

Meanings, Values, Walnuts: How Harvesters, Foresters, and Conservationists Understand and Access Kyrgyzstan's Walnut-Fruit Forest – FINAL REPORT¹

The fall of the Soviet Union brought with it an opportunity to rethink how the natural environment is managed across the post-socialist world. As successor states have shed assets through programs of decentralization and privatization, questions of ownership of and access to natural resources have become increasingly important. Many post-Soviet states implemented institutional reforms of vast ambition, and questions of institutional design have dominated academic and policy-making discussions. In their focus on getting the incentives and timelines right, however, reformers have tended to ignore how post-Soviet citizens understand the places they live, resulting in a slew of reforms ill-suited to their settings (Stark and Bruszt 1998; Verdery 2003; Allina-Pisano 2008). With relatively few exceptions (e.g. Burawoy and Verdery 1999; Schwartz 2006), policy-oriented scholarship about natural resource management has neglected the imaginaries and ideologies that drive human behavior.

In this paper, I analyze some of the understandings of one important natural resource, the walnut-fruit forest of southern Kyrgyzstan. I spent one year living in villages within this forest, the world's largest of its type, talking with people about the forest, what it means, and what its resources represent for people living nearby and further away. Struck by the forest's canopy of walnuts, apples, plums, maples, pears, and cherries, visitors since early Soviet botanist Nikolai Vavilov have touted the genetic resources these trees may harbor for orchardists around the temperate world (McGranahan 1998; Mamadjanov

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2004). As post-Soviet Central Asia has become more accessible to outsiders, the walnut-fruit forest has attracted enthusiastic attention from international conservationists, who see it as a unique natural ecosystem worthy of environmental protection (Eastwood, Lazkov, and Newton 2009; Blaser, Carter, and Gilmour 1998). But the walnut-fruit forest is not only a target of global conservation interest and source of genetic diversity. Thousands of Kyrgyz and Uzbeks live in villages within it, their orchards interspersed with unplanned hillside groves, their livelihoods dependent on the walnuts and wood of the forest around them, and their livestock grazing beneath its trees. Meanwhile, local forestry officials work to manage these processes of resource access, even as the *leskhozy* (state forest enterprises) that employ them struggle to survive the withdrawal of Soviet-era subsidies (Samyn 2010). Each of these groups attaches its own meanings and values to the walnut-fruit forest, which this research is designed to elucidate.

Before continuing to an overview of some of these meanings and values and their political implications, I should acknowledge a paper that was published shortly after this project began, and which covers similar conceptual ground². Using archival documents, Schmidt and Doerre (2011) present a history of discursive constructions of the walnut-fruit forests, focusing on ways that regional and global actors have instrumentalized the forest to the detriment of local people. Their paper describes three successive sets of “predominant leitmotifs, arguments and terms of certain historical discourses” (293). From officials of the Russian Empire diagnosing the importance of intact forest for protection of

² In the interest of full disclosure: An electronic preprint of this paper, Schmidt and Doerre (2011), appeared online just two weeks after my grant application was approved. It represented a sizable shift from the authors' previous work published in English. As should become clear in the following pages, Schmidt and Doerre provide a useful first cut at the questions we both ask, but by no means do they exhaust the topic. In addition, their treatment clarifies the weaknesses of a focus on meanings and values, a topic I address below in explaining how my project evolved in the course of its implementation.

the Fergana Valley's water supply, through Soviet attempts to formalize nature protection in the mountains in order to boost cotton yields in the lowlands, to present-day emphases on forest contributions to global biodiversity, the authors find the conceptions of powerful actors based elsewhere to constrain the ability of local actors to use the forest for their own purposes.

This is an important finding, and its historicization by Schmidt and Doerre provides useful context for policymakers today faced with the question of how to balance local autonomy with the achievement of goals formulated far from the walnut-fruit forest ("sustainable development", most prominently). Certainly locals in the forest are often boxed in by the ways the forest is conceived by conservation biologists, foresters, and international development professionals. But distant powerful actors are not the only ones with ideas about the forest, and local people are not solely machines that metabolize as many natural resources as they can acquire³. While Schmidt and Doerre offer a compelling sketch of the ideas that underpin resource management goals of administrators present and past, they offer little insight, at least in their work published in English to date, into the ideas that inform the resource use of villagers of southern Kyrgyzstan. They close their 2011 piece with a general call for inclusion of locals in policymaking: "instruments and terminologies of prospective protection concepts must be...formulated with the involvement and participation of local stakeholders" (2011, 294). But without consideration of how locals value the forest to complement their work on how *non*-locals do, it is unclear what kinds of policies such participation might yield. It is through an

