mitigation, which is tasked with reducing the cause of climate impacts) was discussed at the UN Conference of Parties in Copenhagen in 2009, 100 billion dollars was promised. That was, in theory, meant to be money spent on something apart from development as usual. However, in an audit of a World Bank-funded climate project in Tajikistan, reviewers assessing a project’s viability voiced their deep skepticism over whether climate change could even be separated from the status quo. The audit starkly outlines this reservation:

The proposal describes Tajikistan quite clearly as one of the most vulnerable countries to the adverse effects of climate change in Central Asia. The proposal then proceeds, however, to outline a rather standard issue rural development project, and does little to demonstrate in a plausible manner why this is a dedicated adaptation to climate change project, and how this project would contribute to the objectives of the [agency] beyond rather generically supporting a sector that is vulnerable to climate change. The project proposal, in our view, fails to clearly explain how resilience to climate change would be improved and how such improvement would be measured – as opposed to merely improving resilience to adverse social and environmental conditions in general.

Despite these strongly worded concerns (cast in the language of resilience), the project was barely modified. In fact, the World Bank-run Pilot Program for Climate Resilience was expanded to encompass five areas of intervention and grew to well over \$100 million US dollars throughout the course of my fieldwork.

Subsequent audits of the World Bank's project proposals, and the projects run by the European aid organization, did not carry the same incisive critiques of climate-driven adaptation as the one quoted above. They recognized that adequate answers would not be forthcoming and it made little sense to hold up the funding because projects failed to differentiate themselves enough from what had been done in the past. Instead of teasing apart climate responses from existing development efforts, the World Bank, Asian Development Bank and other agencies carrying out climate adaptation projects in Tajikistan wanted to make sure that climate considerations were integrated into all facets of development work, whether that meaningfully changed the projects or not. The largest donor agencies and implementing entities had a broader agenda. They sought to establish themselves as primary facilitators for climate financing, allowing them to benefit from a groundswell of ancillary funds.²⁶ While aid practitioners who were being forthright displayed significant reservations, as evidenced in the quote above, project managers still had to follow the money.

Ryck was a tall, ruddy aid worker with short hair and rimless spectacles in his late 30s whom I met several times after seeing him at the participatory climate meeting. He

²⁶ Climate financing included public sources such as the Global Environmental Facility and the Green Climate Fund along with assumptions of private investment. By 2020 a variety of other entities were expecting to disperse the \$100 billion dollars in climate financing for adaptation projects across the developing world that had been promised at the UN's Conference of the Parties in Copenhagen in 2009. As of writing, this funding has not been clearly demarcated or allocated but was still being promised and debated at international fora.

offered a somewhat cynical, yet commonplace, view that figured climate change as a particularly donor-driven concern, something quite distant and removed from local people's needs. Echoing a perspective I heard during many conferences and symposia, the majority of aid practitioners understood climate adaptation as a buzzword to flag in their pitches for donor funds. He noted that the problems facing Tajikistan were multifarious but "the name of the game now is climate change because donors say it is. It doesn't seem like people on the ground see that as a potential threat. Plus, there's no reliable data at the local level. We are working with regional climate models with a resolution of 200 kilometers while the variability within those distances is massive."

In essence, Ryck could not understand how climate change could be brought to the level of actual development work, no matter how much donors wanted it to be there. However, Ryck also believed that development needed to be homegrown and small-scale for it to take hold. He wanted to eliminate bureaucracy and empower people to take charge of their own communities. He was skeptical that climate change as an overriding imperative would help anyone on the ground in Tajikistan. "We know what the actual problems are and we have known them for decades now. A feckless and corrupt government, a broken private sector and Tajikistan is still reeling from the Soviet Union's final bell. If we try to build a new generation of youth with a different vision, maybe they can move things in a new direction." When I asked if climate change could change these dynamics, he sighed with resignation. "Climate doesn't change anything here. The changes have already happened."

Katie believed that climate adaptation was already a part of current development practices that needed to be recognized as such. As we sat in her Dushanbe office

overlooking one of the central intersections of the capital city, she described how she had been working in the development industry for over a decade and had come to recognize the irrefutable impact climate change would have on development. “Climate change is of course something that we have to address, there is no question.” But the methodology was only now being worked out. Katie explained that, “based on the assessments we have conducted we realized that we are already implementing some climate strategies, especially when it comes to forest management. We don’t consider the climate component as separate. Rather climate is an integrated part of improving land management, enhancing agriculture production, responding to disasters, etc.” For Katie the impositions of an altered climate were not a separate issue but another overarching consideration, another “risk factor” as she put it to me in an earlier meeting, which would need to be calibrated into development practices. For the front line workers of the development industry, climate change was banal. A condition so obvious that it barely warranted reflecting on its role in the industry. As Ryck conceded, the funding deemed it so, and everyone had to follow. Despite its seeming ubiquity there existed a persistent challenge to prove that a project actually addressed climate variability, rather than perpetuate development work as usual.

Instituting Climate

The large European aid agency that employed Katie sub-contracted their project implementation work on the ground in Vanj to the smaller local NGO: Zamin. “There are three reasons for managing our project with this local partner,” Katie explained on our way to a meeting with the Zamin staff. “They were our employees before and now we

want to give them more responsibility, to see them take the initiative. Second, this helps to establish more of a civil society so that there are local people with skills and connections to get something done. Lastly, the idea is to have them become self-sufficient so when our funding dries up they can continue our work and advance our priorities without us.” From the many visits I paid to Zamin’s office and in the field, it did not seem like those aims were taking hold. The entire workforce had actually been spun-off from a project that had been run within the European organization. As a stand-alone entity, Zamin would need to be able to find its own funding, make its own decisions, and continue development work after the Europeans moved on. This was far from a reality even three years after becoming “independent.” For one, the English-language capacity of Zamin’s staff severely limited their fund-raising capacity. Furthermore, the staff was not used to making independent decisions and determining what strategies it should take to generate development projects in the Pamirs. As a result of this ongoing collaboration, Zamin was compelled to incorporate climate adaptation considerations into their projects. Their “advisors” required it.

The staff at Zamin understood that climate change was a pressing concern and even had several staff members with “Climate Specialist” embossed on their business cards. But Zamin’s staff was never able to articulate to me what their current or future efforts had to do with the climate per se. “They brought us to several climate trainings,” explained Zarina, the lead climate specialist, “but I can’t really tell you what climate change.” She paused, realizing that this answer seemed insufficient. “I understand the concept, of course, and we know some of the science, which is complicated, but I don’t know what to tell local people about it. It’s too vague, but maybe I will understand it

soon.” Above all, Zarina knew that she had to discuss the topic in the seminars that they ran with local villagers. This was Zamin’s main task, to act as a conduit for development outputs by providing an interface for the people who were supposed to be adapting to the climate.

Zamin maintained an office in the capital of the Pamir region, the city of Khorog. A half day jeep ride was required to travel to Vanj from their headquarters. They made the trip infrequently, perhaps once a month. When they did arrive, it was usually to hustle together a meeting where project goals would be articulated and participation from local villagers would be sought. But the agenda was almost always already determined by the European advisors: the spaces in the spread sheets often had answers filled in beforehand and the ultimate decisions on all project outputs would be decided by external, “expert” consultants. Zamin and its European supervisors worked with the Forestry Agency (*leskhoz*) and other government agencies to implement their projects only if the local community consented (with “community” usually being distilled to several very vocal male members who had strong views on what had been offered). Thus, the expression of interest from local villagers was typically reduced to a single decision: opt in or bow out of whatever the development apparatus was offering. In fact, one of the three initial project sites in Vanj declined to participate. Two others agreed to go along with what had been promised in the “climate seminars.” In the first site, a dam was promoted to protect a riverine forest plot that was to be jointly managed by villagers and foresters. In the second village, Zamin offered a water pipe to irrigate their planned forest plot. These were concrete development outcomes couched in climate adaptation justifications. The

seminars, far from articulating the connection to the climate, were mostly a pretense to show that the projects had buy-in from the local communities.

By the time I conducted fieldwork, participatory rural appraisals and the “participatory turn” in development had become core tenets. Led by Robert Chambers work in the late 1980s, the development industry had assured its many critics that a wave of best practices, consultants and collaborative tactics had resolved the problem of outsiders dictating how projects were chosen and implemented. In reality, this “tyranny” of participation, as development scholars Hickey and Mohan (2000) have termed it, often translated into interminable meetings where few decisions were made. Even if the locus of authority did gravitate to the local level, it was still riven by gendered, class and ethnic divisions that predated the interventions. Added to these meetings were now global concerns surrounding climate change. Zamin staff insisted on climate considerations in the discussions they held with local residents. The prominence of climate change as a paramount concern, conveyed through United Nations forums and the inauguration of journals, book series and task forces had elevated climate change to the status of participation, gender, and poverty: buzzwords that guaranteed funding. But this imposition of global climate concerns into participatory planning meetings had far greater impact on the development agencies than on local residents, who were busy converting fertile agricultural plots into orchards – rather than wait for rocky, *sangov* fields to yield any growth.

I tried to understand what Zamin’s “climate team” sought to achieve on the rare occasions when they visited Vanj to guide community discussions about project outcomes and to document the fact that they had the people’s consent for the projects that

they had touted. I will highlight an instance when people's "participation" was secured so that new projects could be underwritten, assuring continuity for the multi-scalar development organizations, without bringing any tangible benefit to the "beneficiaries." After following Zamin's staff on a visit to a village in the upper reaches of Vanj valley, I witnessed how development interventions merely gestured to promises and possibilities in the future while mostly supporting the practical requirements of the implementers. In the process, hopes for development success were stoked among residents, whereby expectations rose higher than the sobering reality of their (likely) failure.

Conflating projects and purposes

A couple of months later, the Zamin staff returned to Vanj to conduct another set of interventions in the two remaining project sites. As we drove down the valley from an early morning meeting in the first village, the jeep was abuzz with anxious satisfaction. The staff members had beat back some concerns from the residents and managed to secure the signatures necessary to get the project off the ground. The village was going to get a dam built to protect a budding forest zone. "We don't even need this dam, let's build a drinking water system so our families don't have to drink out of the *aryks* (water channels)!" someone shouted during the meeting. Fortunately for Zamin, Umed, the local forester, was on hand and assuaged people's concerns by signing the document first. He assured everyone that it would be better to take this project than to be left with nothing. And if it was carried out successfully, then there were good chances that future benefits would come their way. Umed knew, through hosting the Zamin staff at his home, that these joint forestry schemes were also pilot climate adaptation measures.

The Joint Forestry Management strategy that the Europeans had promoted over the last decade (starting elsewhere in the Pamir region) was being rolled out nationally and the *Leskhoz* was their primary institutional beneficiary. As the forestry project evolved, so would the forestry agency's role. The reformation of the forestry sector would carry on for the next decade and the climate concerns would be folded into it. Umed recognized the opportunity, when we spoke earlier that morning before the meeting: "If these projects come through, we might finally be able to get the equipment and resources our agency has been lacking since Soviet times. If it is because of climate change, so be it. As long as we can work together to get these projects going, then we can grow forests and share the benefits." In order to achieve this synergy, Umed had to convince the forestry agency's director, who was reticent to hand over control to local residents. The director was concerned that decentralized resource management schemes would cut out his organization. Umed assured the director that securing a place in these pilot efforts was a crucial first step to future success. By pointing to the heavy investment in mechanized equipment that the Europeans promised, the forester was able to mobilize the director's Soviet nostalgia for rational management of forests (see Chapter 3). But the villagers were not aware of these institutional arrangements and promises. They were told they might get a small infrastructural investment. Then they had to decide whether to take it or leave it.

They chose to take the deal. However, the second pilot site, the one beside the home where I conducted fieldwork, still had not been confirmed. In the jeep, Zamin staff were dialing their *leskhoz* contacts in the village, hoping to organize another contract-signing session, to repeat the success they had had in the first site. They did not plan to

return for several weeks and their European counterparts wanted these contracts signed quickly to move the project forward—otherwise they might miss out on the funding window. The forester on the phone told them that the meeting he had planned for Zamin with residents had fallen through. The men who could be relied upon to attend such a meeting were busy.²⁷ The mood in the jeep grew somber. It seemed that securing both villages' commitments was out of reach. It might be weeks before they returned and that could be too late.

As the jeep came up to the village on our way down the valley, dozens of neighbors were working on finishing a canal project on behalf of a different development agency. The residents were behind because of miscalculations on the part of outside consultants. Nonetheless, the canal was nearing completion. The Zamin workers noticed the large gathering and Umed quickly recognized the opportunity. He decided to parlay the quorum for his own purposes.

Umed walked up to the canal and gathered all the men working on the water line. The mobilized constituency represented a much larger meeting than he could have hoped to arrange through normal means. Umed did not bother to read the contract out loud as villagers squatted around him, leaning into their pickaxes and shovels. He simply told them they would receive all kinds of machinery and that Zamin would organize everything they would need to secure an irrigation system further downhill. Ostensibly,

²⁷ Women were rarely present, although women were better represented in the Zamin staff. This lack of parity was the result of heightened gender equality in the Ismaili regions of the Pamirs, which included Khorog, where Zamin was headquartered. Ismailis who followed the Aga Khan, a spiritual leader residing in Switzerland, had significantly different political views and mores relative to the rest of Tajikistan. Since residents of Vanj valley had been converted to Sunni Islam several centuries prior, and did not practice Ismaili Islam, like all the valleys east of them, the women who lived there were less commonly found in communal meetings.

the goal was to irrigate a communal plot of forest lands, which was still a barren sea of rocks. Some men, reflecting on the maps that had been drawn in earlier climate seminars, mentioned that the irrigation line would help their private fields, which were uphill of the forest plot. But specifics were inconclusive. Umed promised a seemingly beneficial project and some small amounts of money for those who would do the work, just like the development task they were taking a break from at that moment. The men squatting around Umed signed the paper, without a chance to read it. If they had bothered to look it over, they would have seen that Zamin was going to manage all the funding outlays while the *leskhoz* would hold sway over any key decisions.

With their second signed contract securely in hand, the Zamin staff rode back jubilant to their urban office. There had been a few minor hurdles. One resident had stormed off angrily during the meeting in the first village, while a retired teacher at the impromptu meeting by the canal questioned the length of the proposed water line. But the Zamin staff did not take these diversions seriously. They only needed a hollow confirmation of involvement from a majority of local people for the money to be dispersed. The dispersal of the next tranche of funding to assess the viability of the proposed interventions would be handled by Zamin, guaranteeing their own salaries for the next six months.

When I discussed the recent signing of the contract with the family I lived with and their neighbors, a few had heard about it but no one knew the details, timing, or purpose. The contract did not carry much weight, certainly not for Sakina, the matriarch of the house I stayed in. “Did you see any women there? No. Did you see someone from our

family there? No. Did you even see the village head, no! So really what did they achieve, we don't even know. It's not a contract, it's a show!" What are the rules of this show?

My neighbors were not foolhardy enough to assume they would be handed easily won gains. While they could express personal interests for projects, they knew that donor imperatives and agency needs far outweighed those claims. Their desire was tied to the hope of nabbing a passing development scheme that was accountable to their interests. However, outside interventions could not be called upon at will. As I discussed the situation with Farrukh, a neighbor who was busy working in his own field when the whirlwind paper-signing transpired, he seemed unimpressed. "They come every few months making one promise or another. They're not going to help anybody unless they need spare parts when their white jeep breaks down. It's the same lesson that we teach our kids, you've got to take things into your own hands for it to work. I bet they never even implement whatever they just promised on that contract." As it turned out, Farrukh was right. By the time I left my field site at the end of 2015, the project that Umed had secured on paper only brought a few more months of funding for Zamin, but nothing for my neighbors in Vanj. People hoped that new projects might buoy that small pool of resources – but past experiences could not lead them to think that something significant could change – so they held on to a meager hope.

