Life on an Atomic Collective

The Post-Soviet Retreat of the State in Rural Kazakhstan

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Truck filled with scrap metal collected at the Semipalatinsk Nuclear Test Site in Koian, Kazakhstan. Photo: M. Stawkowski

Life on an Atomic Collective:

The Post-Soviet Retreat of the State in Rural Kazakhstan

In the village of Koian, on the border of a Soviet-era Semipalatinsk Nuclear Test Site in Kazakhstan, young men collected hay at the end of the summer¹. They worked abandoned agricultural fields, ten kilometers from the village, just beyond a rugged mountain ridge and along a make-shift dirt road. Backs bent under the weight of dried straw, the men threw it high, with broken pitchforks, onto the back of the tractor. The mosquitos and biting flies incessantly gnawed at their bodies. They talked and laughed, surrounded by grasslands in a seeming desolate landscape. For lunch, they drank flasks of tea and ate dried mutton and deep-fried biscuits under the blazing sun. Leaving early in the morning, they returned to Koian only after dark, exhausted. House by house, hay was piled upon flat rooftops and the village slowly took on its winter look.

Yet, these much prized fodder crops (wheat) were not native species to the area decades earlier. In the late summer months when the men from Koian spend their routine four to five weeks cutting, loading, and piling they followed a practice from the Soviet times that their parents and grandparents knew well. In the mid-1950s and 1960s, the agricultural fields in the larger vicinity of the village were developed in line with one of the most aggressive industrial agriculture campaigns of the post-Stalin years—the Virgin Lands. Central Kazakhstan’s climate was particularly amenable, in a certain regard, to cereal crops. But sustainability in the area’s poor soils proved the biggest obstacle. Today, the crops grow wild and the villagers knew the best spots for reaping them.

1. Koian and other village names are pseudonyms. In order to protect Koianers privacy, I also use pseudonyms for all individuals mentioned in this article.

Since 2010, I have been conducting ethnographic research² in Koian, a village of about fifty people, most of them ethnic Kazakhs. My work focused on how people survive in and around the Semipalatinsk Nuclear Test Site, the nearly 19,000-square-kilometer military proving grounds polluted with residual and invisible radioactivity³. During twelve months of fieldwork in 2010 and 2011 in Koian and elsewhere in Kazakhstan, and subsequent summer-long visits between 2012 and 2015, I interviewed local residents, medical doctors, government officials, scientists, and members of non-governmental organizations working in the region. I looked at how Koianers' lives were shaped by the economic pressures brought on by Kazakhstan's transition to market capitalism after 1991 and their sense of well-being in the context of Cold War militarism staged in their back yards. Through subsequent trips to the region, many stories emerged, especially from village elders, about their lives on the vast Soviet-era state farm (*sovkhos*) Koian once belonged to. They recalled thousands upon thousands of animals and fleets of sky blue tractors similar to the one the men still use. The Soviet period was positive; life had a dependable rhythm and one people knew well. Elders however, also reminded me that we were in the vicinity of the Polygon (as the test site is known locally by its Russian name hereafter referred), where radioactive fallout from more than 450 above and under ground nuclear tests has made people sick, but also, as many claimed, biologically adapted for survival as a result. Though, unlike individuals living around another radioactive landscape, the Chernobyl Exclusion Zone in Ukraine, Koianers did not develop their own informal understanding of radiation risk by redefining what foods or areas are "clean" [Davies and Polese 2014]. Neither did they claim, like the elderly women living inside the Exclusion Zone and whose lives were described in the acclaimed 2015 documentary film "The Babushkas of Chernobyl," that the *primary* reason they have chosen to stay behind is for lack of economic opportunities or because of ancestral ties to the land. Instead, Koianers spoke of their environment as clean for them, and as particularly fit for their bodies that were exposed to radioactivity for decades and have become immune to it as a result [Stawkowski 2016]. They also said their lives were simple and economically better off than those who relocated to cities; they lived far from the smog, and their village

2. This research was supported by grants from the Eurasia Program for the Social Science Research Council, the Center to Advance Research and Teaching in the Social Sciences at the University of Colorado Boulder, and the International Research and Exchanges Board. This research was also supported by the Stanton Nuclear Security Fellowship and the MacArthur Nuclear Security Fellowship at Stanford University. I am especially grateful to Marc Elie, Carole Ferret, and Robert Kopack for their helpful comments and suggestions. Also many thanks to Donna Goldstein, Cheryl Harned, and two anonymous reviewers. This work, of course, would not be possible without the help and support of my friends and colleagues in Koian who shared their time and stories with me.

3. NNC (National Nuclear Center), Republic of Kazakhstan Institute of Radiation Safety and Ecology, *Semipalatinsk Nuclear Test Site: Present State*. Pavlodar, Press House, 2011.

was independent of the crime and corruption of the capital, Astana, and the urban *bardak* (mess) of post-Soviet life. Their animals, fed by winter surpluses of nutrient rich hay, roamed the vast steppe throughout the year. Thus even in the shadow of the Polygon, Koianers knew mostly contentment.

Recent investigations around Chernobyl nuclear Exclusion Zone have shown an advent of informal economies in the region within the context of a retiring and retreating state that has abandoned its commitments to certain geographic areas [Davies and Polese 2014; see also Petryna 2013]. These informal economies have come to deepen social support networks making life near Chernobyl's abandoned nuclear landscape a more desirable alternative to moving away. Koian, however, is not in or near any Exclusion Zone. In fact, none of the areas near the villages in and around the Polygon carry such a designation. Nevertheless, Koianers in a similar way felt abandoned and saw themselves as existing beyond and outside of state regulation. Because the village is considered an area of minimal radiation risk (based on estimates of past radiation exposure), Koianers did not belong to the same category of "victim" like individuals living in villages in and around the Polygon designated zones of increased or maximum radiation risk [Werner and Purvis-Roberts 2014, 2007]. As such, they were not entitled to the same, even if negligible, state provided welfare benefits (like medical care and monetary compensation). Although informal economies and social networks have been reinforced in Koian after the fall of communism, especially in the context of state abandon-

A herder from the village of Koian, Kazakhstan drives sheep and goats to pasture where they will graze. The Semipalatinsk Nuclear Test Site is three kilometers away.