³ Schmidt and Doerre are well aware of this, having done as much on-the-ground work in forest villages as anybody. One suspects that (M. Schmidt 2010), a book-length monograph on Kyrgyz political ecology, contains much that is relevant here, but as that document is a) unpublished, and b) in German, the English-speaking policymaking community will have to look elsewhere for now.

examination of local ideas about the forest, in particular, that we can work towards more satisfactory resource management institutions than the exclusionary ones Schmidt and Doerre find to have predominated for the past century and more.

In the next section of this paper, I examine several understandings of the walnut-fruit forest that are common among the residents of two forest villages, Kyzyl Ünkür and Gumkana. I spent the nine months of my ACTR-ACCELS grant living in Kyzyl Ünkür, and much of a subsequent 3-month fieldwork stint living in Gumkana, in each case staying with a host family and participating in the daily routines of village life. In addition to countless casual conversations, I conducted dozens of formal interviews with walnut harvesters, beekeepers, herders, and other forest users, many while we walked together in the forest (Thomas, Vandebroek, and Van Damme 2007). This year, I also conducted 80 household surveys on forest resource use in each of these two villages. Kyzyl Ünkür is an isolated Kyrgyz village of nearly 5000 people, surrounded by relatively intact walnut-fruit forest. Gumkana is smaller, less than 3000 people, roughly equal parts Kyrgyz and Uzbek, and, as part of the larger Arslanbob *leskhoz* (forest enterprise) just west of Kyzyl Ünkür, more integrated into regional economic networks. Gumkana's forests have been more thoroughly modified and are subject to heavier human population pressure than the forests around Kyzyl Ünkür (K. Schmidt 2007). Under the Soviets, the economy of Kyzyl Ünkür was oriented towards animal husbandry, taking advantage of the extensive pastures above the forest surrounding the village, while Gumkana, along with the rest of Arslanbob *leskhoz*, was a center of forestry and horticulture. In both places, a significant number of villagers have formal training in forestry; many of them, or their parents, were in fact sent to live in these villages by a Soviet government bent on rationalizing forest management. As a result,

my goal is not to uncover an understanding of the forest that is “traditional,” a term with little meaning here; nor to allot specific ideas exclusively to “local people” or to nonlocals, as these categories are, in the end, not easy to distinguish; but rather to flesh out Schmidt and Doerre’s work in a way that accounts for the complexity of locally-held values and locally-understood meanings. To that end, I first consider local ideas about conservation before describing a more distinctive horticultural understanding of the walnut-fruit forest.

Ideas About Conservation in the Village

Schmidt and Doerre describe a global conservation movement that seeks to limit local use of the forest, but broadly conservationist understandings of the forest are common among village residents as well. These reveal themselves in explicit talk about conserving the forest for future generations, in a rapid increase in the use of coal for home heating, and in a locally-initiated FFI-sponsored Rare Tree Nursery in Gumkana. The following notions and actions demonstrate that the desire to limit local use of the forest is not specific to non-local actors pursuing exclusionary ends, but is also widespread among village residents themselves (without thereby judging the justice of any particular limitation of local use, of course).

In both Kyzyl Ünkür and Gumkana, most older residents are acutely aware of changes in the forest around them, and many of them are vocally unhappy about it. “There will be no forests left for our grandchildren,” one villager told me, using a typical formulation of this conservationist ethic. “The forest takes care of the people, so the people must take care of the forest. And anyways, without the forest there is no life here. So what will become of our grandchildren?” For communities in which most households have at least one member living and working in Russia, the specter of a landscape so degraded as

to compel a general exodus is particularly poignant. A common observation holds that just fifty years ago, during the childhoods of many still alive today, the forest at the village's edge was basically impenetrable, whereas today it is easily entered on horseback or even, in many places, in a car. This is the transformation of other, denser types of walnut forest into anthropogenic "walnut forest of park-like nature" that Grisa et al. find to be common near forest villages (Grisa et al. 2008), the result of heavy firewood collection, which strips out the understory trees (cherry, apple, hawthorn), and near-constant grazing, which prevents their reestablishment, all while leaving the economically valuable walnut canopy intact. Biologists have been drawing attention to walnut-fruit forest degradation and blaming precisely these two factors, firewood collection and grazing, since at least 1955 (Chebotarev 1955); many locals share their concern, and understand the nature of the problem in strikingly similar terms.