Adopting enthusiasm

Before the climate seminars had even been initiated, jointly managed forest plots had been carved out of (barely viable) state forest land holdings. A year before my arrival, the European agency had recommended planting five hectares of bitter almond

trees on a steep hillside at the edge of a nearby village. Bitter almonds didn't hold much resale value but they could establish and sustain roots, thereby solidifying steep hillsides, without requiring much water or attention. Meetings were held and contracts signed between state foresters and local residents. As Katie had explained to me before, her agency's ongoing efforts in the domain of forest management could be "re-branded" or reimagined as evidence that climate targets stipulated by donors were being met. But projections onto that rugged hillside did not only come from external actors who wanted to score points on an evolving and elusive set of global metrics. The seemingly straightforward almond project proved instructive not because it exemplified climate adaptation efforts but rather because its presence underscored the kinds of aspirational commitments needed for development interventions to actually take root. Interventions had to be corralled by someone who wanted to lay claim to them. Those who had invested their desire in the hopes of acquiring a sponsor ended up having to put in the work to see a project to fruition.

The almond plantation had originally been slated for a different location but at the last minute, the arrangement fell apart. The residents at the original project site decided that they could not afford to decommission their scarce pasture land for a forest of bitter almonds that no one really needed. Upon facing this rejection, the NGO workers drove further up the valley to scope out some other potential *leskhoz* lands that might be suitable for afforestation. Their international funders had proposed a scheme for almond plantations and Zamin staff were responsible for getting a site and making it grow. They paused at the house of the school director and considered their next steps. On the spot, he convinced them that his hamlet was the perfect spot. There was little resistance from his

neighbors because they had enough good pasturage on the hillside on the other side of the village. Plus, the hard work of laying the underground water pipes and building the concrete water cisterns to irrigate the almond trees (in the first few years when they were young and needed water the most) would be handled by the school director's son and a few other young men, with the money obviously coming from the Europeans. There was little opposition to the cordoning off of a hillside that was otherwise little used. But when I arrived there to find this nascent forest just budding from the ground, I realized that it represented more than just some spare territory.

I spent a few weeks living in the home of the school director, Afzagh. It gave me an opportunity to learn about how the project had grown in importance for Afzagh and his neighbors and why he had championed it to begin with. "I've always been interested in trees, you see," Afzagh explained to me one evening as the Turkish drama, dubbed into Farsi for Afghan audiences, blared on the satellite TV in the living room. "I love walking through my orchard and seeing something grow taller than myself." As his son led me around the almond plantation several days later, it was clear that this project was going to take time. The saplings were barely to our knees in their second year and many of them had dried out. Upon returning to his house, I asked Afzagh why he chose to take on this seemingly foolhardy project in the first place. The other village lacked the conviction to see the project through, Afzagh explained. "They weren't thinking about the future. They didn't want to put the initial work in to make it happen. It's hard for two or three years and then the forest pays off in the future." He believed that the whole village would be far better off if barren hillside became a fertile forest. He explained that I needed to see how it connected to the surrounding area for it to make sense.

The next morning, Afzagh took me on a walk just as a passing summer shower was darkening the sky. He led me through a wooden gate to the school's orchard, which was located just below the nascent almond plantation. "During Soviet times, this little orchard had been part of the school that I run. Schools were supposed to feed their students so they had an orchard but it's fallen into ruin. But our school needs it." I was confused how an orchard could help his small schoolhouse. The government had recently cut teacher's salaries and he had to ask around the village, going house to house, to get money to repaint the walls so they would be clean and white for the new year. "It's a rural problem," Afzagh explained. "With people moving to the cities and some even settling in Russia, we are starting to have less students in the school. The government pays us a fixed amount to maintain the school based on enrollment. Since we are dropping so low these last few years, I don't even have enough to pay the teachers' bonuses, much less make repairs. I need to find an extra source of funding. That's when my eyes lit up when I saw the white jeep of the development organization last year. Here was our chance!"

The almond plantation was situated above the school's plot, which would help it keep mudslides and rockfall at bay, once it really took hold. But in the meantime, it played a far more important role: externally-sanctioned livestock deterrent. One of the greatest threats to agricultural fields and orchards, particularly as they crept higher up the mountainsides was the threat posed by goats and cows (sheep kept their heads down and focused on the grass, or what little there was of it). One of the greatest headaches for all Tajik residents was fencing off their plots and keeping an eye on errant ungulates. "The school plot is along the main road and we also have animals trying to force their way in on their way from the higher pastures. It's not even my own plot so I can't always be here

to keep an eye on it. But with this almond plantation, we agreed that there would be a new policy—everyone would have to keep their animals out of the plot as a collective—the whole village would basically be protecting the school’s orchards now that the international project surrounds our plot. It’s going to work out perfectly.” Afzagh was delighted that he had been able to secure outside support for a locally-meaningful project. Zamin touted his almond plantation (though there was hardly much to show for it) as one of their great success. “The previous school director had cut down all the trees in the ‘school plot’ and allowed it to be overrun with livestock. But in Soviet times it had been a huge, wonderful orchard. We will return it to its prior glory.” So he struck a deal, and used the sponsors to his own advantage. But he also had to corral some local support. Fortunately for Afzagh, a retired elderly forester had become completely committed to the project with a passion.

Shohin, an 80 year-old retired forester, seemed to have a strong affinity for that hillside long before it had become a target of international interest. As Shohin and I took a zig-zagging walk through the steep terrain where the almond trees were rooting, he caressed each bushy sapling and wanted me to photograph him with nearly every tree. He truly cared for these sponsored trees because he had already started planting almond seeds there the year before, of his own volition. When he recognized that the sponsorship would give a much-needed boost to his own efforts, he supported it with gusto. As we walked around, Shohin explained that everything was doing well, “these hardy little plants will last well past my time. I was educated in forestry in Tashkent and I have a lot experience with the sector. It changes your view of the world, it makes you think outside of yourself.” Shohin even planted small mini-gardens of potato, tomato, cucumber,

parsley, in little dugouts below the almond trees. Asking him how he was so motivated to hike the exceedingly steep one kilometer hike up the hillside nearly every day, at his age no less, he replied that it wasn't about him. "This is to help Afzagh. This is to help the school children, and it's also to help myself. I have a dream that my grandchildren will look up here and see a huge, rich forest and know that it comes from me. I've worked on a lot of forests in the whole region in my decades in the *leskhoz*, but this is the one that will mark my legacy. I feel like I'm being carried up the hill every time I walk up here." While the money was earmarked for climate adaptation, these two key individuals had become impassioned about making the land around them productive and legacy-building. The school director saw the income-sharing agreement with the *leskhoz* as a great way to generate income for his school. Shohin saw an opportunity to leave an arboreal legacy. The climate funding landed in a tangential and fortuitous intersection of personally-motivated actors.

In many ways, the project also met the climate considerations of the planners. The almond plot would generate some benefits which could ultimately improve the ecological capacity of the surrounding area. The funders then were able to use the project to show how climate adaptation was taking hold in Tajikistan when they made presentations at conferences and donor sessions. Its implementation strengthened relations with the Forestry Agency (*leskhoz*), who may eventually get some proceeds from the bitter almond harvest, as was arranged in the initial contracts. But most of all, it showed that committed people who saw the potential of a project could take ownership.

When I returned to this site in 2017, I met Furuzon, a welder by Soviet-training who now farmed and grew trees in the wedge of land that fit between the staggering

valley walls. He lived on the other side of the village, across the stream bisecting the territory. I asked him about his family and talked turned to the almond plantation. He did not see the project corralled by Shohin and Afzagh as a universal good.

Furuzon explained that Afzagh had not secured the bitter almond plantation to support the school directly. Furuzon believed that the project was established there to cordon off the hillside above Afzagh's home, so that other villagers could not graze their livestock there. Furuzon explained, "I would have loved to have implemented that forest project above *my* house and *my* fields, on our side of the village. Then we wouldn't have cows and goats damaging our crops. But I was away working in Russia, like so many of my neighbors, and Afzagh saw the potential first, he jumped on the chance. He is doing a good thing, but who do you think he's doing it for?" Furuzon underscored how development interventions were strategically deployed, by planners, intermediaries and recipients, to make the situation work for them. But Furuzon's parting question continued to resonate with me after we had said goodbye. Who were these projects being implemented for?

Rather than deploying a cynical viewpoint toward development, where everyone is just out for themselves, it seems necessary to consider how different subject positions create a variable landscape of opportunity. On the face of it, everyone wanted something for themselves out of the project. Zamin staff wanted to administer it, Shohin wanted to buttress his school orchard, Furuzon wanted to leave a legacy and on down the line, until we get to the donors who were ostensibly organizing the project to protect populations against climate change. There was a collision of interests that intersected in the almonds, and they were barely even alive, but there was so much hope and opportunity invested in

them nonetheless. Everyone involved wanted the project to help them. On my last day in the village, I asked Shohin what he thought would happen to the almonds since the rains had been so meager. “This is not bad weather at all. When we had the war, when our relatives left to Russia, when the rivers swelled and threatened to tear down our village, then we had something to worry about. But when we lived through those times, we knew that we could hope for a better time. We were living high in Soviet times and some of us are rich men in Russia. We can achieve many things. Don’t be fooled by these mountains, they can be deceptive.” People did not maintain cynicism because they knew that a mountain life was challenging, and from that realism emerged a possibility of marginal improvement.

Conclusion: Little tactics of the climate

“The people of Tajikistan are hardworking, resilient and stoic in the face of harsh weather conditions... People are already adapting to climate risks—but the future is worrying.” *Glaciers of Tajikistan and global warming* (Mahmadaliev 2007: 19)

As residents toiled for personal gain, they encountered development projects using climate change as a justification. Katie was proud of her organization’s effort to pilot climate adaptation projects in Vanj. “We are on the cutting-edge of development. This matters, and not only for this one case.” Katie and her colleagues were trying to parse what climate change meant for development in a particular place, at an actionable scale. Though their work started a year before I arrived, it had not led to tangible outcomes throughout my long-term fieldwork in 2014 and 2015. On a follow-up visit in 2016, I

came to learn that the “climate projects” she had initiated had all been terminated. The residents who had dutifully attended Katie's meetings and waited for the irrigation canals, dams and resource management schemes were left with nothing. The subcontracted NGO, Zamin, had made promises, outlined tangible interventions, conducted assessments, and ultimately implemented none of them. However, the project was not a failure from the perspective of her organization. Katie and her colleagues were primarily concerned with implementing and institutionalizing climate concerns into development activities. For Katie and her bosses, integrating climate considerations into policy and planning was paramount to the output that her development agency provided for the communities in Vanj.

By working to create an idea of how to deal with climate change, without actually generating anything tangible for residents, Katie and her development agency helped ensure the “banalisation of hope” that Peter De Vries (2007: 39) believed to lie at the center of the dialectics of development desire. Climate change helped to establish a virtual horizon which both evoked and betrayed the development enterprise, whether people were actively pursuing it as an object or not. The almond plantation championed by Afzagh actually predated the arrival of climate as an element of concern but was folded into its future responses. The staff at Zamin working with residents were not even sure how climate considerations could be explained to local people. The failures of development did not banish the desire for its idealized form but allowed people a glimmer of hope for yet another intervention. Memories of socialist gains and aspirational futures fueled people's localized tactics.

People working with minimal coordination in response to far-reaching uncertainty are left to take up “little tactics of the habitat.” Stephen Kotkin's (1997) term is helpful to highlight how privation necessitates creative repurposing of outside interventions. Kotkin chronicles how, in the face of punitive administration of the working lives, social relationships, and political opportunities of inhabitants of Magnitogorsk, a steel town established in the Ural mountains during the Soviet Union, the city's residents found innumerable loopholes and workarounds to make the system work for them. These tactics were the basis for life: “even ordinary actions undertaken as part of daily life had the effect of realigning, even if only slightly, what might be called the landscape of possibility, opening up some options and closing off others” (Kotkin 1997: 155). Under the totalizing and ubiquitous presence of autocratic power, residents of Magnitogorsk lived out a social experiment as “pioneers making their way in unmapped terrain... deploying a rich arsenal in the humble encounters encompassing the little tactics of the habitat” (Kotkin 1997: 241). Kotkin argues that the malleable strategies arising in a city showcasing brute Communist industrial might were essential to surviving the Soviet era writ large. The staggering *absence* of state involvement in the lives of residents of post-Soviet Tajikistan forced a similar malleability. People had to be creative to take advantage of slapdash development interventions alongside labor migration and subsistence-based livelihoods. Once the benefits of the socialist project dissipated, my informants took up the tactics they had developed in different times and places to corral whatever resources they could in anticipation of future uncertainties. In the era of climate change, everyone is a pioneer making their way through unmapped terrain. Little tactics of the habitat proliferated.

While the development industry focused on its institutional survival and self-preservation, larger considerations surrounding climate change bent the agenda toward ecological project outputs. My informants were not ignorant of the wider forces swirling around their limited endeavors. They sought me out as an ally to make development work for them, recognizing that their own efforts would have to be the backbone for any future gains. They held on to a practical orientation guiding their desire in the face of seemingly intractable limits. Residents of Tajikistan anticipated failure from the efforts of outsiders, but expended aspirational desire in the hope that they could rebuild a piece of the world they had lost.

However, people were not so naive as to wait for benefits to trickle down to them. Stephen Kotkin elaborates on the tactics of Magnitogorsk residents, revealing how the houses they built, committees they joined, and the supplies they stole from workplaces allowed them to meet personal needs while the state apparatus strove blindly toward its five year plans. As a result, the workers of Magnitogorsk had to generate solutions in the face of an overzealous industrial institution wielding total power. A village in the mountains of Tajikistan would seem to be a world apart, yet the responses were in line. Little tactics of the habitat proliferated. While the development industry focused on its institutional survival and self-preservation, larger considerations surrounding climate change bent the agenda toward ecological project outputs.. They were working on a small scale but the stakes were anything but. It was their personal legacies, their community's well-being and their families' survival at stake. They devised tactics that worked to solve universal problems through localized tactics of an uncertain climate.

Chapter 5 | Ethics of Adaptation

Entertaining social norms in the post-Soviet state

I had grown accustomed to sitting down at the *dasturhon*. It was the way most of my informants preferred to greet me. I was perpetually taking on the role of guest, if I acquiesced to the honor. “Please, recline (*kachpalu*)!” my hosts would insist as they surrounded me with embroidered pillows. In Tajikistan, one had to grow accustomed to being fêted and regaled at the head of a fine cloth, laid across a carpet or outdoor seating platform, surrounded by long, rectangular mats (*kurpacha*). As soon as I sat down a procession of small plates would start to emerge from a back room or kitchen area. The sheer number and diversity of the plates never ceased to amaze, which was the intent, though the contents became predictable. The *dasturhon* was the way in which guests were entertained in Central Asia, in Tajikistan, in the Pamirs, and in Vanj valley, where I spent nine months living with a family who rolled it out for me the first time I entered their home. Almost as soon as I arrived I began avoiding the *dasturhon* as much as possible.