Photo: M. Stawkowski

ment and “shortage economy”, the existence of these networks depended upon the reinvention of Koian as a collective village commune in the post-Soviet period. Their animals and their grasslands are capital; the village is a relatively stable economic unit that is, for the most part, not only self sufficient, but also supports family networks in the city.

I present here a case study of Koian, once part of a large livestock and agricultural *sovkhoz* made up of four other villages, all located in and around the Polygon, one of the world’s largest nuclear test sites. This particular story involves two overlapping landscapes – one of nuclear tests and the other of industrial farming – that are quintessential expressions of Soviet industrial and military development of the 20th century. In what follows, I describe how, despite economic hardships, Koianers have reinvented their collective farm as a “collective bank” (*nash bank*) sustaining themselves and remaking the village commune in this post-Soviet agro-nuclear landscape. Below I show how Koianers maintained their livelihood through practices learned and legitimated during the Soviet period in the former *sovkhoz* that they have brought into the present, showing the ruptures and continuities of post-Soviet rural life. These included skills and labor practices embedded in collective labor, like animal grazing and hay collecting, as well as communal ownership of natural resources like pasturelands and water. Their survival strategies, antithetical to market-driven urban life, were reinforced and maintained through informal economic activities, such as “economy of favors,” or *blat* [Davies and Polese

Communal tractor parked on the abandoned Soviet-era wheat field. The village of Koian, Kazakhstan is ten kilometers away. Photo: M. Stawkowski

2014; Ledeneva 1998, 2006; Polese 2008] and social and kinship networks and ties [Schatz 2004; Walker 2010] that today, help people cope with the post-Soviet everyday. Like those living near Chernobyl's Exclusion Zone then, Koianers have come to rely on informal economies to sustain themselves. However, by reinventing their collective farm, the village became the lynch pin of a broader strategy of upward mobility for family members who move to cities in search of better work and education.

Koian in historical context

Koian has a pre-Soviet and even a pre-Russian history that can be seen in the area's centuries old rocky grave mounds and boulders with faded petroglyphs depicting animals and people that conceivably date back a thousand years or more. Many locals can trace their ancestry in the area for seven generations and most are kin belonging to the same clan group. Traditionally, Kazakh kinship is based on patrilineal descent, clan exogamy, and patrilocal residence [Werner and Barcus 2015]. Koianers, for example, trace their ancestry through the male line, while women marry outside of their clan group and settle with their husband's family. Elders claimed that the village was a *beket* or a horse swapping station between postal points during the Tsarist period. Their pastoral life seen today is reflected upon as a "return" to some degree to the life their nomadic ancestors lived [Ferret 2016].

When the Bolsheviks "liberated" Kazakhstan from Tsarist oppression in 1920, they added it to a growing list of territories slated for radical development along socialist lines. Remembering Marxist-Leninist dictum, the Communists viewed Kazakhstan as the most backward of all regions in the Union, one inhabited by "prehistoric" shepherds and nomads stuck somewhere between primitive communism and slavery [Michaels 2003]. In the eyes of the 1920s Soviet leadership, nomadism was the most exploitative and thus lowest form of social and economic organization, one in need of complete eradication, if the region and its people were to become properly "Soviet modern." Although the nomadic lifestyle was never fully eradicated in Kazakhstan and was sometimes even supported by the state, the goal was to ultimately reconstitute Kazakhstan as an exemplary Soviet Socialist Republic, to showcase its eventual achievement of modernity through reeducation, as proof that even the most "primitive" peoples of the world can be compelled to evolve [Kret 2013; Olcott 1995]. Koian and its people were assimilated into the vast Soviet modernizing project, experiencing first hand the paradigmatic changes of socialist planning.

As the story is told by those who experienced the rapid transformation first hand, as very young children, or heard about it from their parents, the violent attack on their Kazakh way of life began shortly after 1928. It was the

late 1920s and early 1930s that the then Soviet leader, Joseph Stalin, introduced repressive measures designed to rapidly industrialize the Soviet Union. These measures included an all-out forced collectivization of peasant agriculture, expropriation and redistribution of grain and livestock, sedentarization of nomadic peoples, and deportation or murder of wealthy *baj* (rich herders) perceived as “enemies of the state.” The rapid pace of these transformations proved devastating. With livestock and grain confiscated, a famine killed 1.5 million ethnic Kazakhs [Cameron 2016; Pianciola 2004]. Although most Koianers were either born after the tragic years of famine (1930-1933) or were very young when it happened, I frequently heard stories about it over dinner, which today is eaten heartily, people would say to me, out of defiance of the Soviet regime and in remembrance of perished relatives. Tursynbek, a man in his mid-50s who was born in Koian in 1957, would tell me about the famine when I refused to eat more food. “It must have been 1932 or thereabouts. There was massive hunger here. We protested too! Collectivization was confiscation. But you don’t want to eat. In Koian people ate each other”, he nodded to me sharply.