The problem, then, is not that locals do not understand the ecological plight of the forest, nor that they disagree with the diagnoses of conservationists, nor that resources are subject to a tragedy of the commons (Hardin 1968) that property reform might plausibly repair, but simply that village residents generally find themselves unable to survive without grazing and firewood collection. Where alternatives have become available, they are eagerly being taken up and incorporated into local livelihoods. The most prominent example is a recent increase in the use of coal as a replacement for firewood in providing household heating through the winter. As recently as 2007, coal was almost never used in the Arslanbob region (K. Schmidt 2007), let alone in more isolated Kyzyl Ünkür. In fact, the disappearance of coal from forest villages was emblematic of the post-Soviet decline in living standards: "Since Kyrgyzstan's independence firewood has replaced coal as the main

fuel for households in rural areas, which is another indicator for the fundamental changes in local livelihood systems triggered by the breakdown of the Soviet Union” (K. Schmidt 2007, 305). My household surveys found, however, that coal use has surged in the past five years, with 47 of 80 surveyed households in Gumkana, fully 59%, reporting purchase of coal last winter, and residents describe the appearance of middlemen making regular coal runs from coal mining towns including Tash K m r. Even in Kyzyl  nk r, where the lack of paved roads and regular public transportation make the provision of coal much less convenient, coal use has begun, with 7 of 80 households (9%) noting they had bought coal the previous winter.

To be sure, this is not only, and perhaps not even primarily, a story of conservation. Firewood has become more difficult to find as nearby forest understories have been logged out, and cash for coal may have become more prevalent with the rise in remittances sent home from economic migrants in Russia and elsewhere (Isabaeva 2011; M. Schmidt and Sagynbekova 2008). The winter of 2011-2012 was particularly difficult (Igoe 2012), and villagers were forced to be especially creative in finding ways to heat their houses; coal use might be expected to drop in years with shorter, warmer winters. Additionally, nearly all surveyed buyers of coal continue to use their firewood allotment of one truckload/household/winter, as coal cannot substitute for all of fuelwood's uses (cooking over coal, for instance, is nonexistent). Still, there is a distinct and growing awareness, more in better-connected Gumkana than in more isolated Kyzyl  nk r as yet, that coal offers forest households a way of lessening pressure on the forest's wood resources, and of bringing village life more into accord with broadly conservationist sentiments that people voice.

Finally, not all proposals to institutionalize conservationist ideals come from nonlocal sources; the “global conservation movement” is not only an import in the villages in which I lived. For instance, Gumkana schoolteacher Bolot Tagaev and his students are currently tending a nursery of rare forest fruit tree species with the aim of protecting and, ultimately, propagating and increasing their numbers in the wild, while simultaneously increasing student awareness of forest ecology and population dynamics. The project, initially proposed by Tagaev and funded by Fauna and Flora International, is in the early stages of growing out seedlings of a handful of rare species (*Malus niedzwetzkiiana*, *Armeniaca vulgaris*, *Pyrus korshinkii*, *Pyrus turcomanica*, and *Sorbus persica*) at Tagaev's school, with plans to transplant the seedlings to the forests of Gumkana and Kyzyl Ünkür as early as 2013 (Tagaev 2012). Unlike the move to coal, this project is explicitly oriented towards conservation, and speaks against Schmidt and Doerre's attempt to define conservation as strictly an external imposition on local livelihoods.

Other Local Understandings of the Walnut-Fruit Forest

Taken together, these constitute a pragmatic conservationist ideal, not one based on an appreciation of capital-N Nature's essential value; in this, they are no different from the ideas that Schmidt and Doerre describe as important in non-local interactions with the walnut-fruit forest. There are certainly other ways that locals think about the forest, including the most obvious, the productivist notion of the forest as a set of utilizable resources that underpins the walnut harvesting that anchors local livelihoods. I also found more symbolic ways of seeing the forest to be quite common, such as understandings that emphasize its importance to Kyrgyz identity, a notion which has contributed to the moratorium on walnut felling originally passed by presidential decree in 2006 and recently