This chapter explores how social norms developed from historical precedents and contemporary interactions between residents and state actors in Vanj. Instead of a robust architecture of state intervention, ideas and values from the Soviet era were renegotiated through relationships of patronage or reciprocity solidified through the convention of hosting guests. The relationship between state interests and individual needs were bridged by the adaptive work of norms – a term I engage because of its importance to the broader Soviet project and the ripple effects it continues to have on the post-Soviet state. The Soviet state continued to reverberate in the norms it had sought to establish while the

post-Soviet Tajik state struggled to regulate behavior because current norm-building efforts were concentrated in personal connections rather than legal authority. In the conclusion, I contrast the reinterpretation of norms regarding the environment with more recent efforts by the Tajik state to curtail “wasteful” expenditures on weddings and festivities. Legal and institutional norms dictated by the state were made into rules to live by through their integration into more malleable and efficacious social norms. Given weak state institutions, normative valuations from current and past state projects were selectively incorporated by enterprising residents through the material constitution of the *dasturhon* and the negotiations it made possible.

Because of the specter of severe food borne illness, which haunted me throughout fieldwork, I strove to avoid eating anything I had not prepared myself. However, hospitality is foundational to social relationships in Tajikistan and the *dasturhon* was the most conspicuous display of this preeminent obligation. In Vanj, I always stated that I did not want anything special prepared for me and that I had just eaten. These requests were frequently ignored and a plate or bowl of whatever had just been cooking was set out amidst the numerous small plates that crowded the spread. Neighbors would call me in for tea while walking down the road and, when I obliged, a *dasturhon* would be rolled out. Every person who stopped by, excepting the immediate household and neighbors who passed by many times a day, would be implored to sit and eat. The *dasturhon* welcomed people into a home, whether a dear relative or the electricity meter reader taking a quick break.

For planned occasions, the *dasturhon* would already be set in advance. Weddings, circumcision celebrations, funerals, birthdays, Islamic holidays (such as Eid) and non-

Islamic holidays (Nawruz — Persian New Year), the number of guests were often substantial and the meals well established. Vodka was placed on men's tables at the discretion of the hosts, almost always at weddings, which regularly numbered three hundred guests or more. It became popular to rent plastic outdoor tables and chairs if the weather was fair. But the layout on the tables remained unchanged. There would always be bread, tea, candies and sweets. Depending on the season, the household's wealth, and the importance of the occasion one could also find dozens of other dishes such as fruit (fresh and dried), salads, honey, nuts, sugar cubes, sodas and juices, and ancillary meat products (the cheeks, tendons, heart, etc. of a sheep, goat or cow). Guests were encouraged to start eating and drinking as soon as they sat down. In Vanj, the most common meal was *shurbo*, meat soup with potatoes and carrots. This was frequently substituted by *osh*, rice pilaf with fried meat, which is the "national dish" of Tajikistan (as well as Uzbekistan). On the grander occasions guests would be given both main dishes. Despite the repetition of the proceedings, many households took the opportunity to distinguish themselves and their social status through the *dasturhon*. The expectation of being seated and fed was unwavering, but the quality and quantity of the contents constituting the spread differed.

For impromptu occasions, the household would scramble to provide the guest with whatever they could muster. Having been on the receiving end of this presentation on many occasions, I was allowed to help out the household where I resided when a relative from the valley's central district arrived unexpectedly one day. Except for the massive feasts, when men would tend to the large cauldrons alongside women, preparing the *dasturhon* was the domain of women's labor. Men would slaughter the animals, secure

firewood, and preside over the guests: pouring tea, bringing out the main dishes, and offering more food as needed. Women did everything else. With Sitara, Azim's wife having just returned from the hospital, the *kelin* (daughter-in-law) was responsible for all the backroom tasks that day. So I offered to help. After months of ingratiating myself into the household's dynamics I felt like I could pitch in.

First, we pulled the cover off a large oil drum where the candy was kept away from the children of the house. We arrayed glittering clumps of Ukrainian and Russian sweets onto ceramic plates and rushed them onto the embroidered gold cloth that had been set out in the central room. Dilduza, the *kelin*, tried to usher me away from this work but I realized she needed the assistance since her child had been struggling with a fever and she was visibly tired from her chores that day. She relented with only meager protest. Then we dashed to the cellar and secured a large bowl of apples that had been set aside for just this purpose, along with several small plates of walnuts taken from a sack that had been harvested last autumn. The dinnerware for guests was kept in its own trunk and I helped scatter plates for Dilduza to fill with a variety of table items. We made numerous trips and slowly the *dasturhon* began to take shape: bursting with shimmering variety and abundance. Dried apricots. Sugar. Chopped carrot salad. Luckily the electricity was on that hour so boiling tea only required plugging in the electric kettle. There are no natural gas lines in Tajikistan and I was the only person who cooked with gas on a daily basis. Nearly every households relied on firewood as the primary cooking source. Dilduza had already prepared a simple stew so she ladled it into bowls and presented it to the guests to conclude a hectic twenty minutes of preparation. This was the bustle that went on behind the scenes every time a guest entered a home.

For the first six months of my research, I took the *dasturhon* for granted – since it had been in some respects the focus of my prior research in Kyrgyzstan. It was so ubiquitous as to be unremarkable. In every home I entered a fine cloth cover would appear and, despite my objections, would quickly sprout little plates to nibble on. In nearby Kyrgyzstan, I had noticed the importance of communal festivities for building social bonds, marking status, and providing a repository for migrant earnings that resonated beyond daily expenses — particularly in the vaunted wedding ceremony of recently returned labor migrants (Rubinov 2014). I had taken note of the spread for guests as the basis of inter-household sociality in Kyrgyzstan. In that research, I had thought of communal celebrations primarily as a distributive mechanism for migrant earnings which enabled social relations to be affirmed or contested. But my understanding of the *dasturhon* was transformed when the topic came up unexpectedly while discussing Azim’s professional trajectory.

One day, reflecting on the fact that Azim had been a teacher for several decades, I asked him what it took to be promoted to director of a school. He noted three requirements for taking on a leadership role in the school, or any other state institution: 1) knowledge and capabilities to do the job, 2) the right political connections and 3) the ability to manage those relationships successfully. While the first skill set should have been the crucial one, it was entertaining guests that mattered most of all. For Azim, this marked “the trouble with the situation in Tajikistan.” Azim explained that “someone comes to make an assessment from elsewhere and then they just want a nice table set up for them. It doesn’t matter how you do your work or anything, just that they feel satisfied and well taken care of; that’s there’s lots of good food for them. That’s what matters

most.” As someone who was inundated with requests to join the *dasturhon*, I had missed its signal importance to relations of patronage and enactment of personal politicking. Even more important than what was offered at the table or how magnanimous the spread, it was who you were able to receive at the table that determined one’s room for maneuver and how you were treated by those in positions of authority. Hosting provided the material underpinnings of patronage, access to information, and preferential treatment.

Having recognized the importance of this ubiquitous social space, I began to see these interactions in a new light. I began to take note of the fact that Adham and Firuz, who were nearby neighbors, often had unfamiliar visitors who did not stop at any other homes. Adham and Firuz had been the last two directors of the collectivized farm that once enclosed the village where I resided (the *sovkhos* was called “50 Years of the USSR”). As Soviet bureaucrats, they had lavished officials and forged connections. These relationships continued to yield dividends in the post-Soviet era. Employees of the state TV channel would arrive. Men with information regarding the state of the presidential visit would pass through. Families or individuals in gleaming white or silver jeeps, the ultimate status symbol, regularly pulled up at their doors. They would stay for half an hour or a few days, but would always be treated to freshly slaughtered meat and as many delicious fruits and nuts as could be mustered. Adham and Firuz not only had the most lavish *dasturhons* but they unfurled them most often for an eclectic audience.

In the next section I will outline one particular instance of the *dasturhon* in action. This encounter provides an entry into understanding how the *dasturhon* reshapes the terrain of normative behavior. Norms are not singular rules, but form a continuum of efficacy from legal norms backed up by sovereign law to moral norms maintained in

personal attunements and comportment. Sociologist Göran Therborn (2002) argues that social norms fall somewhere in the middle. He posits that behavior in society is shaped primarily by norms, which are themselves the product of hierarchically ordered systems, organized according to overarching principles and more limited situational expectations. The polyvalent origins of norms requires that normative action hold an intrinsic flexibility. However, he leaves unexplored the mechanisms or practices through which this flexibility is enacted. I argue that through the *dasturhon*, existing norms, laws and precedents enter social discourse and are reconfigured to authorize tangible outcomes.

Stumbling into the state

On a bright autumn day in 2014, I encountered a jovial man in a heavy coat striding down the road beside the local district accountant. I was out on a walk trying to keep up my daily habit of visiting neighbors and helping out with rural work in Vanj valley. Setting out from the house where I rented a simple room, I would often try to find employees of the state forestry agency at their offices or out amongst their sparse land holdings. I wanted to understand how the institutions and actors of the post-Soviet state, while operating under starkly different circumstances and means, could perpetuate policies that had originated under socialist conditions. The endeavors of poorly-paid state workers, such as foresters, irrigation engineers and road maintenance workers, typically had little impact on the efforts of individuals working within private domains. This was a startling break with the past. Residents of Tajikistan had been inextricably woven to state institutions throughout the tenure of Soviet rule. In the two decades since independence, decisions had seemingly become unmoored from the dictates of *sovkhos* directors and

well-placed apparatchiks. In the absence of rigid, totalizing, and often impractical state plans, what were the rules that helped people coordinate their efforts and organize their engagement with the state? The unexpected appearance of the man in the heavy coat would prove to be instructive.

Normally, government employees were a rare sight in Vanj. It took persistent effort to find anyone working under the aegis of the state. Far more common were encounters with local residents toiling in their fields and pastures or sitting in their yards chatting and playing with their children. Fences surrounded nearly every yard, unlike the Soviet era when households could only tend meager kitchen gardens surrounded by a ring of collectivized, unenclosed land. I was regularly spotted through the makeshift fences made of thorny brush or wire mesh and invited in for tea. However, on that day I was stopped on the roadside, outside the fence.

As I walked up to the accountant of the Local Farmer's Association (*Assosiatsii Dehkon*), whom I had met on several previous occasions, he asked me again what I was researching. To avoid further inquiries from the KGB (state police), I highlighted an apolitical focus on ecology. His eyes lit up, "Well, then this is the man you must talk with. Hakim is the head of *Ekologia* for the district of Vanj." Hakim was a warden (*nozir*) for the Committee for Environmental Protection (CEP) of the Republic of Tajikistan. The CEP had been established as a stand-alone entity in 2008 to centralize the oversight and protection of natural resources in the country. Before being spun-off into its own committee, the work of environmental monitoring had previously been distributed across several post-independence ministries and was essentially left unmet. As the accountant beamed at me, we both looked over at his colleague, who was noticeably drunk.

Alcoholism had been rampant in Soviet-era Tajikistan but had subsided in recent years as drinking became limited primarily to communal celebrations, such as weddings, where crates of vodka were distributed like so many rounds of bread. Most people had limited their drinking to the celebratory occasions when they gathered around the *dasturhon*. In this case, it had been a *dasturhon* set for two.

I shook Hakim's hand and proceeded to ask him what his business was in the valley and why I was only then making his acquaintance for the first time. I had heard people vocalize concerns about infractions and fines from the Committee for Environmental Protection (most residents continued to use the Soviet name: *Ekologia*). Though I had been conducting research for nearly eight months I had never seen any sign of the organization or its agents. The warden lowered himself gingerly down onto the grass by the roadside and explained his duties. Hakim lived in Yazgulam, a sparsely populated valley directly to the east, which, along with Vanj valley itself, comprises the district of Vanj (*Nohiyai Vanji*).²⁸ Because he lived in the adjoining valley, he came to Vanj only rarely to carry out his duties as an employee of the CEP.

Like nearly all government workers, his salary was meager, so he tended first and foremost to his own orchard and fields at home. But when he came to Vanj his job was to protect nature. "My job is to make sure that every part of the environment is respected and that people act properly. The way we do that is by making sure that everything around us has a price." Hakim opened his folder and showed me the figures for a nightingale (*bulbul*; 12.75 Tajik somoni),²⁹ a walnut tree (*chormagz*; 6,408.05 somoni), a

²⁸ Though the entrance to Yazgulam is only 13 kilometers away from Vanj along the Pamir Highway, its residents speak a completely different language. Yazgulami only counts the 8,000 residents of the valley as speakers and is not mutually-intelligible with Tajik, a Persian language, which is spoken in Vanj.

²⁹ In 2014, 5 Tajik somoni were exchangeable for roughly one US dollar.

Pamiri mountain goat (*arhar*; 51,000.26 somoni) and a cubic meter of timber amounted to 5 somoni. He continued: “All the things around us have a value. The people just don’t understand what those values are. There are costs for every single thing in nature, fees for the whole ecology. But unfortunately the population doesn’t understand that.” I was unsure what to make of these valuations. How were people supposed to account for these precise values and what would the knowledge of such costs imply? Did the tabulations represent fines for destroying each object? His dossier simply stated the rate of payment for each ecological item, anachronistically for the years 2009 and 2010, with slight increases noted year over year. In his inebriated state, the warden could barely explain to me what he was doing, certainly not why. I could not get a sense of how the residents were meant to respond; what the state was hoping to achieve. Hakim could only insist that the people’s “behavior is not rational, I can guarantee you that.” Then his designated driver swung around and took him to the upland districts, to meet with the respective accountants there.

When Firuz, the accountant who had accompanied Hakim, returned, he explained to me that the warden visited Vanj twice a year and stopped at the *dasturhon* of the accountants in each of the four districts that stretched along the length of the valley. In the district where I resided, halfway up the valley, the accountant had written out a series of (fictitious) infractions on pre-stamped receipts (*kvitansia*) that equaled 500 somoni (roughly \$100 in 2014). In the transaction, the CEP warden collected only 300 somoni from the accountant. The remaindered 200 somoni simply went into the accountant’s own pocket and the warden enjoyed the most sumptuous feast the accountant could muster. No one was fined for any tree cuttings or illicit hunting and no ecological resources were

measured. This lack of engagement stood in stark contrast to the detailed valuation of plants, animals, and fruits written out on in the ledger the warden carried with him. I tried to square the broad proclamations and goals of his job description with the extremely limited extent of his actual efforts in the valley. Why would the warden argue that people did not know the value of nature and could not act properly when he himself made no effort to disseminate those valuations?

Looking back over my field notes later that night, I was perplexed as to why the inspector was so dismissive of local people's concern for the environment when they did in fact maintain a keen awareness of the value of natural resources (which admittedly did not always align with state dictums). This disconnect became all the more puzzling when I realized that my informants knew what the values were that he carried in his notebook and implicitly integrated them into their calculations regarding resource use. I struggled to understand how expectations of the state and its employees were incorporated into people's behavior. As should be clear from the vignette outlining his visit, the warden did not actually talk to any residents apart from the accountant that entreated his reciprocity of patronage. But the packet of environmental values that he carried in a folder resonated beyond his ability to police or enforce them. Through the social interface of the *dasturhon*, where privileged connections were made and remade, government actors and local residents determined what was permissible and where the power of the state found its limits. Those with the means to invite and fête bureaucrats, inspectors, and neighbors were able to make sense of laws and regulations and shape them into norms that disseminated out to others. I came to realize that the accountant was a gatekeeper who

reframed ecological norms. As a local resident and a state employee, Firuz provided an interface between legal dictums and their dispersion into private domains.