Whether cannibalism occurred during the famine years is unclear. But the violence of collectivization and sedentarization campaigns produced a debilitated society unable to resist Soviet modernist plans, or a “leveled social terrain” [Scott 1998: 5] on which to build a new social order in Kazakhstan, an effect that was clearly documented in archival sources. For example, in 1929 there were 6553 ethnic Kazakhs living in one of the six *raions* (districts) that were subordinated to a larger administrative *okrug* (region) and the location of Koian⁴. In 1935, the same district had a population of 3863 – all ethnic Kazakhs [Spravochnik 2012: 13]. In 1930, the entire region had 1,684,043 heads of livestock, including horses, sheep, goats, and camels. By the start of 1935, this number fell to 88,285 because the animals either died of hunger or were killed (and eaten) thus avoiding confiscation [Spravochnik 2012: 13].

By 1935, Koian and nearly 98.2 percent of all settlements in the *okrug* belonged to a *kolkhoz*, a small collective farm cooperative [Spravochnik 2012: 12]. Koian’s *kolkhoz* consisted of at least eight separate villages (or *aul*, from the name of the former migrating unit), of which Koian was one, each occupied by a number of extended families. The *kolkhozniki* (collective farm workers) received a share of meat and dairy products according to the amount they worked and the number of people in their families. But because herds were small, some of the elders remembered routine food shortages accompanying a dark period in their history and the first Soviet development scheme that shaped lives for generations to come. During interviews I conducted village history spanned two tandem, colossal “civilizing” projects of the Soviet

4. Karaganda Regional State Archive. f. 1487, op. 1. d. 84, l. 5.

period: nuclear testing (only if people were asked about it) and the Virgin Lands campaign.

Atomic testing began in August 1949, when Koian was still a fledgling *kolkhoz*. “We had no electricity then, no glass windows, dirt floors, no store, and in fact, no road”, Burkut, a man in his 80s recalled in spring 2011, six months before his death. In 1947, the architects of the Soviet atomic bomb project began construction of their primary nuclear proving ground: the Semipalatinsk Nuclear Test Site named after the large city directly east and about 140 kilometers from the site. The verdant banks of the Irtysh River, a little over hundred kilometers from Koian, were chosen as the “empty” and therefore “perfect” location for the command center of this top-secret military installation [Holloway 1994]. Known as Moscow-400, on maps it was presented as the end of a railroad line and nothing more.⁵ This administrative center that would later become Kurchatov was a closed and secret city; isolated from the outside by strict controls on the mail and telephone and only those specially permitted could enter. Yet despite its alleged secrecy, its existence and the 40-year period of nuclear testing that followed were well known to the local populations who worked on collective farms nearby. The extent of scientific and military activities, however, remained a mystery except to the privileged consortium working on the bomb project.

Koian was erased from maps as Moscow-400 was. For the next four decades, more than 450 above and under ground nuclear explosions punctuated life in Koian and villages adjoining what in time would grow to be the Semipalatinsk Nuclear Test Site research complex.⁶ Those who remember the tests told me that before each explosion, troops dispatched to the region, ordering residents out of their homes until testing was complete. There was never any mention of radiation or elements like strontium, cesium, plutonium, and countless others known to cause illness and death with repeated exposure [Gusev et al. 1997]. Some saw mushroom clouds on the horizon, while others, experienced unexplainable illnesses. First-hand accounts from

5. The test site and the military command center were known by several different internal code-names including Moscow-400, Site M, Bereg (river bank), Semipalatinsk-21, and Konechnaia (ending or terminal) (Balmukhanov *et al.* 2002; Werner and Purvis-Roberts 2007). Today, the command center is the city of Kurchatov, renamed in honor of the Soviet nuclear physicist who oversaw the Soviet bomb project.

6. There is no agreement as to the total number of tests conducted on the Polygon and the number varies between 456 and 710 tests. See S. Balmukhanov, *Medical Effects and Dosimetric Data from Nuclear Tests at the Semipalatinsk Test Site*, Fort Belvoir, VA, Defense Threat Reduction Agency, 2006 ; IAEA (International Atomic Energy Agency), *Radiological Conditions at the Semipalatinsk Test Site, Kazakhstan: Preliminary Assessment and Recommendations for Further Study*. Radiological Assessment Reports Series 3. Vienna and London, 1998. From my conversations with scientists conducting research in the region, most believe that the total number of all detonations (not just the number of tests that could have included more than one device) is closer to 700.

medical doctors I interviewed at local hospitals, as well as a variety of secondary sources I consulted, individuals who experienced immediate illnesses, that often included fainting, nosebleeds, diarrhea, or hair loss, resembled acute radiation sickness. But people were not permitted to speak of explosions nor any illness they suspected to be linked to them. With a laundry list of symptoms, individuals were given diagnoses in accordance with “state sanctioned illnesses”, like the flu or brucellosis [Boztayev 1994].

Neither the active nuclear testing nor the radioactive contamination impacted the ways in which the grasslands around Koian, including certain sections of the Polygon, were enrolled in a grand new plan. In 1954, a new Soviet leader, Nikita Khrushchev, embarked on what seemed at the time a brilliant solution to the Stalin-era grain crisis. He proposed that the fragile “virgin” steppe grasslands, half of which are located in Northern and Central Kazakhstan, be transformed into gigantic agricultural farms. Khrushchev inaugurated the Virgin Lands campaign in line with Soviet ideological goals: agricultural production could be and would be revolutionized along socialist lines. The vision of the future was an efficient, integrated, and rational agro-industrial complex maintained by properly socialized Soviet bodies [Starks 2008]. Concerns that Kazakhstan’s grasslands were prone to wind and water erosion were dismissed and the Virgin Land campaign forged ahead at a swift “Sovietesque” tempo. Vast tracts of land (equal in size to the total cultivated area of Canada) were seeded with cotton, wheat, and other cereals [Dronin and Bellinger 2005; Josephson *et al.* 2013; McCauley 1976; Saktaganova 2012].