extended through 2017 by legislative action (Kutueva 2012)—and which, according to many biologists, is making effective management of the walnut-fruit forest much more difficult (Venglovsky et al. 2010). Some villagers are even aware of Beer et al.'s work arguing, based on palynological evidence, that the walnut is a relatively recent introduction to Kyrgyzstan (Beer et al. 2008). Their awareness initially surprised me, given how few village residents are likely reading *Quaternary Science Review*⁴, but as the forest is often considered to be an important element of the Kyrgyz birthright and evidence of divine work on the landscape, interest in its origins makes perfect sense. Invariably, my interlocutors found Beer et al.'s argument unconvincing: of course the forest has always been here, they told me, just as the Kyrgyz have always been here.⁵ Rather than going into detail about these other meanings that locals and others attach to the walnut-fruit forests of southern Kyrgyzstan, however, this paper concludes with a consideration of a final, horticultural, understanding of the forest and how it has shaped the ways in which my project has evolved since I first proposed it.

Future Directions: Understanding the Forest Horticulturally

The walnut-fruit forest is interesting to biologists in part because it is meaningfully orchardlike: the trees that make up its canopy are the same species that, suitably domesticated, populate orchards in temperate climates around the world. This material

⁴ Of course scientific work gets picked up by mass media all the time and findings are disseminated in unpredictable ways, but it was striking to hear this specialist work described several times in heated, personal terms, as if my informants suspected this team of German scientists to have set out to undermine this important element of Kyrgyz heritage.

⁵ As an aside, I was surprised to hear so many of my informants insisting on this, that the Kyrgyz have always been in present-day Kyrgyzstan. In past stints in the country beginning in 2003, I found most to subscribe to the theory, supported by Chinese chronicles and endorsed by the Akaev regime, that the Kyrgyz state emerged first in Siberia along the banks of the Yenisei River 2200 years ago (Gullette 2006). Now, one is told that the Siberian Kyrgyz were a splinter group, and that unspecified "archeological discoveries" place the Kyrgyz within today's borders 5000 years before present. In any case, the larger argument being made tends to call for the dispossession of Uzbeks.

difference enables another way that people understand the walnut-fruit forest, one far more particular to *this* forest than debates over conservation and economic production, which crop up wherever natural resources are managed: a horticultural understanding. The walnut-fruit forest can, effectively, be gardened. This makes it potentially the kind of liminal space, partly humanized and partly natural, that has appealed to people-environment geographers and others theorizing more appropriate ways for humans to interact with nonhumans (Cronon 1996; Pollan 2003).

Of particular interest here is grafting, the horticultural practice by which wild forest trees such as apples, apricots, pears, and plums, can be transformed into the commercial varieties that grow in orchards around the world. The Soviets grafted thousands of hectares in the walnut-fruit forest belt, hoping thereby to combine the best aspects of wild forests, such as water protection and erosion prevention, with the higher production of orchards (Gusev 1938; Prutensky 1962). Grafting continues today, in smaller scope and less-organized fashion; I conducted extensive interviews with a handful of expert grafters, accompanied them on their horticultural outings, and asked others about the place of grafting in human-forest interactions. I am only in the very early stages of analyzing this data, but I am finding this topic to be particularly revealing. For one, the collaboration of human and nonhuman is foregrounded in grafting, in a way that isn't true of conservation or property reform or most other topics concerning the use of forest resources. Worse, the whole discussion of meanings tends to focus attention exclusively on the human actors in the forest region, as critics of discourse analysis have long noted (Braun 2004; Latour 1993). Grafters, by contrast, turn conversation repeatedly towards the active role of the

fruit tree in enabling their craft, and the products of their work, individual trees which are genetically half-wild and half-domestic, embody the same evenhanded collaboration.

As I have said several times and as must be obvious from this document, what I have so far is very preliminary. I have approximately 40 hours of interviews still to transcribe, 160 household surveys to analyze in depth, and several hundred pages of field notes to digest. I have an entire history of grafting, never before examined, to synthesize from these materials and a dozen or so articles published in Moscow and Bishkek over the past 75 years. But it seems fairly evident that the inclusion of locals, as advocated by Schmidt and Doerre, and by countless development and conservation scholars besides (for examples from Kyrgyzstan, see Kouplevatskaya-Yunusova and Buttoud 2006; Pandey and Misnikov 2001), is insufficient for the development of a fair and effective resource management strategy, as is the mere recognition of the walnut-fruit forest as a cultural landscape. Close consideration of the partial acculturation of that landscape, so to speak, in the form of grafting and the horticultural mindset that accompanies it, are more likely to yield effective policymaking outcomes. I hope to use the data already collected during my year of fieldwork in southern Kyrgyzstan to accomplish this.

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