Firuz's role did not emerge spontaneously but was the product of historical roots. It will be necessary to consider the broader Soviet socialist agenda and propaganda that created and disseminated a valuation for objects in nature. The way these norms were later integrated by locally-viable systems of meaning influenced natural resource use in response to post-Soviet institutional changes and international development agendas. To understand how such impacts persisted despite the vacuous and ineffective institutions meant to oversee the environment in the Pamirs requires us to consider how norms extend beyond the reach of policing to take hold in social articulations of proper behavior. Norms are often [a] a "reflection of underlying material interests and [the] resulting political struggles. State interventions can change social norms (e.g., they can allow for sustained behavior change even if state intervention ceases), just as social norms can influence or constrain what actions the state can consider" (Miyashita 2007, quoted in Kinzig et. al.: 166). Therefore, by tracing the role of norms, we may be able to more clearly distinguish the relationship between citizen and state.

Mediating Norms

A significant body of research has emerged on the role of norms in managing common-pool or shared resources (Ostrom 1990). Social norms are shared understandings about actions that are obligatory, permitted, or forbidden (ibid.). A key figure in these debates, economist Elinor Ostrom, suggested a series of underlying conditions that help ensure successful adoption and enactment of norms, such as clear

rules, graduated punishment and mechanisms for mediation. Her research sought to highlight the advantage of having local people manage resources rather than distant, bureaucratic elites — as long as certain conditions were met. While Ostrom (2000) emphasized the importance of “context” in determining how effective certain norms would be, she also stressed that evolutionary theories would best explain the principles underpinning group cooperation. In situations where external rules or monitoring are ineffective or absent, norms can even fill in for the state (Ostrom 2000: 147).

Anthropologists have encouraged consideration of micro-politics and forms of coercion and power that come to dominate resource use. Arun Agrawal (2005) argues that new institutional practices changed people’s dispositions to community forestry in Himalayan India through the state’s efforts to classify and manage environmental subjectivities, enacting a process he calls *environmentality*. Building on this analysis of land management as closely tied to its users’ subjectivity, Anand Pandian considers development as “an incitement to work upon oneself” (Pandian 2008: 162) through programs of practical and moral improvement that arose as reconfigurations of past colonial practices.

My research in Vanj suggests that Ostrom’s evolutionary models are inadequate given political upheaval and the unpredictable nature of resource management regimes in post-Soviet Central Asia. Furthermore, the privatization of land in Tajikistan did not encourage the coercive intervention of a governmentalizing state but rather precipitated its ineffectual absence. Thus, I would like to highlight how norms, as a product of historical and material conditions, guide resource use because they are open to contestation and mediation and because they are themselves part of the “context” in

which decisions are made. Working from Michel Foucault's inquiries into how norms take on the work of governing, Pandian and Agrawal argue that moral principles guiding environmental practices become internalized. Michael Cepek (2011) takes issue with the ramifications of blanketing arguments underlying notions of "environmentality," the title of Agrawal's book. Instead, he suggests that the Cofán people he worked with were able to maintain a critical consciousness relative to environmental interventions, rather than simply adopting the notions of conservation that were historically prevalent or recently promoted. Therefore, norms are not simply concepts that planners and administrators can deploy, backed up by the threat of violence, money, or sanction, and then sit back and watch them seep into the minds of local actors. In the absence of effective mechanisms of state sanctioning and oversight, social norms become contested platforms through which common resources come to be managed. My research asserts that normative frameworks are reworked through the social space of the *dasturhon*, allowing residents to draw their own working interpretations of allowable or desirable behavior within their environment.

Through an improvised fusion of newfound entrepreneurialism and communal interdependence, residents of Tajikistan worked to make the most of decollectivized land. In the process, targeted investments in horticulture, irrigation and animal husbandry elevated the importance of some material elements. As Ostrom recognized, the context helped determine which things mattered, like livestock and orchards, and what norms would help guide their management. Arjun Appadurai (2015) argues that ethically important objects are distinguished from other things through mediation, whereby certain objects are elevated to prominence through acts of interpretation and analysis. In addressing the questions raised by object-oriented scholarship and assemblages theories

regarding the role of agency across human and non-human elements, Appadurai argues that the centrality of people that undergirded the social sciences should be amended but certainly not abandoned. He suggests that “the normative paralysis that the new materialisms seem to induce can be avoided by moving our focus away from all ‘actants’ (to use Latour’s famous term) to a smaller class of agentive entities that I propose to call ‘mediants’” (Appadurai 2015: 222). For mediants to engage with things in the world, they have to find an interface or a medium in which to be of consequence. Therefore, not every object can mediate and the distinction between things that do and do not mediate provides an entry into longstanding concerns with ethics, politics and justice that should not be dismissed with the shift of emphasis from subjects to objects.

Appadurai asserts that an attunement to context requires parsing the elements that matter more than others. “I would like to call this space a sociology of mediation, and its key movers are what I have called mediants, neither actors nor actants... which privileges what we used to call human actors (or subjects or agents or persons or selves), seen this time as mediants, mediators among other mediators” (Appadurai 2015: 234-5). The *dasturhon*, offering the ability to negotiate and collaborate with neighbors and institutional contacts, provided my informants with opportunities to clarify competing frames of value and determine how to put them into action. The work of mediation performed at these communal venues helped prioritize certain ethical orientations and enabled evolving resource management priorities to be clarified. Those with more prominent, popular, or well-connected *dasturhons* found themselves in a position to act more frequently and forcefully than others — to mediate. Therefore, the *dasturhon* provides an important space for social mediation by bringing together the objects (fruits,

drinks, meat), ideas, and people that constitute it and then helping those interactions shape norms that reverberate beyond the event itself.

Ecological institutions

A month after my serendipitous meeting with the warden, I sought out the headquarters of the Committee for Environmental Protection's (CEP) headquarters to better understand the institutional logic behind his visit. It was evident the generosity of Hakim's host had encouraged him to ignore the actual work of monitoring ecological resources. But I was still puzzled by the origin of his normative codex. How could one person, making rare visits to a valley of 40,000 residents ever hope to catch infractions? And where did the conceptualization of nature as a measurable entity come from? I returned to the small town nestled between mountain peaks, Khorog, the regional capital of Gorno-Badakhshon Autonomous Oblast (the administrative territory comprising the Pamir region, which includes Vanj). Set back from the main road, behind a sculptural fountain that had ceased spouting, stood an administrative building with a huge Soviet tiled mural greeting the visitor in the main foyer. The mural proclaimed the possibilities of industrialized progress, as cranes, axles and ore jutted out from a rough-hewn marble outline of the Tajik Soviet Socialist Republic. These tentacles of industrial machinery were tethered to the country's capital, Stalinabad (the name was later changed to Dushanbe, meaning Monday Bazaar, in 1961 during the Soviet Union's ideological purge of Stalin's legacy). The vision of progress exalted in the mural, of ubiquitous automated control linking all peripheries to the core, continued to exert its sway through the enduring reverberations of its underlying normative framework.

The CEP offices were located on the fourth floor, where I found an elderly man, Shodi, chain smoking and happy to explain his agency's business. The CEP administrators monitor ecological conditions across all government land holdings. These include land held in reserve, such as the massive Tajik/Pamir National Park (which comprises 18% of the country's territory), the State Forest Enterprises (*Leskhoz*), and nature reserves (*zapovednik*). However, they also hold jurisdiction over "privatized" plots of land controlled by local residents and overseen by *Dekhan* Farmer's Associations, which are all technically owned by the Tajik government (see Chapter Y for further discussion). Shodi went on to explain that the agency had been a part of the Ministry of Agriculture but then was doubly demoted in 2008, not just to a Committee but a 'Committee before the government,' which is two steps below a ministry.³⁰ "As goes the economy, so goes the ecology," he sighed as he poured each of us a cup of tea. "We really don't have the capacity to handle everything we are meant to look after." The CEP pays the salaries for two field workers in each region, one of whom was Hakim, the man I stumbled across in Vanj. To make up for the CEP absence on the ground, local residents are encouraged to report abuses to field workers. "Officially, people have to submit a letter to the municipal authorities (*hukumat*) and our inspectors go and observe what they have reported." From these citizen reports, and the monitoring carried out by field workers, the regional CEP office in Khorog is expected to send a minimum sum (20,000 somoni—roughly \$4,000) annually to headquarters from the collection of fines. This was the ideal schematic concocted in the capital and disseminated to regional centers. It was

³⁰ It's organizational structure at the oblast level is an *upravleniye*, at the city level there's an *otdel* and at the rayon level you can find the *sektor*. There are multiple *otdel*s responsible for four different categories of ecological oversight, each of which is overseen by two staff in Khorog: 1. Atmosphere, 2. Animals and plants, 3. Manufacturing and industry, 4. Waterways.

taken for granted that infractions would be reported, inspectors would verify them, and the resulting fines would make their way to central state bank accounts in the capital.

Ecological conditions had deteriorated precipitously during the 1990s as people desperately tried to survive the siege-like conditions that gripped the Pamirs during the civil war. The ascent out of that abyss was enabled, according to Shodi, by new logics introduced by international aid workers: “in the nineties people just grabbed at anything they could. Now European development agencies have taught them about joint forestry management and introduced energy efficient insulation systems. They have provided some new perspectives.” The Pamirs had been particularly influenced by development projects since 2000 because the region had essentially been abandoned (financially and politically) by the central government. After winning the civil war, President Rakhmon began to direct investment to the capital and his home region Dangara, in the southern oblast of Khatlon. These preferences were detrimental to the losing factions, which resided primarily in mountain regions, such as the Rasht Valley and the Pamirs. Most improvements enjoyed by state agencies or public infrastructure in the Pamirs since the war’s end were owed to international development efforts. The international community, spear-headed by the deeply invested Aga Khan Development Network (which shares a religious and cultural solidarity with the Pamiri people), filled the vacuum of investment and governance. I engage the role of these NGOs more fully in Chapter X and Q. The financial input of development actors was necessary for the basic functioning of state agencies, particularly in the Pamirs, but it had not reached ideological or conceptual dominance. State institutions of resource governance were held in constant tension by the

structural and normative limitations of the Soviet legacy set against the investments and influences of externally-funded development projects.

While I came to understand more fully the influence and importance of international development agendas and funders, I was still unsure of how Soviet norms left an impact, since they seemed to resonate with so many state employees and local residents. Near the end of my long-term fieldwork, in the middle of 2015, I organized an interview with Behruz, the deputy director of the national office of the CEP in Dushanbe. He offered further insight into the foundational tension undergirding his agency's efforts. First, he outlined the Soviet legacy that pervaded everything his agency still struggled to achieve. Second, he spoke with skepticism about the benevolence of outside funders in the country. The work of the CEP, he admitted, was stuck in place. "Most of the protocols and rules are holdovers from the Soviet Union. Any new adaptations and additions are simply taken verbatim from the Russian or Belarusian regulations and translated into Tajik. Then we just change the name from the Russian Federation to the Tajik Republic at the top. But even this is hard to keep up with since they've been changing a lot of rules lately. Our inspectors in the field have to keep up with all these normative [*normativniye*] changes and they keep all the lists of infractions up to date."

However, even this system of carbon copying was in upheaval. Having been demoted and separated, the CEP was required to create their own set of norms. This was immensely challenging given the lack of expertise in the staff to establish such a normative baseline. "In the past, there were really capable institutes who spelled out all the acts, codes, methodologies, etc. There were hundreds of people in Moscow, Minsk, Tashkent... But we don't have this kind of capacity. We need specialists, we need

machinery and research equipment. The institutes, I don't want to disapprove of them, but they are confined to work for themselves. They don't really inform us anymore. As a result, 90% of what we use is Soviet. Normative documents are really difficult to produce. We have a Department of Ecological Norms (*Normativnaya Ekologiya*) but their capacity is very minimal. They just copy documents to Tajik basically. There is quite simply a lack of specialists." Behruz had himself acquired a PhD in aluminum chemistry several decades prior and had trained doctoral candidates who had all flourished under the Soviet system. It was disheartening and confusing to figure out how to guide this agency without the research and staff that he knew such a task required. As the deputy director, he was second in command under a political appointee who had little interest in the actual workings of the CEP. That director was simply hoping to move up to a better endowed government agency. But as the deputy, Behruz had to figure out how to actually run the agency.

Without the benefit of a norm-generating intellectual cadre, the main issue for the CEP came down to the relationship between the state and the people. "Local people invariably abuse our ecological wealth but it's hard to blame them because the real issue is a lack of jobs. When they're unemployed they seek out more resources from the mountains. The more economic problems — the more ecological problems." Then I asked if international organizations were supporting their work and improving their capacity to support and inform local populations. He admitted that there was support but it did not amount to what was advertised. "Let me tell you a secret (*shtoto sikretno*). Let's say we get a five million [USD dollar] project that comes in. Only 10% makes its way to the actual place. The rest goes to paperwork, trainings, documents, the fees and expenses

of the consultants – all these things ultimately have no effect on how things are done. It's just to perpetuate their own goals and... it creates and demands so much paperwork. In the end there's no effect." However, he did note that for technical projects, where the goal is to buy equipment, transport vehicles or computers, "those are probably 50% effective." Ultimately, Behruz held out little hope for altering the workings of the aid industry, "the international mafia is very strong."

The international development community did hold significant sway with most government ministries in Tajikistan, particularly those that had limited financing, such as the Committee for Environmental Protection (CEP). Aid organizations sought to empower the CEP by devolving its control through the implementation of joint forestry management. One of the key tactics of adaptation efforts, which were the new drivers of development policy, entailed reconfiguring state land rights so that local people would take on accountability for protecting natural resources. Joint forestry management schemes, water user associations and other collective governance structures encouraged individuals to be vigilant against misuse perpetrated by their neighbors in exchange for greater access to state lands. Individually distributed profits and incentives were promised as rewards for protecting riparian, forest and pasture resources from other people. But all of these decollectivized arrangements had to be legally and administratively reconciled with a legal and normative codex that operated under outdated and largely antithetical guidelines. Given the combative history of natural resource management in the country, the greatest challenge was to get residents and state agencies to see their work as collaborative rather than combative. The government would have to relegate some of its authority while local users would need to enforce rules and follow external plans.

International agencies sought to make the state and the population a cooperative enterprise, seeing the environment as a mutually beneficial resource to protect and profit from.

The effort to turn the contemporary Tajik state from a top-down, norm-making entity into a collaborative enterprise cooperating with the population was not going well. In conversation with the head of the Leskhoz in the Pamirs, I realized that a lack of plans was only the beginning. “In Soviet times there was a plan. Now there’s no plan... there is only an “assignment” (*zadanya*).” The assignments of the Leskhoz include walnuts, almonds, firewood, rabbits, etc. “Some of these expectations are unrealistic. They are taken straight from the old Soviet perspective. You have to take into account actual productivity. The government planners don’t look at anything – they just come for meals and leave without looking at anything. They have a national target and divide it by the Leskhoz acreage in each region.” Furthermore, in the Soviet era there was a complete inventory of forest stocks every decade to monitor any changes. This inventorization was last carried out in 1981 in Tajikistan. “In Soviet times there were funds for everything. It was all provided for. Now the forester has to maintain irrigation, fund his own assistants – acquire tools for them and salaries — and he must have a complete ecological knowledge of the landscape.” Not only were skills and training required, but a certain disposition to the land was also a prerequisite. As the director explained: “Not only do we need specialists to grow trees, we need someone whose heart worries for the forest.”

At the conclusion of our meeting, Behruz walked me downstairs to a spare office where two deferential workers took out a blue binder and made a photocopy of a single page. The document was a short table outlining the girth of trees on the left and the value

of each type of cutting, on the right column. Less than 12cm is 2 somoni, 80.1cm or more is 34 somoni, and so on. These were the latest laws of the Forest Codex taken from the section on Legal Normative Acts (*normativnih pravovih aktah*). But, “in reality these are all just Soviet norms,” one of the bureaucrats conceded as he slid the blue folder back into the drawer.