From a purely economic standpoint, the *kolkhoz* was deemed inefficient in producing the massive quantities of much needed agricultural goods. As a result, colossal *sovkhozy*, long seen as an advanced form of socialist organization, were rapidly built from scratch, or emerged from consolidated and less productive *kolkhozy*. Technoscientific breeding techniques were introduced, which in turn altered traditional Kazakh grazing practices. In many places like Koian, so-called “antiquated” free-range grazing was replaced with feedlots, causing animals to put on weight, quicker [Olcott 1995]. Machinery and workers were also sent to the region. Initially, tens of thousands of tractors and other machinery arrived on trains to the Virgin Lands [Taubman 2003: 263]. Although settlers from European Russia already occupied the Kazakh steppe (including the Semipalatinsk area) in large numbers in the late 19th century, hundreds of thousands more began pouring in [Martin 2001]. Khrushchev recruited workers by appealing to the ideological sensibilities of the Soviet youth. Hundreds of thousands of unpaid, idealistic volunteer *komsomol* (All-Union Leninist Young Communist League) brigades arrived in Kazakhstan to *podnimat’ tselinu* (raise the Virgin Lands). In subsequent years, millions of students, soldiers, former Gulag (Main Camp Administration) prisoners, and special settlers (mostly political deportees from Soviet Union’s border regions)

established tent cities in the steppe and joined large grain and livestock *sovkhozy* [Pohl 2007; Viola 2007].

Similar to other *sovkhozy* in Kazakhstan, the Virgin Lands campaign in 1954 meant a near immediate economic redevelopment for Koian [Pohl 2013]. Its success, however, cannot be understood without considering the new village of Oktiabr' (October). As the story goes in Koian, a new settlement appeared "unexpectedly" [Pohl 2007]. "We just woke up one day and there were people building a new village," Burkut said in 2011. Hundreds of Russian and other non-Kazakh settlers spread out a tent colony on an open steppe 30 kilometers away. The new arrivals included a large population of Stalin-era political deportees and individuals in search of work, an ethnically mixed group of Russians, Ukrainians, Poles, Chechens, Tatars, and Germans, among others. In a matter of months, Oktiabr had a neat grid pattern of cinder block homes, a school, administration buildings, a sports complex, medical clinic, and a graded secondary road.

It became the administrative arm of the region's burgeoning agro-industrial complex. On a local level, Koian was transformed: no longer just a peripheral Kazakh *kolkhoz*, but rather, a "rurally-cosmopolitan" agricultural node. On September 20, 1954, both Oktiabr and Koian became separate *sovkhozy*⁷. This was followed with an above ground nuclear test nine days later and eight more the following month⁸. Some Koianers remember watching from a hill-top near the village for the flash and billowing cloud to appear on the horizon. By 1961, Koian and Oktiabr were consolidated for administrative purposes to become one gigantic *sovkhoz* Oktiabr. Oktiabr was designated the managerial center, while Koian and four other villages, or *otdelenia* (sectors), and at least fifty *zimovki* (winter settlements) were assigned a specific role on the collective⁹. The *otdelenia*, were tasked with raising livestock and specialized in breeding cows, sheep, horses, and goats or combinations of these. Yields were shipped to Oktiabr then elsewhere along a transport link in a long chain of distribution centers throughout Kazakhstan that delivered agricultural goods elsewhere in the Soviet Union.

The life improvements that followed the Virgin Land campaign are remembered fondly by the older generation of Koianers. For them, the *sovkhoz* was idyllic yet modern, providing a sense of purpose. Before the end of

7. "Ob Organizatsii v Kubskom Raionie Zernovykh Sovkhozov Karagandinskogo Gostresta Sovkhozov", 1954, Karaganda Regional State Archive, f. 18, op. 1, d. 2061, l. 231-233.

8. N.-O. Bergkvist, and R. Ferm, *Nuclear Explosions 1945-1998*, Stockholm, Defense Research Establishment Division of Systems and Underwater Technology, 2000.

9. "Ob Organizatsii v Kubskom Raionie Zernovykh Sovkhozov Karagandinskogo Gostresta Sovkhozov", 1954, Karaganda Regional State Archive, f. 18, op. 1, d. 2061, l. 231-233; "O Vnesenii Imenii v Administrativno-territorial'noe Delenie Nekotorykh Sel'skikh Sovetov Deputatov Trudiashchikhsia Kubskogo Raiona", 1961, Karaganda Regional State Archive, f. 18 op. 1 d. 3309 l. 49.

1955, all settlements within the *sovkhoz* were electrified, additional housing, schools, medical clinics, and dormitories were constructed. Consumer goods became available. Regular monthly wages allowed people to access previously unattainable goods and for the first time, locals could buy bicycles, building supplies, and food products. The well-maintained dirt road and bus service connecting Koian to Oktiabr was particularly welcomed. For Burkut, who I first interviewed in 2010, life became much easier. He said:

We finally got glass windows, salaries, vacations, and real houses. Volunteers came to Koian, erected barns for livestock and then built cinder block houses, store, and a dormitory. There was even a radio and a telephone. When volunteers raised the Virgin Lands we had so much bread – we were still collecting the wheat harvest in December! Life really improved and we participated in the building of Communism. Economically it was better then.

For most, the *sovkhoz* brought the socialist future that the Soviet leadership boasted about. Regardless of the bombs exploding in the distance, or the fact that police and the military monitored all movement in and out of the village. Instead, Burkut remembered that the population experienced an increase in the standard of living and grew.

Overall, the reordering of space that occurred in the 1950s comprised various hierarchically positioned officials that administered a workforce of 6000 strong including brigade leaders, tractor drivers, reapers, veterinarians, herders, grain harvesters, repairmen, teachers, and so on. Over 4000 people lived in Oktiabr and nearly 700 in Koian and its satellite winter settlements (not counting the other three *otdelenia* and their *zimovki*). This division of labor was designed to embody the highest form of socialist development, that is, all parts needed to work together in order to ensure that the *sovkhoz* operated like a well-oiled proletarian machine. By the early 1960s, new migrants to the region outnumbered ethnic Kazakhs who then found themselves a minority population (less than half of the total, according to some individuals in the village, although there are no official figures I was able to find) on ancestral land. As elsewhere in Kazakhstan, most managerial positions in the *sovkhoz* were given to Europeans—Russians, Germans, Ukrainians, or the like. But people frequently mentioned that despite this inequality, there was no ethnic strife; much the opposite in fact. The majority of people I interviewed in Koian and Oktiabr remembered other nationalities favorably, especially Germans who were seen as clean and precise and thus, highly valued workers. Only in the early 1990s would some Koianers feel resentment toward some Russians who they blamed for dismantling the *sovkhoz* and stealing formerly collective property after the fall of the Soviet Union.

While the Virgin Land campaign increased the overall grain output in the Soviet Union and harkens to a grand period of history for many villagers,

A woman from the village of Koian, Kazakhstan brings sheep and goats from pasture to be enclosed in a barn at night. Photo: M. Stawkowski

western scholars deemed it ultimately as an ecologically destructive example of the Soviet system [Feshbach and Friendly 1992; Josephson *et al.* 2013]. Industrial-scale farming had a barrage of effects and, looking back, the problems were indeed manifold. Failing to rotate crops, overgrazing delicate soils, and a relentless pressure to boost output, led to catastrophic erosion in subsequent years. Dust Bowl-like conditions were reported in many parts of Kazakhstan. The poorly trained workforce with poorly researched methods set out with fertilizers, pesticides, insecticides, herbicides, and fungicides – applying these liberally while downplaying environment concerns.

Yet the predominant interpretive framework of Soviet “ecocide” in scholarly literature “does nothing to advance further understanding of both the real place of nature within the Soviet project and the weight of impact of environmental sensibilities in the population” [Coumel and Elie 2013: 161]. Koianers neither saw the Virgin Lands program nor nuclear testing in the region as spawning an environmental catastrophe. There are several reasons for this. First, nuclear testing was a state secret that Koianers, like others, knew hardly anything of. This is especially true with regard to radiation danger. There was no radiation to bemoan because no one knew it existed. Unlike in the Soviet Union’s plutonium producing city of Ozersk where the working-classes were attracted with middle-class prosperity to live with residual radioactivity and health risks [Brown 2013], Koianers first learned about their local toxic legacy in the late 1980s, when the Nevada-Semipalatinsk anti-nuclear movement in Kazakhstan made this information public. Second, until the fall of the

Soviet Union in 1991, Koianers spent their lives within a collective system that offered them a better standard of living than they had before (or after the fall of the Soviet Union for that matter) [see also Abashin 2015; McMann 2007]. Many told me that they did not have time to think about environmental health or wait for the bombs to explode:

We used to collect hay on the Polygon. I remember seeing signs that had *zona* (zone) written on them. We used to laugh about this. What sort of zone was this? *Zona otdykha* (a resort) perhaps? No one in the village had a clue. We were happy, we worked, and we had a normal life. The state provided us with all the necessities and the testing that went on was a brief interruption of our daily routines. No one knew that the bombs were radioactive.

In this context, the *sovkhos* brings together two Cold War experiments into one overlapping landscape. Nuclear tests were an unexplained interruption of a daily agricultural routine when people were asked to stop all they were doing until after the testing was complete. Older residents remember seeing them in the air, feeling trembling under their feet like an earthquake, and returning home to find things disheveled with furniture out of place and objects fallen from shelves.

There is something in the resounding positive tone of local narratives today, however, that warrants further exploration. Unless prompted, people rarely brought up nuclear testing even though news media had run stories on the “victims” while I was working Kazakhstan. Part of the reason why Koianers were not afraid of their environment was that they looked healthy, unlike those featured in several exposés. No one was born without arms or had strange tumors growing on their faces, for example. As a result, even though many Koianers have come to believe that cancers, heart disease, and mental health disorders were connected to radiation exposure past and present, these only served as proof their adaptation to their particular environment. After all, they were not suffering in the same way as others. Complicating the issue is that there is no way to prove scientifically that any particular health problem Koianers experienced is a result of past or present exposure to radiation. The accumulation of multiple and overlapping toxins in the region, or “toxic layering,” “complicates the establishment of clear causality with respect to environmentally induced harm” [Goldstein and Hall 2015: 648; Goldstein and Stawkowski 2015]. Scientists are to this day ill equipped to distinguish between cancers, heart disease, or other illnesses caused by tobacco or alcohol consumption for example, and those caused by exposure to radiation. In Koian, there are no studies that approach either. The village residents were in any case, largely uninterested in the significant scientific uncertainty with regard to their local landscape history, or their genetic makeup. Their survival was proof enough that things were okay. Too simple it would be to dismiss

things as nostalgic yearnings or a “romance with one’s own fantasy” [Boym 2001: xiv]. The bucolic and idyllic stories Koianers tell themselves about the period of the *sovkhos* today are not so much reverent contemplation about a life that never was, but rather a reflection of how their lives actually did improve. Since Soviet disintegration much has changed. Their status as respected citizens is gone. Their skill sets—perfect for a collective—have become unsuited to a market economy or completely useless.