Affective Rationality

According to Soviet policy, the thread entwining nature and society was woven by norms. The valuation of natural products, including ways to properly catalogue, protect and put them to use, was the base upon which further efforts could be built. Soviet planners in Central Asia understood natural resources as reserves to be exploited through endless mechanization and unwavering industrialization. Policies focusing on managing socialist resources in a rational way hinged on several dimensions. These included mechanization, standardization, minimization of waste and a skeptical disavowal of local people’s capabilities. Heightened precision would allow excess materials to be minimized and reused as long as the uncertainties of human behavior could be mitigated.

Despite these modernizing visions, Soviet policy makers were continually disappointed that foresters (*lesniks*) in Tajikistan were still using shovels and shears, lamenting that “forest products in our country are still not always used rationally...” (Melehov 1958: 37). They blamed the shortcomings of their efforts on complications with local residents. Resource managers were forced to combat “the irrational actions of people, [which] led to the destruction of a balance in nature” (Padalko 1980: 25). The managers of state resources viewed nature and society as unpredictable and unruly,

failing to succumb to the grip of rationality. Norms not only helped achieve maximal ecological exploitation but offered the promise of overcoming the greatest obstacle to nature's rational use: irrational people.

As technical development approached heightened levels of automatization and self-regulation, planners hoped to promote a new kind of ecological Soviet subject that adhered to a new approach to nature. The affective subject, in love with nature for the benefit of the socialist state, had to be cultivated as a complement to state planning efforts, rather than a detriment. Advances in technology and state power would alter the interaction between a person and nature. "Dialectic-materialism is the driving force of human behavior, it is the dominant force for changing man's relationship to the environment" (Vorovich and Zhdanov 1982: 21). Scholars and educators sought to draw a direct correlation between controlling human behavior and achieving the goal of total management over natural resources. If people's irrationality was subtracted from the equation, fully maximizing the potential of natural resources came within reach. "The wider we distribute the propaganda of forest knowledge, the more rationally we will use our forests [...] instill a love of forests ... which can help us fulfill the great work outlined by the Directives of the 20th meeting of the Communist Party" (Melehov 1958: 46).

Therefore, the complement to the productive industrial worker was the Soviet citizen who cared for the beauty and vitality of nature. This passion was meant to be stoked at a young age, such that children were taken on excursions and pressed into group plantings and beautification projects all across the Soviet Union.

"To teach our youth to manage, with a wise approach, the wealth of forests in our country is a large pedagogical task and a governmental obligation of our schools.

We do not support a separation in relations with forests. Nature for us is not only an example of aesthetic growth. We must know how to use nature for the benefit of the individual so that the forest, in the eyes of children, must be seen as a national good (*narodnim dobrom*). They must know how to more fully utilize forests for socialist welfare, how to garner from the tree more beneficial productivity for the person, remembering that you can cut a tree quickly but to grow it takes a very long time.” (Ivanov 1980: 14)

Children were taught to affectively value the environment, through the quantitative knowledge of its benefits and the emotional appreciation of how it made their modern lives more healthy and attractive. At its core, the pedagogical methodology for protecting nature was not biological nor ecological but social, encapsulated in the triad of “nature-person-society.” Schools were meant to be a part of mass agitation (*agitmassovaya rabota*) that involved children in forestry and steered them towards its study. “Students who study forests must understand this triad and recognize the deep meanings it holds for the Soviet person and for the welfare of the Soviet nation” (Ivanov 1980: 15). These efforts included socialist competitions between classes, schools and pioneer squads (*druzhinami*) (ibid: 86).

I would like to suggest that the environmentally-affective citizenry desired by Soviet policy may actually have come into being, albeit with different priorities, from the necessity of agricultural subsistence that has come to dominate rural, post-Soviet Central Asia. Commitments to landscape and place took shape out of necessity, through the ecological toil necessitated of households wedded to place. These affective attachments and loyalties, centered on a local terroir, have emerged in nearly every valley in the Pamirs. While Vanj as a whole had become renowned for apples and pears, the upper part of the valley had the best walnuts, people said, with wonderfully thin shells that a child could easily crack open. The next valley, Yazgulam, was renowned for their mulberry

production. Whether growing the valued fruits of the valley or not, nearly all residents espoused potent appreciation for their localities. They held deep reverence for the *zamini kor* (working/agricultural land) outside their households. People would delight in showing me every new wrinkle in the irrigation matrix, the dearth of pebbles in a field or the breadth of a walnut tree's crown. The landscape had become a source of pride, sustenance and identity.

The historic legacies of affective-driven attachment to the landscape intersected with emerging personal interests in Vanj. Farhod, the elderly school director pointed down to the area that the Leskhoz had been fastidiously trying to afforest. It still held the discernible trace of tree rows planted by his students in the 1970s. When he was the director of the high school, three hundred students at a time would be sent out to help the state foresters work that area. But the plantings never held. A huge flood came down the side valley, ruining all the waterways. The trees dried out and everyone pulled them down for firewood. The same story repeated itself in the 1980s, when the Leskhoz tried to use bulldozers to level the land. The climate-driven international efforts underway at the time of my fieldwork were the third iteration of a rational application of forest cover. However, the foresters were not working to engender emotional ties to the land. Their efforts continued to cause friction with local users and most of the young saplings planted in orderly rows were abandoned and dried out.

When I talked with residents who had territory adjoining state lands (which in Vanj almost invariably meant the “forests” of the *Leskhoz*), they openly discussed how they would steal state resources. “When you have your own land beside theirs, there’s no way they can check where you got firewood,” noted one neighbor as he stacked cords of

firewood along the back wall of his house. When I asked about the trees he had recently cut along the roadway, he explained that the inspectors from Ekologia would come to observe and give “major fines, but I’m not concerned because I chopped down these trees quietly (*po tihashku*).” He wasn’t concerned about fines, he claimed, because they come to check on infractions during the autumn, when people are usually just preparing their winter firewood stacks. So he chopped his in the summer. “I know that each cubic meter of illegally logged walnut trees is 400 somoni, but I also know that I can call my cousin in Khorog if there’s any attempt to get in my way. And if they really want to make a fuss, I’ll resolve it the way I did last year. I’ll have the forester (*lesnik*) over for a meal and we’ll settle the whole thing quietly.” Doing things quietly not only referred to the way people would access or appropriate state resources, but also signaled how issues could be resolved when quiet actions were found out. I asked Murod, an employee of the Land and Taxation Authority with a modest house on the far edge of the village, what happened when the forester from the other side of the river found him gathering firewood, he explained his response very simply: “My wife is his cousin and we had him over for a meal. When he rose from the *dasturhon*, everything was resolved.”

Practicing norms

Despite the limited presence of the state in the remote valleys of the Pamirs, people occasionally invoked the norms of the Soviet Union in their decision making process. In the village where I lived and conducted research, the land holdings that people praised the most had until recently just been rocky outcroppings. They were motivated to improve the woodlots on the edge of their own household properties, rather than more

distant forest zones. Azim assured me that the land had been gradually irrigated and tended, so that “even with everything they could throw at it, the Soviet state never took care of these areas like we do now.” He cited the need to enhance underused lands to improve the overall look of the village and, of course, personally reap the benefits of firewood and lumber harvests. Local people also paid exceptional attention to the quantity and quality of their orchards and fields. I was constantly led around people’s yards and shown the grounds tree by tree. They were rarely able to tell me the Latin name or particular variety of a tree they had planted or inherited, but they could tell me many of the characteristics that it exhibited and why they chose to keep it. They were keenly aware of exactly how many trees they had and what they were worth to them.

They also saw these efforts as a means of building up the public good, of enhancing the prestige of the valley and expanding the ecological baseline of the district and its ability to sustain its population. “When you’re talking about the trees, you have to think of future generations,” Azim said as several of his neighbors shared a meal under the shade of pear trees on the veranda. “These are not only for money but also something we leave as a legacy, that shapes how our grandchildren will live and what kind of land will be left to them.” This consideration of the long-term impact of one’s actions on the environment was remarkably similar to the norms that Soviet pedagogues and propagandists had dreamed of entrenching. But these orientations had been promoted to align with the state’s management schemes, which was hardly the case nowadays. Instead, the value of things in the environment became a topic of debate and conversation, to be worked out through conversations around the *dasturhon* and commitments in the field.

Local users took advantage of institutional failures in managing natural resources to prioritize their own needs. They were aided by the fact that control had devolved to them through the distribution of land tenure from formerly collectivized farms. But apart from this legal half-step (only going halfway since the government still technically owned all the country's land), users filled in the spaces of the state with their own collaboratively-regulated practices. However, in doing so, they occasionally overstepped legal limits by using land that was not theirs or by taking resources from public lands. No one ever said to me that they were basing their actions on a set of norms (*normi*) or rules (*pravila*), but in conversation they would justify a particular behavior by citing decisions elaborated in social, rather than bureaucratic or legal, settings. Neighbors knew how many trees the others planted, checked up on how many bushels of wheat were threshed, who had found the most promising fighting partridge in a mountain excursion, and informally competed to see who could harvest the most potatoes. The accounting of ecological developments had become deeply woven in story-telling, gossiping and everyday household accounting.

Apart from taking natural resources, the planting of trees was also regulated. It was unlawful to change the status of land, from field to orchard or pasture to woodlot, without consent from land management authorities. Azim would also discuss the potential for being fined for planting new trees. He said that there were precise limitations on what he could chop and what he could plant. He would occasionally bring up these requirements when considering if he should cut down a walnut tree (which are usually several centuries old in Vanj with massive crowns). He would claim to take into account the fines levied by *Ekologia* if he had decided to harvest any forest products from the high mountains above the plot. Essentially everyone in Vanj knew that trees were meant to be protected and they

knew there were fines that could be levied for engaging in the practice. Capturing grouse for bird fighting was very popular and people knew it was a punishable offense but the birds could be found in many homes. They also knew that certain territories were off limits for livestock grazing, that water could not be wasted when it was needed downstream, and that hunting and carrying firearms was illegal and prohibited. But they determined the efficacy of these rules only in so far as their neighbors and friends saw them as potentially detrimental. They were more concerned about the threat of social, rather than legal, sanction. And many of the boundaries were delineated around the *dasturhon*.

On the face of it, my informants were ignoring the rules and restrictions set by state agencies meant to oversee their actions. Countless people told me that the *Ekologia* inspector could easily fine them and that penalties for cutting down trees were severe. Yet this never seemed to prevent anyone from cutting down trees whenever they had set out to do so. This could be explained by the fact that state agencies had extremely limited policing capacity and, even when they did find infractions, were constrained by familial and neighborly expectations in order to avoid friction with neighbors and relatives. These relationships were articulated and strengthened through collective celebrations. The reciprocities people secured at such events forced the foresters or ecology wardens to prioritize local harmony over laws and regulations. Talking about land and resource use around the *dasturhon* did not ensure people followed what the state wanted. More often, these venues helped align the perspective of state representatives to what their neighbors preferred.

The relative valuation of agrarian outputs and familial decisions were evident when people chatted by the side of their fields or shared a seat in a jeep taxi, but they were the richest, most sustained and deeply articulated when people were invited as guests to sit for a meal. The largest, most heavily attended venues were weddings. A *lesnik* (forester) from another district explained that in the autumn months, when he held access to official taking of firewood, “I am the most popular person at every festivity. Everyone wants to sit next to me at the *dasturhon*. In early spring, it’s the guy with the tractor.” In these settings, residents could press their guests about what needed to be taken into account. These valuations differed wildly from the ones I found in the warden’s folder, but they were surprisingly consistent among those I interviewed. The cost of cutting down a walnut tree or hunting a partridge were more than price points for infractions. People created normative frameworks that set parameters for their behavior by discerning the intrinsic value of natural objects. They cultivated this awareness by making trips to the bazaar, chatting with their neighbors and staying abreast of what their acquaintances were able to do with their harvests. People rarely consulted the recently created online web portal, www.agroinform.tj. Established with the help of foreign funders to bring pricing and historical indices for a wide basket of goods being sold in urban markets across the country, this incredibly robust and well-updated website was not consulted by anyone I ever met and was casually dismissed whenever I brought it up. My informants had determined prices based on what they heard when distant family members came to visit and they discussed outputs and costs sitting around the *dasturhon* of their neighbors.

The social articulation of norms gave them force in people’s lives — rather than the force of political or legal injunction. At the same time, ready-made reference points

outlining a schema for natural valuations were hidden in a folio carried by an inebriated man who made no effort to disseminate that information to anyone in the valley. Ethical and conceptual contributions were drawn from local relationships and techniques of work. For instance, Pasture User Associations introduced throughout the country as part of climate adaptation efforts focused directly on the management and control of livestock. These agencies struggled to make inroads, given how dedicated each household was to maintaining the size of their individual herd at the expense of the pastoral commons. Livestock were far too abundant as cows, goats and sheep had become a preferred way to bank savings. Given the extremely limited carrying capacity of the land, overgrazing and the ensuing erosion, degradation and landslides would have continued to send many Soviet land managers into paroxysms. Whenever a guest of honor would come to visit, or if a neighbor had a death in the family and the surrounding houses had to treat the pallbearers and communal grave diggers (made up from men of closely neighboring villages) to a meal, then sheep were invariably slaughtered. Cows provided milk and the meat for the largest festivities, such as weddings. Livestock were a massive burden of daily upkeep for every household, except for the couple months in the summer when almost all of them were sent up to the high pasture, to stomp and snort their way through the meager summer grass. Animals were crucial not only for maintaining savings and holding a supply of readily transferable assets on hand - but were also a way to meet obligations surrounding the *dasturhon*.

One morning I walked over to Sitora, Azim's wife, as she was kneading the dough for homemade bread. I mentioned that the water in the *aryk* (water canal) had stopped running and she explained that the *rais* (boss) must be watering his potatoes. I asked her,

“How is he the *rais*? Isn’t he just your neighbor?” She explained that he had been the head of the collective farm. “He makes all the decisions. He knows how to make everything run smoothly. Nowadays, in Vanj, things only work if you can cover a *dasturhon*.” I was taken aback. I thought we were discussing his use of water. Sitora gives me a pitying look, feeling sorry for my ignorance. “If you can’t cover a *dasturhon* then you are nothing. If someone from Dushanbe comes, you have to set up a big *dasturhon* for them, you need goats, several sheep, a bunch of chickens, all at the ready for when someone comes into town. That is because you’re a little person. Unless you have connections you always need a *dasturhon*.” I reveal more of my ignorance, “But even if you do have connections, you still need to cover the table?” “Yes, of course! But then you are not just setting out a table to look good, you are getting something in return.” Her blunt explanations to an inquisitive novice outlined clearly how the capacity to exercise connections to visiting big shots allowed the abstract plans of the state to interface with everyday livelihoods.

Marcel Mauss, in *The Gift*, reached a provocative conception of object animacy in a section of his book titled *The force of things*. Incorporating disparate examples, he emphasizes that all forms of materials are more than simply objects to be used by people. “The houses and decorated beams are themselves beings. Everything speaks... Each of these precious things has, moreover, a productive capacity within it. Ceremonial dishes and spoons decorated and carved with the clan totem or sign of rank, are animate things” (1921: 42-3). Animation of objects is not only what makes them important for ceremonial or social purposes but it also has a productive capacity, the ability to create. What does it mean for anthropologists and other scholars to make sense of the animate properties of

the material world? It forces us to consider the potency of the objects themselves; to try to make sense of the force being enacted by the thing existing alongside the person.