Living sami po sebe

“We lost everything overnight,” Tursynbek reminisced in the summer of 2015, “when Soviet Union collapsed, life became unpredictable and things here quickly turned to ruin.” I listened to stories of individuals who froze to death or were attacked by wolves outside the village as they walked through knee-deep snow from Koian to Oktiabr’¹⁰. These were common tales. With little indication that these events actually happened, such stories capture the collapse of the Soviet Union when people’s lives teetered on the edge of death. There was little food, no electricity, no coal for heating, no bus service, and no medical services to speak of, and no telephone. The period was often recalled as “*represia*” (repression), a term generally used to describe Joseph Stalin’s brutal policies, but in this context a return to the “ancestral way of life” and a temporary loss of “civilization.”

Like elsewhere in Kazakhstan, the transformation of the Soviet command economy after 1991 was characterized by the “unraveling of the previously entwined character of Soviet work, domestic life, and the person” [Alexander 2004: 311; Nazpary 2002]. By the mid-1990s, the *sovkhos* was abandoned and a large class of dispossessed people began working with what was left. Systemic shortages of consumer goods and agricultural products were a standard part of Soviet existence, but the dismantling of the *sovkhos* stripped Koianers of property, work, social protections, and divested them of their social status. The Germans, Ukrainians, Russians, Poles, and Tatars who once lived and worked in the *sovkhos*, left in search of better work elsewhere and often repatriated to native countries. Koianers not only lost their jobs, money, housing, livestock, machinery, access to health care and education, but also watched in a state of alarm as state property was plundered, taken by former *sovkhos* administrators who were never to be seen again. Tractors and livestock, cars, electronics, and other hardware *propalo* (vanished).

10. Today, wolves continue to be a problem in Koian. They frequently attack sheep, goats, and calves in the village. This especially happens during winter months when food is scarce. During my 2010 to 2011 fieldwork, there were three such attacks.

When nuclear testing was outlawed in 1991 and the Soviet army disbanded, what was left of the test site was a landscape littered with conceivably millions of tons (no one is exactly sure how many) of scrap metal. No longer a military zone Koianers scavenged the site for whatever they could find (possibly contaminated with radioactivity) and dismantled any infrastructures left over. A brief market emerged for scrap metal, but since the mid-2000s, most of it had been hauled off. Seasonal grass fires expose stray findings here and there. Koianers relied on the Polygon for most of their livelihood, using the land as pastures or for small vegetable gardens as they had done during the Soviet period. There were no physical borders at the perimeter of the old test site and many dangerous areas are unmarked. While some places posing the greatest risks had been secured with fencing, this was taken down. Koian itself is near two large craters (and animal watering holes) that emerged from underground nuclear blasts in the 1960s that have a dangerously high level of residual radioactivity¹¹. While speaking with government authorities in charge of monitoring the site, many conceded that they lacked the resources to keep people out. In 2011, there were 80 active *zimovki* on the nuclear test site, where people were holding 30,000 sheep, 4,000 cows, and 3,000 horses¹².

When I last visited in 2015 there were 51 people living in Koian, of which 25 were female and 26 male, including 13 children under the age of 18, in ten households. There were about 350 people living in Oktiabr'. Other former *otdelenia* were abandoned. Most in Koian and those in Oktiabr' belonged to same kin group and clan of the Middle horde. Men tended the animals and women looked after household economics. Though women's roles included herding too. They brought animals in from pasture and did all of the milking. In Koian, all families owned livestock. Some were poor, with three cows, one horse, and fifteen sheep. Others were wealthier, like Tursynbek, who had six horses, about thirty cows, and over fifty sheep and goats. In comparison, I visited a singular, prosperous family that lived in a *zimovka*, an hour's drive away, and was told it owned 320 cows, 250 horses, and 1200 sheep and goats. This family was considered to be economically very well off.

Koianers liked to say they live *sami po sebe* (on their own and keeping to themselves). Ironically, this denoted a free and self-sufficient life (compared to those who live in the cities) together with a daily struggle to maintain their rural livelihoods, and the collective economy they have given new life to. Indeed, Koian resembled a cooperative enterprise, what some scholars refer to as "neosocialist corporation" where everyday life was not dictated by maximizing profits, but rather, by what was in the best interest for the survival of the village [Humphrey 2002]. *Sami po sebe* included more. Koianers lived in a moral economy of reciprocal favors and gift giving. Help and gift exchanges

11. NNC [op. cit.].

12. *Idem*, p. 46.

between individuals (both kin and not) and with outsiders have come to play a central role in village life. No one in the village could survive without this implicit mutual system of dependence. While there were occasional rifts, help would never be refused to anyone without the threat of being shunned. This moral economy distributed limited resources, especially labor, and established networks of reciprocal obligations. The kinship networks and informal economic activities, long part of Kazakh life, certainly became a more overt part of economics in Koian (like elsewhere in Kazakhstan) in the post-Soviet period. To some extent, this was due to the pervasive scarcity of economic goods [Collins 2006; Schatz 2004]. A politically and economically marginal segment of society, Koianers have come to resemble a “self-help group” whose members devise solutions to their common problem of social, political, and economic dispossession [Dave 2007].

Because Koian’s population was small, stock herding and hay collecting, like in the Soviet period, was a cooperative endeavor and duties rotated between village males. One tractor was shared, as were the pastures. Everyone contributed to Koian’s overall well-being. With little disposable income circulating it is perhaps not surprising that barter has mostly replaced monetary exchange, particularly between village residents and with those who visit. One could exchange several liters of diesel for a ride to Oktiabr’, or a sheep or two for a couch sold by *stepnye biznesmeny* (steppe businessmen) who travelled from one remote village to the next selling goods from the back of a *kamaz* (truck). Animals could also be swapped for sets of tires, wheel barrels, and other machinery. Not surprisingly perhaps, Koianers frequently referred to their livestock as a living and breathing “collective bank,” where animals can be bartered to obtain goods or sold in city markets for hard cash. Retirees with small families and few animals, however, had an especially difficult time in the village. While Kazakhstan’s government honors Soviet-era pensions, the monthly take-home pay in 2012 was 16,000 Tenge or approximately 110 USD. With the unreliability of the mail service to rural areas and the impassibility of roads in the winter and spring months, these hardly sufficient government funds were often late to arrive.