Conclusion

When the Soviet Union set out its far-reaching project of establishing a normative codex that encompassed all of nature, it represented an effort to guide population behavior to maximally use the environment. If every element was accounted for, then every person's missteps or misuse (signaling irrational behavior) would show up on the ledger. Yet this nested system of surveillance was full of loopholes, gaps and failures. Following Tajikistan's independence, the government had neither the manpower nor the commitment to maintain vigilance. What does the lack of state control imply for the individuals who are still its subjects but no longer in its thrall? If norms result from the interplay of state institutions and the subjects that they govern, what does our knowledge of the workings of the CEP tell us about societal responses taking shape in the absence of the state?

The reality is that the normative framework of penalties for ecological infractions did influence people's considerations about natural resources. Of course no one was concerned with the warden himself. But people could consider the potential damage that their actions might cause through a moral lens which had once been based on Soviet tabulation of relative ecological value. Thus, people would think twice or ten times before chopping down a tree. But if they wanted to, they would still do it. The norms elaborated in principle by the CEP and its variously situated administrators and bureaucrats did actually impute some effect on how people valued and made use of the natural resources

that were directly under their control (though legally still owned by the state) as well as the public lands that they made use of. The rules, and how to avoid them, provided the rudiments of a proscriptive compass for what could get done. However, much of this flexible orientation was disseminated through personal connections at celebratory meals. In fact, even the meals themselves have come under the scrutiny of the Tajik state. The attempt to limit their expense highlights the way that state-sanctioned efforts fail to control behavior, instead allowing people with different types of connections to interpret the law as they see fit.

The Tajik government passed a Law on Festivities in 2013. The law stipulated a variety of rules regarding weddings, funerals and other celebrations. The Tajik state wanted people to stop “wasting” money on such *tois* (festivities), so they generated a tally of infractions for exceeding limits on invitees, kilograms of rice, number of cauldrons of meat, and length of festivity (3 hours). These rules were never adhered to closely, in my experience. But they did have an impact on how people planned their festivities. Costs did not plummet but were altered. Many people insisted that the regulations were widely enforced and heavily policed but I saw the rules frequently broken by nearly every household that had the income. Sanctioning did not take place through aggressive implementation or complete bureaucratic tabulation. The Tajik state had almost no idea how many trees were under its control and much less how many were held by its citizens in private. The state was not aware if someone cooked an extra 10 kilograms of rice. But the threat of punishment was enough to alter the behavior of people who were already looking for justifications to avoid them in the first place.

Norms set greater constraints on individuals who have fewer means to avoid them. Those with greater connections and wealth could display far more people at their wedding or a casual afternoon at their *dasturhon*. But norms also provided those with diminished means a tool that they could put at their disposal. 'I can't have a big wedding because it's not allowed' is a justifiable way to spare oneself of expenses that would saddle them in debt. The wealthy neighbors will have a big wedding anyway. They will chop down a row of walnut trees because they want to grow flowers. While many people talked of *tanzim* inspectors, just as they had *Ekologia* inspectors, I never met one. The fact that the state does not have the capacity to enforce norms reveals how it intervenes in people's intimate decisions without actually having the power to do so. By setting out ideological parameters, either for purposes of cybernetic tabulation, minimizing “waste,” or efficiently using the environment, it establishes different moorings guiding people's decision making. Citizens are then able to reconfigure those markers with the connections, assets and resources available to them.

People who had expected industrialized agriculture and state-planned distribution networks to see them through their lifetimes strategically employed the obligations of hosting and reciprocity to compensate for the absence of a robust socialist state. They turned to the *dasturhon*, where the ability to provide meat and a wide array of dishes allowed hospitality obligations to be met and social status affirmed. When changes were introduced by development agencies promoting climate adaptation projects, their meaning and implementation were resolved by the people who fêted the aid workers at their homes and then disseminated the resulting compromises at subsequent gatherings where people discussed how to make them work. When the Tajik government continued

to perpetuate Soviet conceptions of valuing nature and promote a proper ecological disposition, mediators helped turn abstract concepts into possible responses. When the state tried to limit the social space of mediation itself, the practice of the *dasturhon*, people responded according to their connections and what they thought they could get away with. The sociality of the *dasturhon* not only helped Tajik residents refine ethical principles but allowed them to work together to realize them in practice.

Conclusion: Vital Growth
Fruits of vitality

Thou cunning'st pattern of excelling nature,
I know not where is that Promethean heat
That can thy light relume. When I have pluck'd the rose,
I cannot give it vital growth again.
It must needs wither: I'll smell it on the tree.

Othello, the Moore of Venice
Act 5, Scene 2

When my stay in Vanj extended into the autumn of 2014, the weather grew increasingly overcast and the wind began to howl down the mountainsides. As opposed to the warmer months, when the wind blew *up* the valley floor, this colder wind was dubbed *shamol-i chormaghz* (walnut wind) by Azim and the rest of the family in the household I lived with. As the wind grew frigid, it helped harden and crack the green outer casings of the walnuts, encouraging them to ripen. Pears, apples and walnuts joined in the wind-swept chorus, continuing to fall for weeks. The family members jumped with alarm each time the nuts crashed onto the recently renovated tin roof, while the dislocated roofing slabs of the Soviet era, a mixture of asbestos and concrete, were stacked neatly in a corner, looking drab, grey and solid.

Azim's mother, Dinara, explained that she used to make soap out of the endless stream of walnuts that crashed down on their roof by rendering them in a big cauldron. "In years past we had many more walnut trees," Dinara noted. "But the walnuts didn't fetch anything like the prices they do now. There was no one coming around to buy walnuts! Now they are precious." With so many excess walnuts — Dinara recalled dozens of bags weighing 30 kilograms each, during a bumper year — Vanj residents used

to roll a heavy stone cylinder atop a large, flat stone to press the walnuts into cooking oil. Walking around the village, I found these stones lying dormant at the edges of courtyards, monuments to the desolate self-sufficiency that abounded before Soviet rule engulfed Vanj valley, when soap and oil could not be bought at a shop and had to be gleaned from tree nuts.

As Tajikistan stumbled into independence and careened through five years of devastating civil war, its rural areas were hit hard by deforestation. In a dry, arid land, the small forest stocks that stood were cut down out of desperation. Hundred-year-old walnut trees (*chormaghz*) were cut for firewood and farmland. Those arboreal monoliths were probably not coming back. Walnut trees were very hard to grow from seed so nearly every household had turned instead to pomiculture, growing fruit trees that had more accelerated maturation periods. Apricots and plums only took a year or two to fully flourish; apples required five years; whereas walnuts took decades to fully mature—and they could not be grafted onto.³¹ However, households whose members had the foresight to leave their old walnut trees intact profited as the nuts' value in the post-Soviet era reached unprecedented levels—a kilogram of walnuts were selling for over 50 somoni (\$10) in urban bazaars in 2015. Considering that walnuts had once been a superfluous crop to be rendered or pressed down, it was no wonder Dinara found them to be so precious.

Waking up to the sound of early morning commotion, I saw Sitora, Dinara's daughter-in-law, slinging a bag of walnuts over her shoulder and heading down to the

³¹ Jake Fleming (2017) discusses how the obstinacy of walnuts beguiled Soviet foresters, while the flexibility of other tree fruits allowed for alternative political formations to take shape in the walnut forests of southern Kyrgyzstan.

small general store. The storeowner accepted walnuts as payment for Sitora's grandchildren's winter clothes, which she had purchased on credit when a cold snap set in. However, Dinara was unhappy to see Sitora dragging the satchel away. After watching the walnut grab in the morning, Dinara proceeded to stitch up the remainder of the walnuts that had been laying out to dry on the patio (so that mold would not ruin them). She gathered them into eight sacks, sewed them off with a bit of string, and stashed them in the cellar. The walnuts' impromptu storage did not mean that they were cut off from circulation.

A neighbor stopped by later in the day to look in on Dिल्фуза, the daughter-in-law (*kelin*) married to Sitora's son, who was nursing a newborn. Before walking her guest out after an hour's chat around the *dasturhon*, the spread she had laid out for guests, Dinara stopped by the cellar to fill a sturdy blue plastic bag with walnuts. Whenever guests came to the house it was Dinara's decision as to what kind of food would be put before them – the guests' importance mirrored in the constitution of the feast that would be undertaken. Azim always liked to say, with a smile, “we will have to see what the *shef* (boss) decides,” referring to his mother. “Like the long-serving President [Emomali Rakhmon of Tajikistan], *kampir* doesn't want to give up power.”³² As a result, she intervened when too many apples, walnuts or pears were making their way out the door with departing guests. As for bank payments, remittances, pensions: they were handled by her son—as if the immateriality disinterested her. Dinara, a woman in her 70s who had lost all but two

³² When someone set off for a festivity at a neighbor's house, the *kampir* (old woman) decided if a live chicken would serve as a gift, or whether bread and candy would suffice. Chickens seemed to be reserved for major *to'lov* (festivities) in her natal village.

of her teeth and could not eat hard foods of any kind, wanted full control over the walnuts.

Fruitful finds

The hunt for errant walnuts was fierce. I came around the corner to find Subhona, the six year-old who lived with us, crying. She had discovered that the shop owner in the neighboring village had been giving kids store credit for walnuts they “find.” The day before, she took a small bag on her way to school and exchanged it for candy. She thought she could really make a killing with a whole bucketload, until she was caught. As she slumped on the dirt, pretending to be very upset, one of the older ladies of the village came up the dirt driveway. Sitora, Subhona’s grandmother, hollered out, “Hey! Drop those walnuts!” Friendly banter ensued as the neighborly thief tried to smooth out her bulging pockets. Apparently, Zarina, the neighbor, came around during every strong wind and gathered the windfall not yet collected by her neighbors. When the walnut wind started howling everyone grabbed a pail and raced to the trunks of the trees as they dropped their mana. When land was redistributed from the *sovkhos* (collective farm) in the 2010s, Zarina’s household was left without any walnut trees. “They take too long to bear fruit. We thought about planting new ones but it’s not worth it,” she would later explain to me. Her son had planted their first few rows of apple trees in the field beside their home earlier that year but no walnut trees were slated. Zarina resorted to gleaning from neighbors and Sitora usually looked the other way, trying to maintain a modicum of sociability. But with the recent losses perpetrated by her own grand-daughter, Sitora had to draw the line somewhere.

The jocular shouts and subsequent warm exchange patched over a simmering tension among neighbors whose trees bent over each other's fences. The village had felt different, just ten years prior, Sitora conceded. "It wasn't as closed off, when there were just the *sovhoz*'s tobacco fields and a handful of houses. Everyone used to stop by more frequently." Azim, searching for a diplomatic answer, just said that there was less land to go around. Sitora did not take the bait. "Everyone has problems now. And they act them out on their neighbors. It's not even the old ladies (*kampir*) or the men but their middle-aged wives. They are the cause of the tension." I began to understand why Sitora was often reluctant to have me volunteer my labor to the neighbors. The opportunities often afforded me engaging conversations; engrossed in the task at hand the dialogue would flow freely and my informants grew to appreciate my help. It took me some time to understand her trepidation. A polarization seemed to have emerged in recent years. Sitora complained that "everyone just takes care of their own plot nowadays. For instance, I haven't spoken with one neighbor for the last three months since a calf ran through the gate and ate up a bunch of the apples, damaging the twigs. This battle between animals and trees and people just creates too much tension when there is so little land." The communist vision of collaborative workers banding together to industrialize the future had cracked long ago. Trees were pushing into the fissures, exacerbating tensions among their caretakers. This chapter considers the force of these trees to remake the social and ecological landscape when outside interventions fail to reach the ground. How do trees alter and reframe people's labor? What is shared and what is lost in the interplay between vegetal and human efforts to make something new out of the rubble of the past?

The use of fruits for health was not confined to doctors and patients. One day I saw Farrukh collecting apples in a box in his yard. He had a large extended family and after returning from Russia (as a devout Muslim) he had become the critical scion of the family, an obligation he attended to with the aid of a large herd of sheep (over 70), along with inherited trees and potato fields. He explained that the fruit in the box were for his relatives in the hospital. While he acknowledged that the nutrients in the apples were beneficial for them, he thought it was just as important that they feel connected to this place, “so that they get a taste of Vanj on the hospital bed, and it takes them away from all their problems.”

Just as the exchange of livestock is foundational to lifecycle rituals and status in Central Asia (Werner 1999, 2001), fruits are a special gift that upholds relationships and reciprocates care. Such flows of in-kind remittances can have important impacts on local economies and household well-being (Ellis 1998; Taylor 1999). Andersson (2011) argues that in-kind remittances provide important redistributive mechanisms for food across space, whereby rural households maintain responsibilities for producing food for urban-based relatives. The objects exchanged are not merely signifiers of value (Appadurai 1986), or foundational objects of communality and social control (Godelier). They are used to grease the wheels of corrupt state institutions, and to nourish relations with people in positions of power.

New Animisms

Animism is perhaps anthropology’s first theoretical concept, “the intellectual genealogy of central debates in the field goes back to it” (Bird-David 1999: 67). The study of animism provided an entry into the study of nature through the prism of the

Other. Animism was established by Edward Tylor as an ethnographically researchable practice evident among indigenous peoples. This “old” animism was a “belief in spirits” which mistook what was considered alive and its cause, while derogatorily ascribing this belief to “people who could not distinguish correctly between objects and subjects, or between things and persons” (Harvey 2005: xiv). However, there has emerged a “new” animism that is concerned with broader ontological questions of ethics and environmental cooperation: “knowing how to behave appropriately towards persons, not all of whom are human” (ibid: xi). Animism is open to pluralities and multiplicities that are neither concrete nor structured for ease of analysis.

Irving Hallowell (1960) was a forerunner in initiating a reappraisal of the scholarly notion of animistic personhood - pushing ontology outwards with the help of his Ojibwe informants. While distinguishing between persons and objects, the Ojibwe challenge notions of what a person is. For Ojibwe, persons become a wider category, encompassing sub-groups such as human persons, rock person, bear persons, etc. Along with Margaret Mead (1932), Hallowell argued that such animistic conceptions should not be seen as concretions of childhood whimsy but were communally developed constructs finding their fullest fruition in adulthood. These were not errors in judgement or misguided folly but a way of seeing the world that gave other entities a role in the world equal to the self.

As a result, animacy is not the property of persons projected imaginatively onto things that surround them (which is the fundamental flaw in the Tylorian tradition) but is a dynamic field of relations that continuously and reciprocally brings beings into the world. “In the animic ontology, beings do not simply occupy the world... they contribute to its ever-evolving weave. Thus we must cease regarding the world as an inert

substratum” (Tim Ingold 2000: 71). However, the revival of the animism debate within anthropology (Bird-David 1999; Descola 1992, 1996; Viveiros de Castro 2007) seems to strain for a particular re-invigoration of agency carried forward by indigenous groups. Rather than focusing on explicitly political projects, these provocations seek to upend the very ontological categories that undergird universal ethics.

One of the key proponents of this shift in new animism is Eduardo Viveiros de Castro (1998: 473), who defines animism as “an ontology which postulates the social character of relations between humans and nonhumans: the space between nature and society is itself social.” For Viveiros de Castro, ontology is the preeminent category for understanding interoperability between forms of life and the gap between these entities is the very space of sociability itself. Upending Kantian duality and the modernist project of mastery over the environment, Viveiros de Castro’s understanding of animism does not posit one nature encompassing many human societies, but rather one society of both humans and nonhumans encompassing, as it were, many natures (Pederson 2001: 415).³³ The ultimate implications of Viveiros de Castro’s argument is that body and soul are indeterminate (not something that one “finds” in the other). As a result, nature and culture cannot correspond to substantive, self-subsistent entities or ontological provinces, but rather are pronouns or phenomenological perspectives (Harvey 2005: 136). What might look like “nature” (the non-human environment) does not look that way to animist people. Thus, from the Amazonian point of view that Viveiros de Castro promotes, all

³³ Perspectivism is “a process of discrete switching of points of view between the different forms of agency populating the cosmos” (Viveiros de Castro 2007: 161). Humans and animals are the visible part of this living spectrum yet there is a brilliance in the way spirits are apperceived: “Hence the primordial quality associated with the perception of these spirits is their *luminous intensity*” (ibid: 163, emphasis in original). The fundamental distinction is between visibility and invisibility (Lagrou 1998).

that surrounds humans appears cultural because it is mediated through the space of life and death that weaves everything together.

Eduardo Kohn (2015) has been plotting out a trajectory explicitly from Viveiros de Castro, Descola and others. Kohn argues that forests and the animals that live in them are agentive because they are selves that can represent through signs that exceed the symbolic, without having to speak. “Selves, not things, qualify as agents” (Kohn 2013: 92). The quintessential self for Kohn is a puma, which by hunting him and his Achuar informants blurs the boundary between what is human and what is wildcat. However, by focusing on a Piercian theoretical framework that sees everything as a sign with semiotic origins, he has to bow out from his own interlocutors belief that rocks and other inanimate objects in fact hold agentive and expressive power as well. He argues that materiality does not confer vitality, contra Jane Bennett’s view of materiality (which I will get to later on) because it does not fit into his theorization of what counts as a self. “I recognize of course that those we call animists may well attribute animacy to all sorts of entities, such as stones, that I would not, according to the framework laid out here, consider living selves [...] if I were routing all my argumentation through what, say, the Runa think, say, or do, this discrepancy might be a problem. But I don’t.” (Kohn 2013: 94).

Marisol De La Cadena (2014) *does* find this discrepancy to be a problem. In responding to Kohn’s book, she points out that her informants see power in the mountain that they live next to not because the rock has agency per se but because they can accommodate its presence and potency into their awareness of their environment. Mountains and stones are not a type of nonhuman that needs to be semiotically accounted

for in order to count as selves because “geos and bios do not exhaust what they are” (De La Cadena 2014: 25). Any elements of the material world are simultaneously in and of the earth, rather than separate categories that can be brought up to the level of a self. Trees cannot speak or sign, they convert solar energy into growth and their attempts at procreation nourish human life, along with myriad other coopted ecological processes needed to sustain our species. As Strathern and Weiner pointed out, the challenge is not shifting epistemologies to recognize different kinds of nature as beings or objects that matter. Instead, the boundary between the person and the object itself has to break down. Anthropology does not have to move beyond the human by theorizing outside the perspective of its informants. Instead, anthropologists must recognize that humans are already included in everything around them, disturbing the boundary between what we are as selves and what is not a part of us.

The crisis of climate change has thrust the question of ecological interdependence squarely into the heart of Marxist concerns about the arc of history. As a result, studies of materiality, ontology, and the non-human have been searching for political and critical purchase. Eduardo Kohn (2015) argues that ontology-concerned scholarship should follow Donna Harroway’s example and not shy away from questions of capital, politics and power while still being attuned to the extra-human. However, all too often, perspectivism, arboreal semiotics, and ontological animism valorize the indigenous subject as a foil for modernity’s neat bifurcation of nature and culture. As Lucas Bessier and David Bond (2014: 440) assert, “the figure of the ontological as commonly invoked often narrows the areas of legitimate concern.” Is there only one way that ontological difference can be invoked, and must it always come from the figure of the indigene? I

argue that it is necessary to look for ontological openness, an expansive interpenetration of subject and object, in situations where people do not articulate their own vision of material power. Where no one insists that they are a perspective-shifting shaman, do objects still disturb the boundaries of the self? If the dismissal of the object in Enlightenment thinking is to be reversed, as Latour, Descola, and Viveiros de Castro insist, then animistic cultural practices should not be a prerequisite to acknowledge this shift. The interoperability of people and things should be evident everywhere.

This burgeoning interest within the discipline of anthropology and beyond begs the question, what if our interlocutors lack a tradition of animism or a history of shamanism—what if they do not ascribe agency or vitality through culturally mediated frameworks? Do the observations of the ontological turn hold for people who are neither scientists manipulating matter nor spiritual seers divining it? Scholars have recognized the need to account for the potency of the material world beyond isolated communities. Engaging the epistemological dimension is an important step to expanding the scope of objects as agents in the world.

Vital energy

The boundary between subject and object, person and thing, has been probed by anthropologists working with, and beyond, the concept of animism. The relationship to the physical world is not solely a source of materials for civilization's projects nor a canvas on which to draw social texts and practices, though it is both of those things. Taken to a more radical plateau, objects in the world define, constitute and impinge on the actions of people. The material world is an active force not because it circulates

through human worlds but because it makes them. This dissertation argues that this circulation is not based solely on human points of view and perspectives — the energy of life is immanent to the interrelations of people and the world.

Timothy Morton (2013) has argued that the Anthropocene is forcing a revolution in human thought. Hyperobjects, a term he uses to describe climate change, alert us to the limits of human mastery over a world that is no longer under our control. The Anthropocene, as an epoch, insists that we cannot transcend our reliance on other beings. We can only find ways to live with them. Elizabeth Povinelli (2016) figures this epochal shift as a pivot away from the foundational antagonism between Life and Death — to Life and Nonlife. Her introduction to *Geontologies* advances the idea that biopower (power over life) has been transcended by geontological power (power over nonlife). Povinelli insists that rather than the old figures that mattered for bio- and necropolitics, new figures have emerged to alter relations in the Anthropocene. “Capitalism has a unique relation to the Desert, the Animist, and the Virus insofar as Capitalism sees all things as having the potential to create profit... everything is vital from the point of view of capitalization” (Povinelli 2016: 20). The remaining chapters of her book do not take up these figures, which are relegated exclusively to the introduction. The book does show how her Australian informants viewed different instances of fog, rock formations, oil deposits, and meeting places as resources for legal, political and ecological survival. Povinelli only hints at vitalism's potential, through the figure of the Animist/Indigene and gestures towards the new animisms that make such an approach possible.³⁴ Vitalism

³⁴ “At the heart of the figure of the Animist lies the Indigene... the Animist insists that the difference between Life and Nonlife is not a problem at all because all forms of existence have within them a vital animating, affecting force” (Povinelli 2016: XXX). Povinelli properly highlights how vitality is the bedrock of animism, which lays the groundwork for thinking about capitalism in the Anthropocene.

extends a non-essentialist ontology, an ontology permanently suspended between being and non-being. This suspension of the status of being, acknowledging both the many inanimate components that make up each living thing (think of chemicals, DNA, etc.) and the impact of living entities on the inanimate world, is essential in the Anthropocene. I would like to engage the notion of vitalism as a crucial substrate for the interaction between subjects and objects. The rethinking of mind and matter, the relationship between what people think, do, perceive and achieve, is undergirded by the presence of a vital force, the capacity for life.

Vitalism is an old idea that was upended by the inexorable progress of modernity and science. The term “vitalism” is most readily associated with a series of debates among 18th and 19th century scholars arguing that the explanation of living phenomena is not compatible with the principles of basic sciences like physics and chemistry (see Benton 1974). However, scientists and philosophers have continued to address vitalism—if mostly in order to reject it—well into the second half of the 20th century. There is a broad distinction proposed by Wuketits (1989) between ‘animist’ and ‘naturalistic’ varieties of vitalism, where the first is explicitly metaphysical and teleological in orientation, while the second posits organic natural laws that transgress the range of physical explanations. For Wuketits (1989: 4), from the perspective of general systems theory, both views are “untenable in the light of modern biological research.” However, rather than an explanatory vehicle for pseudo-science, it can be valuable to consider vitality as the power affording continuity to life, present in all living things: such as the vitality of seeds, for instance (Fraser, Kember and Lury: 2005: 2). However, Wuketits' binary discounts animistic vitality with the cudgel that naturalistic vitalism is

scientifically irrelevant. Thus, while vitalist theories remain “scientifically inadequate and philosophically naive, they are nevertheless directly *relevant* to the problem of life” (Greco 2005: 18 emphasis in original).

This reinsertion of vitality into the space between subject and object has gained conceptual clarity in recent years. By exploring the interdependence of metal, fat, stem cells and a rolling black out that shut down much of the East Coast in 2006, Jane Bennet’s monograph considers how non-human entities are refashioned into actants that work with humans. Recognizing that the object of exchange is “active,” as Mauss termed it, opens up for Bennet the realization that “the human is not exclusively human, that we are made up of its” (Bennett 2010: 113). Bennett compellingly outlines a case for the vitality of matter as possessing an innate agency to impact life and politics. Her effort is to “highlight what is typically cast in the shadow: the material agency or effectivity of nonhuman or not-quite-human things” (Bennett 2010: ix). She promotes a “vital materiality” that is remarkably close to what Mauss and his successors had been thinking with. It is not the ascribing of *hau* to objects by people which makes them circulate, or lends them importance, but the suffusion of vitality between people and things which makes the world spin together. While Povinelli had argued that power in the Anthropocene is the distinction between life and its opposite, vitalism maintains that such a distinction is untenable.³⁵ Vitality suffuses everything that makes life possible.

³⁵ The vitality of vitalism thus can be read as pointing beyond a question of epistemology to an ontology if it is understood performatively: “not in the sense of a valid representation of life, but in the sense of a valid representative... it is not as an account of life that vitalism appears viable; rather, it is as a symptom of the specificity of life that its recurrence should be understood” (Fraser, Kember and Lury: 2005: 2). The result is an ontology that does not seek to differentiate what is living and what is not, but rather one that accepts the blurred lines between the two.

Tree whispering

Azim announced one day, in the fall of 2015, that he had been thinking of cutting down the walnut tree at the entrance to the yard. He had tried whispering to it, to trick it into producing, but he never really believed it would work. It was just a gentle way of buying a tree more time; they had had a conversation. He negotiated a calculus between the valuable but occasionally unproductive walnut trees that towered over the property and the sunlight they blocked for smaller fruit trees or vegetable crops. Azim was concerned that this particular tree was blocking precious sunlight for the two pear trees growing beside the outdoor seating area. But more than that, he worried that it might be giving off “bad air.” “It’s not a good tree to rest beneath,” he asserted, “it sucks up your oxygen.” Perhaps he gathered this idea from recollections of the widely-touted research on phytoncides that had garnered great attention in the Soviet Union.³⁶ He did not end up cutting down that tree during any of my visits to his home spanning 2014 to 2017, but I recognized that he was making landscape choices partly based on their perceived physical effects. He combined familial and ecological husbandry in his expansive concern for health and wellbeing, and he was not alone in this kind of reflection.

Amon was one of the most genial neighbors in the village. He was genuinely upset every day that I did not specifically set out to pay him a visit, “I haven’t seen you in ages,” he would say no matter the last time we had actually seen each other. One spring day, I did just that, and he set out a jar of honey with our tea and bread. He lamented that not many apples were coming in that year but the cucumbers and potatoes were enjoying

³⁶ Phytoncides were part of a wide ranging research paradigm that sought to pinpoint active chemicals released by certain vegetation—and discern their beneficial or deleterious effects (Tokin 1928). This work led landscape planners to promote the planting of trees in health resorts and recuperative centers (Makarenkova 1986). However, conclusive evidence of their existence has still proven elusive.

the strange weather.³⁷ The unusual weather was also giving his heart some trouble. However, he would have to wait till the autumn for a checkup. He had a disability pension from a bullet that grazed his pancreas during the civil war—affording him free treatment once a year. I asked why he always waited to go to the hospital in the fall if the pain was worst in the spring. He smiled, “I always take a nice box of apples, big ones,” he held up his hands as though grasping a chalice, “and some walnuts.” Even though his medical care was free he needed to supplement it with gifts of fruit, the pride of Vanj. “The gift of health is getting passed around,” I offered. Amon nodded in agreement. His sons were all in Russia and his wife busy baking bread, so he slid off the raised seating area to tend to a chicken waddling mischievously from the orchard to the vegetable patch.

The house next to Amon’s looked to fruit in a remarkably similar way. Mukhbil had suffered a stroke a few years ago and had a heart monitor implanted under his skin above his ribcage. He would visit his Dushanbe doctor regularly to check the status of the monitor, a metal case protruding faintly above his ribcage. The medical visits had been insignificant and he was faring well despite limited mobility following the stroke. One day, after requesting I kick a tree to see if the pears were ripe enough to fall, Mukhbil started counting off a packing list: two boxes of apples, two boxes of pears, one big bag of walnuts... Confused, I wanted to know what the list was for. “Oh, I sent those to the doctor as a gift last week.” Have you offered him anything else, like cash, I probed? “No, I just have very good relations with that doctor. I know his address in Dushanbe. I have been sending him those boxes ever since I came back home after my surgery. We’re on good terms now.” It is not surprising that residents of Vanj would want to share

³⁷ A lingering cold spell had snapped into unseasonable heat, causing flash floods that drowned six people as they drove home in a minivan up Vanj valley.

something which is prized and delicious with people they rely on. Fruits help secure relations of care when other assets are in short supply.

The transaction of fruits for care was not confined to patients and their doctors. One day I saw Farrukh collecting apples in a box in his yard. He had a large extended family and after returning from Russia as a devout Muslim he had thrown himself to the task of caring for them. “I feel a weight on my chest every morning I wake up. It is 20 people relying on me. *Allah* helps me be strong and support them.” He told me his faith helped him shoulder the burden of being the critical scion of the family, an obligation he met with the aid of a large herd of sheep (over 50), along with inherited trees and potato fields. He explained that the fruit in the box were for his relatives in the hospital. While he acknowledged that the nutrients in the apples were beneficial for them, he thought it was just as important that they feel connected to this place, “so that they get a taste of Vanj on the hospital bed, and it takes them away from all their problems.” He hoped the succulent bounty of the hard-scrabble Pamiri mountainsides helped Farrukh’s relatives feel nourished and connected to their birthplace, helping them surmount their ailments. The more time I spent in Vanj, the more it seemed to me that people were using fruits as a way of binding relationships and getting access to social services and privileged connections. Whether nourishing health, assets or status, the fruits of sylvan toil provided the tangible basis for making adaptable lives amidst the decay that followed Soviet abandonment and civil war.

Walnut money

Sitting with Azim in the patio, reflecting on the weeding we had done in the field, he noted the income from the trees that he had planted in 2014 and then contrasted it with the challenges befalling his children. Azim's eldest daughter had just come back from Russia with her husband a month into 2015. They had tried their luck as a migrant couple, a tactic that was growing slightly more common as Tajik citizens began to acquire Russian passports and tried to settle abroad permanently. "It was never going to work," Azim scoffed, "They lived in some tiny hamlet reachable by a long walk, after a bus, after the last stop on the tram." This condescending assessment of their housing decision was coming from a man living in a valley in the Pamirs that was at certain times of the year completely inaccessible, who nonetheless understood where you needed to live in Russia to enhance your earning potential (near a train line or at the workplace/construction site). His daughter and her husband had run out of money in that backwater. They had no money to pay for a plane ticket back home. Azim had to spend half of the walnut harvest to get them back to Dushanbe, the capital. The other half of the walnuts would pay off debts from the older son while the apples would help his other daughter rent an apartment in the city after her husband didn't return as expected from working abroad.