In recent years, various multi-national mining ventures operate on the former test site with the permission of the National Nuclear Center and hire local stockbreeders like Tursynbek to work in open pits on the former test site. His earnings from this plus that of the rest of his extended family of seven were between 60,000 to 140,000 Tenge per month (or between \$400 and \$950)¹³. For perspective, in summer of 2012 it would have been difficult to find a one-room apartment in the city of Karaganda for less than 30,000 Tenge

13. During my 2010-2011 fieldwork in Kazakhstan, one dollar equaled 147 Tenge on average. In 2015 the Tenge collapsed after the government took steps against supporting the currency. Today, one dollar is worth 334 Tenge on average.

(200 USD) per month—utilities, of course, being extra. Some of the money went to family living in the city—two daughters, one son and his wife, and one son-in-law—who needed help covering food, transportation, and housing costs. Although all of the individuals worked, none had jobs that paid enough to make them fully independent. The majority of Kazakhs who moved from Koian to Karaganda relied on their village kin network for financial support.

While Koianers generally derided city life, they felt isolated and embittered: not living in Kazakhstan, but rather in “Koianistan.” They frequently expressed anger at local authorities for abandoning them. Many accused Oktiabr’s *akim* (mayor), responsible for the phone and electricity service in Koian, of purposefully trying to cut the village off in order to get people out. There were certainly tensions between the two communities, despite kinship ties. The *akim* was known to shut electricity off to the village for weeks at a time (or to avoid fixing it) and for refusing to plow the makeshift road in winter, effectively trapping everyone.

To the Bazar

In summer 2012 and on a particular trip to the *bazar* (market) with a slaughtered animal I got an appreciation of what it means to navigate the workings of their rural economy and piecemeal wage labors vis-à-vis the city. Tursynbek and Altynai, my host family, usually joined me on these trips in part, to make sure that their meat arrived safely to its destination and to visit with their other children. This time, however, they stayed behind. I was not returning immediately and it would be difficult for them to find return transportation to Koian – a journey that consists of buses, taxis, and other inconveniences that can take days without a reliable car, which the family and others in the village lacked. In several days time, Tursynbek was beginning his monthly, two-week shift (working twelve hours a day) at a nearby mine anyway, so there was no time to take a trip. Importantly, the family entrusted me with getting the required *spravka* (in this case, an official document certifying the meat passed a health inspection and can be transported). I had made this trip on countless occasions; my time and labor was payment, of sorts, for living in the village. The standard cost of carting an animal from Koian to the city *bazar* in Karaganda, after all, can be as high as 15,000 Tenge (or 102 USD), a one-month’s retirement pension for some, or the cost of buying one sheep in 2012.

To get the meat ready for sale in the city, Tursynbek and four other village men got up at dawn. They were anxious that I would get a late start and summer temperatures would spoil the meat before it got to Karaganda. In the summer, the animals are slaughtered early – when the weather is still

cool – before the meat embarked on a seven-hour journey to the *bazar*¹⁴. This day a sheep was also slaughtered; this would go to Tursynbek and Altynai's three older children who live in the city. The combined load – 151 kilograms – was neatly wrapped in a large blue tarp and placed in the back of the van. Before departing, I was obliged to ask if anyone in the village needed a ride to Oktiabr' or anywhere else along the way. Surely they did and grocery orders came too. I gathered itemized lists of *produkty* (food usually, but in Koian could mean also any merchandise, like detergents, hair coloring solutions, or medicines).¹⁵ On this particular day, my list included about 300 kilograms of flour, sugar, and rice; three large sacks of carrots and onions; twenty boxes of black tea; ten heads of cabbage; four large buckets of lime; and much awaited electric *separator* (a machine that divides milk into cream and skimmed milk, from which butter, sour milk, yogurt, and *qurt*—the small, dried, and hard sour skimmed milk—are made).

After obtaining the *spravka* certifying that the transported meat was not stolen, and moreover, was fit to eat (brucellosis and anthrax free, not radiation), and after eight more hours of driving, I arrived at the Karaganda *bazar* and its labyrinth of alleyways. It was another hour or more before the *komersant* (merchant) arrived, collected the meat from the van, weighed it and rolled it into a cooler. The cow's liver was spread out on a large, bloody wooden stump and inspected for traces of disease. The *komersant*, who was an acquaintance of a family friend, agreed to buy the entire cow for 135,900 Tenge (or 900 Tenge per kilogram). Not a bad price, at least according to Tursynbek¹⁶. There was no concern for radioactivity, nor were there any tools to measure such a thing [Stawkowski 2017]. The meat they sold on the market or consumed at home was not checked for radiation and there were no safeguards, at least in Koian, to prove otherwise. "We don't know anything about radiation or what is in our food. No one tells us anything," Tursynbek said.

14. According to individuals I spoke to in the village, meat can only be sold in the oblast (county) of residence. Hence, even though the city of Semei (Semipalatinsk) is much closer to Koian than Karaganda, Koian residents cannot sell their meat products there.

15. Trips to the city almost always included household needs of others. Lists were usually quite extensive and included anything from tea, flour, rice, sugar, noodles, potatoes, onions, carrots, and cucumbers, to machinery parts, lime for painting houses, toys, make-up, and clothing. Because the price of all *produkty* is at least four times cheaper in the city than in the small, often inadequately stocked family-run stores in Oktiabr', people always bought merchandise in bulk and the lists reflected this accordingly.