While most fruits ended up in boxes, packed up by the middlemen who visited the villages in Soviet Kamaz trucks (or, increasingly, the more capable Chinese Furas), a certain slice of the fruits were used to form the links in the web that held together relationships and affairs. Later that week we were picking apples and Azim got frazzled. I had told him earlier that I had noticed neighbors were picking their walnuts and I

supposed he must have gotten anxious. He sent Difuza and Sitora to go pick walnuts instead. “There’s money laying on the road, don’t just stand around doing nothing.” As we turned our attention from the walnuts, we continued sorting the apples into three piles: 1) elite, 2) regular and 3) tiny, bug-infested. The first sort would be housed in my bedroom (on the back patio), the majority, of the regular caliber, would fill the family’s summer patio (*neves*), while the last would give the cows a delicious feast for a couple days. Onions, walnuts and apples were now filling up respective corners of the property. Asking about the relative measurement of the fruits, Sakina explained that it was basically subjective. “Who knows what’s elite or not.” But the thing that really bothered her was that the best apples were simply sent away to the city. “What are we even growing them for if we can only eat the bad ones? What is all this work for?” However, she had been less dismissive of fruit trees a few months prior.

Weeding a row of carrots with Sakina earlier in the spring, she said her daughters were coming in a month or two. “When did they say they will they come,” I wondered aloud, trying to plot out events that might break up the monotony of fieldwork. “When the *gelos* (cherries) are ripe,” she said with a guffaw, realizing how funny it was to sync her own children’s return to the output of fruit trees. She went on to note that the ripening of fruit meant that the weather would have improved, the roadways would have become more passable and the hot, dusty air in the capital city would have grown into more of a nuisance. “But they love our *gelos*.” After bailing hay with Akbar later in the week, he told me his son wanted to leave the army base and come for a vacation in the summer—when the *gelos* were ripe. “His army buddies want to see the place and enjoy all the wonderful fruits here. It’s a great place to come back to and taste the sweetness.” Sakina

may have been displeased that the vast majority of the fruit they cultivated, picked, and sorted was sent off to distant markets, leaving so little for them. But there was certainly more than enough to go around when you were there, eating fruit off the branch. Fruits made Vanj (a remote, underemployed and trying valley), into a cause for celebration and enjoyment. Fruits really livened up the place.

Walnut bribe

One day, as Azim and I sat together during lunch, he proceeded to tell me with great amusement about his adventures in Khorog, the capital of the Pamir region, a four hour drive from Vanj. He had been avoiding the police because his car was imported from Japan, and thus the steering wheel was on the right-hand side, which had been outlawed in Tajikistan. He was pulled over. He tried to race away but the cops commandeered a car (as they had no vehicles of their own) and found him up on the road that goes out of town. Azim played it cool with them and said, “go ahead take my car, see if I care.” He then promptly called a pal who brought the director of finance of a bank with him. Azim continued the story: “So the economist came over and asked with some authority in his voice: who took this man’s documents and keys?! They tell him that I can’t have legal documents for my Toyota because its steering wheel is on the wrong side.” The bank director insisted that they return the keys to Azim and they complied, not wanting to test what kind of connections he had as a *krisha* (roof) granting protection. “Is this any way to treat a guest,” the economist had scolded the police on Azim's behalf. However, before they let him go they insisted he pay a fine. The cops had found 40 kgs of walnuts in his trunk and had asked for them as payment. He had balked, saying he was merely holding

them in his car for a friend. The negotiations continued. At the end of the day, he let the cops have a plastic bag each in exchange for a promise not to pull him over in the future. When I came back to visit him in 2017, the police cadres had been shuffled and no one recalled this gentlemen's bargain allowing him to drive in an illegal automobile. He waited for the fall harvest to build up his savings to warrant making another walnut bribe, to keep his driving unencumbered by the law.

Similar tactics were employed for the benefit of, Hakrezo, Azim's youngest son, who was conscripted into the army to serve out the compulsory military service he had been evading for a couple of years as a labor migrant in Russia. Every few weeks a great flurry of activity would engulf the household as Azim tried to get his son moved to another base, or a special sports battalion, or just to secure a few days of leave from the barracks. Azim never hesitated to pack a box of apples, perhaps walnuts, and some sturdy pears, either for the battalion chief, an officer, or a relative who supposedly had good army connections. Thus, the steady fruit supply that supported Hakrezo at the base extended to his superiors. They liked Hakrezo and his dad's generous packages so much that they offered him a military post when he finished his conscription. However, Hakrezo found the offer constraining, citing too little freedom in the army.³⁸ The fruit boxes greased the wheels for his son, but they could not encourage him to change his mind. He neither wanted to take the steady military salary or settle into unemployment in Vanj. Hakrezo yearned to return to Russia and "hang out in a fun place." The fruits of budding orchards could only do so much to compensate for Tajikistan's limits.

³⁸ The pay, however, was excellent by Tajik standards: 600 somoni/month [\$120] for young officers and over 2,000 somoni and up among the higher ranks.



As the importance of horticulture began to take center stage in my research, I started looking at the websites of agricultural extension services. They were brimming with tips on trimming, fertilizing, grafting and pest control. I broached these issues with Azim, assuming he would be happy to critique misconceptions. Given how often discussions turned to orchard planning and their prospects, I was sure this would provoke lots of conversation. I was surprised that Azim seemed disinterested in the diagrams and charts. He was aware that he could limit bumper crops, and the subsequent drop-off in production, by brushing off flowers on branches in spring time. He also knew that young apples should be removed when they clustered too densely or rubbed against branches. But he dismissed these recommendations. His apprehension was echoed by other horticulturalists. Everyone had heard that fruit trees preferred open space in the interior of their crown to let in sunlight along with a myriad of other tips. But why did they so rarely implement them? What logics guided their practices? “I know all about the proper techniques for nurturing the trees, but I’m just too scared to fiddle with them,” Azim acceded. “Maybe it makes me a bad *hozyayin* (caretaker) but I just can’t bring myself to cut branches or knock down fruits. I just can’t do it.” I was confounded by his response.

Under classical economics, he should be doing whatever it takes to maximize profits. Under more recent economic theories, he was potentially lacking some knowledge and could not make proper decisions because of a failure of information. If seen through the lens of the “labour-consumer” (Chayanov 1925), Azim was simply responding to market prices by throttling back his work load to rid himself of onerous chores on the land. Under Chayanov’s vaunted theory of household microeconomics, a

farmer would not seek to maximize profit by meticulously tending to trees (like a capitalist firm might do), but regulate his workload depending on the amount of output desired relative to labor invested. However, Azim's answer spoke to something more than the pressures of unanticipated homesteading and (mis)informed market logics. He had become emotionally attached to his trees and saw them almost like extensions of himself. As an affective horticulturalist, it became unpleasant for Azim to prune branches or cast off excess fruit. I wondered if there might also be a social dimension to this reflexive reluctance.

Adham, another renowned orchard keeper, was not trained as a forester, but graduated from college as an agronomist. As such, he was expert in Soviet mechanized cultivation, now a defunct mode of organizing agriculture. He knew enough about trees from his training at the agricultural university to understand that difficult choices had to be made. You could not afford to be too sentimental. As we walked around his orchard, he showed me a few trees he had chopped down to a lowly stump. Adham was letting new branches shoot up as an experiment to see how these coppiced trunks might rebound. He fretted that the old roots could be a source of disease and tested this coppicing technique as a hedge against starting from scratch. This was the kind of aggressive experimentation that Akbar could barely countenance.

I continued talking to many neighbors as I took long walks along the single road running the length of Vanj valley. I found an orchard keeper, Rozikh, who was particularly interested in the horticultural techniques that I pulled up on my laptop. He obliged me when I tried to explain that the 'ideal' tree shape looked like a spindly carapace — limbs jutting out at obtuse angles to allow plenty of light into the center.

Rozikh pointed at the screen and discussed with me how these trimming techniques could be put into practice. His three sons were all working in Russia and he needed a good harvest to cover expenses for his daughter's upcoming wedding. Finally, we walked out to his orchard and took a look at his five year old trees. No trimming had been carried out since they were planted. Just like in the vast majority of orchards I visited (probably over 100), the trees grew as they liked. When we observed the gnarled and knotted state of his tree limbs, my interlocutor seemed resigned to just let them be. To him, as for many other horticulturalists I talked with, fruit trees were destined to thrive on their own.

Horticultural work involved keeping livestock away from the trees, fertilizing and watering the soil. Their vitality should be tended and their output collected. But the growth of the trees would have to follow its own path. Rozikh then made a link that underscored the conviction that committed horticulture required. Considering his sons' efforts to find safe and reliable work in Russia, he noted: "I guess the trees are sort of like my son. They grow toward the light, looking for an opening. Everything has to find its own way."

Orchards had to be dealt with on their own terms, as vital matter. But their management incorporated the health of families beset by poverty, medical ailments and dispersion. Outside interventions and Soviet legacies, exacerbated by unreliable access to water and agricultural inputs, presented a fragmented terrain for growth. The information I had found on the internet was yet another input that might be integrated into the matrix of decisions. A horticulturalist might graft on the ideas I had pulled up online, along with many others. New concepts were incorporated into horticultural work—a labor conjoining familial and ecological concerns. It was possible that Azim found his trees

standing in for absent family members. The orchards and their dividends could not be treated simply as a commodity but held a vitality that had to be accounted for.

Horticulture, the raising of trees, was an extension of the delicate task of raising children.

However, Azim also surely overstated his singular role in maintaining his land holdings, often underplaying the immense effort put in by his wife, mother, *kelin*, and,

intermittently, his sons. The members of the household helped to satisfy the household's self-sufficiency far more than Azim would let on. Though Azim saw his efforts as

individuated and idiosyncratic, he called upon the significant investments of his household and the nourishment he had to coax from the surrounding landscape.

Conclusion: Vital anthropology

In the spring of 2015, while seeking out archives on the logics of Soviet resource management in the capital, Dushanbe, I came across a friendly librarian who inquired politely about my work. She pressed her hands together with glee when I told her that I would soon be returning to Vanj to continue my field work. She seemed delighted by the fruits that would soon be blossoming there, lamenting the fact that she had not been back for years. "The best fruits in the world grow there. The whole place is just so beautiful and nourishing. Too bad I'm stuck here in Dushanbe, I really need to get back and taste the sweetness." Fruits have become an important part of what makes Vanj feel like home. Gone are the tobacco fields, quartz mines, and marble-processing factories directly funded by the Soviet government. In their stead, young orchards have taken hold amidst old roots. Plants, people, ideas and soil were joined in the tactics of place making.

Vital forces need to be husbanded to reproduce and reaffirm ongoing efforts, lest they fall back into the ruins they arose from. It is this tenuous, consistent work which makes the post-Soviet, post-war moment in Tajikistan so illustrative. A tertiary meaning shines a light into the heart of the dynamic, graft: noun. “hard work;” verb. “to work hard.” This informal British usage, where hard work is the mechanism and the outcome of grafting, brings into relief the antagonisms and affinities that weave together subject and object, person and plant, family and fruit. Like a Hegelian lord and bondsman, reluctant horticulturalists must take stock of whatever falls into their domain and put it to work. In the process, the trees root down in the stony ground, taking up the desire that is invested in them. The result of many such interactions alters the landscape for all who seek to flourish in it.

I have sought to clarify how sylvan spaces and the outputs they circulate are significant for self and other in rural Central Asia. The resulting harvests allow people to nourish themselves and their relationships, and occasionally generate a profit. If trees flourish then so do the humans who have come to rely on them. Fruits gathered from orchards and fields help secure medical care, provoke institutional responses, encourage children to return, and help families stay connected. The material properties of fruits help define what kind of relations are possible. Of course, a graft can fail and fall off the rootstock, losing its attachment with the broader flourishing organism. A hailstorm can destroy the flowers before they get a chance to bud. Fruits highlight the degradation of relations—where links between debtors and creditors, family members, and business partners are liable to rot and wither—like an itinerant son decamping from the family tree, a scion breaking off from the limb.

Trees hold legacies; a latent potential. They are a base of living infrastructure with which to build from. But they need constant care and an environment devoid of major strife and shocks. Even with the benefit of stability trees require a *khozyain*, a caretaker, to flourish and be spared the axe. Someone who is invested in a place that others may have given up on. Sitting in the front yard, next to a mound of fruits we just harvested, the elderly neighbor with the pacemaker walks over to see how much was gathered. I ask Mukhbil about his own trees and he sighs. Mukhbil was a truck driver and a chauffeur for geologists who scoured the Pamirs for precious ore during the Soviet era. He held a respectable and demanding job for decades. However, he bemoaned the fact that he never planted any trees. “I have plenty of land closer to the river, would’ve been great. Now it’s too late. I wasn’t thinking about trees at that time. I was a driver and I just had routes on my mind. Now...”, he hesitates. I finish the sentiment: “Now there are plenty of other trucks and who could’ve known that fruit trees would be such a big deal.” “Right. Back then we couldn’t even figure out what to do with all the fruit. There was nowhere to sell anything.” The following year, his son, recently returned from working construction jobs in Russia, started planting apple trees.

Fruits are not simply commodities but objects imbued with deeply held concerns. As Annette Weiner (1983: 700) points out, “objects are not idiosyncratic. They necessitate labor tied to the priorities and needs of others. Objects are heavily weighted with the social implications of past relationships and obligations...” “Thus, objects of import to people’s lives are freighted with obligations and relationships. This makes vitality a crucial component of projects of sustenance under trying conditions. In the case of Vanj, fruits are the objects weighted with obligations and social implications, helping

family members circulate in and out of households, allowing for little luxuries in a forgotten valley.

Max Scheler, a mentor of Maurice Merleau-Ponty, argued in a searching essay right before his death that a “philosophical anthropology” would need to be based on the way humans channel nature's vital energy, through what he called “drives.” This channeling would enable the organization of society toward the grandest civilizational enterprises, not a will to power but a collaborative enterprise striving for life. “The fact that life is not the ‘will to power’ but impulsion toward reproduction and death is proven best by plants” (Scheler 2009: 8). Philosophical anthropology would need to take account of lively materials to see how vitality flows through them. Scheler hoped that such an undertaking would provide a unified account of the meaning of being human. The starting point for such a task began in an earlier work, *The Idea of the Human Being*, in which Scheler (GW III, 186) wrote that the human being is undefinable because there is only a “becoming,” a “between,” a “self-transcending being.”

The ethnographic articulation of such a fluid conception of subjectivity has parallels in anthropology. João Biehl (2005; 2007; 2009; 2013) has been attuned to the arts of living that his informants chart in opposition to trying circumstances. Careful observation and participation reveals the subject, the character, the informant, to be a driver of history, an engine for theorizing, a fount of life. “Anthropology’s unique analytical force lies in recording competing rationalities and vital experimentations, in conceptualizing fine articulations of worlds, differentiated, in flux and impending” (Biehl and Locke 2010: 335-6). Following vital experiments is anthropology’s bedrock. Scheler, in advocating for a different kind of philosophy, was in fact promoting anthropology.

Anthropologists engage the ways people are attuned to the weave of multiple forms of life. These have expanded to materials, objects and things which are not human but come to matter for life. They are vital. Vitality marshals the desire to live and (re)produce into forms of work that situate capital among relational bodies, leaking everywhere onto the landscape. An accounting of life in flux, helping to nurture new relationships while responding to the impulses and needs that arise out of the environment, may help us plot the outline for a *vital anthropology*.

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