16. Tursynbek's cow sold for 924 US \$ (often, he would sell for as low as 700 US \$), at six dollars per kilogram. Between 2010 and 2012, food prices were relatively stable in Kazakhstan and at the *bazar* were as follows: milk 150 Tenge/liter, loaf of bread 60 Tenge, ground beef 1500 Tenge/kilogram, beef strips 2700 Tenge/kilogram, beer 250 Tenge/liter, and grilled lamb shashlyk (a skewer of about five pieces of meat 1000 Tenge). Sheep and goats from Koian were sold in Karaganda anywhere from 10,000 to 15,000 Tenge (or 68 US \$ and 102 US \$ respectively). According to colleagues living in Karaganda, the sale price for Tursynbek's cow was too low.

Conclusion

I often wondered why, given the hardships and isolation, Koianers preferred to stay in the village. I was thinking that perhaps it was because they received some sort of state compensation as “victims” of nuclear testing. Although a law passed in 1992 providing for the social protection of citizens who lived in the Semipalatinsk Nuclear Test Site region during the period of testing (doling out monetary compensation and medical treatment, as long as residents were able to prove that they lived in and around the Polygon before the test site was closed in 1991), Koian was deemed a zone of minimal risk and, therefore, in need of minimal help. Most Koianers received a one-time payment of about 10,000 Tenge. Regardless, no one in Koian was concerned about radiation because most believed they were adapted to it and unable to live outside the radioactive zone. During my ethnographic research, I realized that Koianers stayed in a radioactive environment for other reasons. Most lacked the education, skills, or training to navigate an urban landscape, unlike those in Soviet administrative positions who left to secure new occupations in the city. For Koianers, moving to cities is a risk: work is scarce and low paying. Poverty among newer migrants was particularly high as I observed.

Driving through Kazakhstan one cannot help but see the ruins left from the mass transfer of people after the fall of the Soviet Union [Yessenova 2005]. Countless villages are completely abandoned. In most of the now sparsely inhabited former *sovkhozy*, people live next to deserted or dismantled homes, while children play in cement skeletons of grain silos and structurally unsound administrative buildings from the Soviet-era. Many Koianers remarked on their surroundings, their “ruined life” as they call it, both literally and figuratively. For most, the aesthetic is *posle voiny* (after the war). Yet individuals who moved away to the cities in search of better work found not rural abandoned buildings but new homes in urban slums (usually found on the periphery of cities), are chronically unemployed and barely scraping by. As I observed during my frequent trips to the region, many of them are financially dependent on their village kin with similar sharing and distribution networks I observed in Koian.

Western scholarship has gone to great lengths to uncover the damage left behind after the Soviet Union’s collapse. Kazakhstan in particular, features prominently in narratives about ecological ruin with the Aral Sea desiccation, but so too with the Virgin Lands campaign and the fallout from nuclear testing on the Polygon [Feshbach and Friendly 1992; Glantz 2004; Josephson *et al.* 2013]. Indeed, the point has been nearly overstated at this juncture. To be sure, the villages in and around the Polygon are some of the most neglected and impoverished areas in the country. There is no doubt that the implementation of economic reforms following the breakup of the Soviet Union created a multiplicity of new articulations of the modes of production and ways of being

in the world. Indeed, the creation of an entirely new economic system fostered new power arrangements in which the emergence of well-connected *nachalniki* (bosses) took managerial positions in industrial enterprises and former Soviet elites emerged in leading business roles [Junisbai 2010; Liu 2012]. Koian exists at the intersections of three paths: one of agricultural development, one of nuclear testing, and still another of the near complete withdrawal of the state. The villagers who remain in Koian continue on with stockbreeding while their children are sent to cities to live with relatives. Animals raised on the test site stock urban *bazars*, making the “disaster landscape” intimately tied to the workings of nearby cities. They are sold to provide for living expenses in the city, while the village remains central to a broader understand of family life. It is to the village people go to visit aging parents, their grandparents. It is to the village where people go, not to mourn the victims of nuclear testing or the abandoned state collective farms, but where families gather and share in what people believe is a “better life.”

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Abstract

Life on an Atomic Collective: The Post-Soviet Retreat of the State in Rural Kazakhstan

This article is a case study of Koian, a former livestock and agricultural collective farm overlapping the border of the Semipalatinsk Nuclear Test Site in Kazakhstan. I examine how, despite economic hardships, village residents have reinvented their collective farm as a “collective bank” on a post-Soviet agro-nuclear landscape. Although informal economies and social networks play an important role in ameliorating a lack of state commitment to the region, the village has become a relatively stable economic unit and a lynch pin of a broader strategy of upward mobility for family members who move to cities.

Keywords: Kazakhstan, Semipalatinsk Nuclear Test Site, collective farming, nuclear testing, post-Soviet economic transformations, toxic environments

Résumé

Le kolkhoze au nucléaire : le désengagement de l'État au Kazakhstan post-soviétique

Cet article étudie le cas de Koian, une ancienne exploitation collective d'élevage et d'agriculture dont une partie du territoire est située sur le site d'essais nucléaires de Semipalatinsk au Kazakhstan. Je montre comment, malgré les difficultés économiques, les habitants du village ont réinventé leur exploitation collective sous la forme d'une “banque collective” dans un paysage agro-nucléaire post-soviétique. Alors que les économies informelles et les liens sociaux jouent un rôle important pour suppléer le manque d'intérêt de l'État pour cette région, le village est devenu un moteur économique relativement stable et une source essentielle de cohésion dans les stratégies d'ascension sociale des personnes qui migrent vers les villes.

Mots clés : Kazakhstan, site d'essais nucléaires de Semipalatinsk, agriculture collectivisée, essais nucléaires, transformations économiques post-soviétiques, environnements toxiques