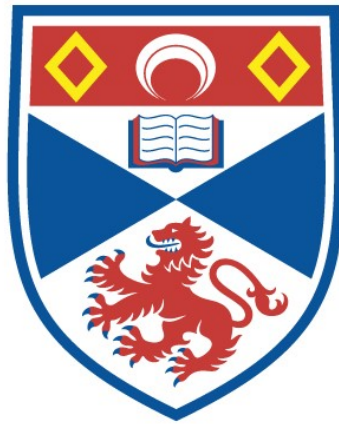


PARTNERSHIPS AND UNDERSTANDING BETWEEN KAZAKH  
PASTORALISTS AND GOLDEN EAGLES OF THE ALTAI MOUNTAINS:  
A MULTI-SPECIES ETHNOGRAPHY

Lauren Mueller McGough

A Thesis Submitted for the Degree of PhD  
at the  
University of St Andrews



2019

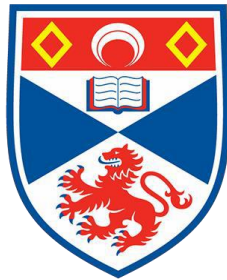
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Partnerships and Understanding Between Kazakh  
Pastoralists and Golden Eagles of the Altai Mountains: A  
Multi-Species Ethnography

Lauren Mueller McGough



University of  
St Andrews

This thesis is submitted in partial fulfilment for the degree of

Doctor of Philosophy (PhD)

at the University of St Andrews

March 18<sup>th</sup>, 2019

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## Abstract

This thesis is a study of the Kazakh tradition of hunting in partnership with golden eagles in the Altai Mountains of Mongolia. It represents a unique relationship among the spectrum of human-animal interactions – here eagles live both fully independent lives in the ‘wild’ and yet, for a time, are brought into the domestic sphere by Kazakhs and behave, in many ways, as a domesticated animal would. Kazakhs are able to accomplish this through the deep ethno-ornithological knowledge of the lives of eagles and a willingness to see eagles as beings with agency and engage in an intersubjective relationship with them.

Kazakh pastoralists rely entirely on animals for their livelihood, and therefore communicate with goats, sheep, horses, camels, yaks and eagles on a daily basis. None of these relationships are of dominance, but rather co-domesticity. The aim of this thesis is to use the lens of cultivating a relationship with an eagle to better examine how human-animal interactions make us who we are, and help us understand the world around us. There are strong parallels in the lives of the eagles and Kazakhs of the Altai Mountains – both migrate with the seasons and utilize landscapes in similar ways. Along with notions of ‘domestic’ and ‘wild’, apprenticeship is a strong theme in this thesis. A Kazakh hunter must apprentice himself to both his eagle and his human mentor. In turn, the eagle becomes an apprentice of sorts as it learns to communicate with humans. Layers of interspecies communication saturate the landscape and challenge the notion of human exceptionalism. When we think about animals this way, like the Kazakhs do, truly special human-animal partnerships can occur.

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## Introduction

The aim of this PhD dissertation is to better understand human-animal relationships through a close examination of one of the world's most unique examples of human-animal interaction and communication: the tradition among nomadic Kazakh pastoralists of hunting in partnership with golden eagles in the Altai Mountains of Mongolia. This practice represents, arguably, the earliest form of falconry, which is defined as the art and science of hunting wild quarry with a trained bird of prey. Falconry is one of the few instances of interspecies cooperation that does not involve classical domestication. The skill of socializing eagles with humans is embodied in the falconer and passed down culturally. Each eagle utilized must be taken from the wild and individually tamed, with the goal of permanently returning the eagle to the wild to breed after a period of time hunting with a human. This is in stark contrast to the typical method of achieving tameness through the life-long captivity of a population of animals and controlled, selective breeding. Communication with a solitary predator such an eagle requires careful, nuanced skill, and reciprocally, the eagle must learn to interpret and react to human behavior.

Since its inception falconry has spread to every continent except Antarctica and exists in a variety of different forms. I have chosen to conduct my fieldwork with the nomadic Kazakh pastoralists of the Mongolian Altai because, even though it is quite possibly the birthplace of falconry, it has also remained remarkably unaffected by recent history and globalization. (Bodio 2014) The same cannot be said for the eagle culture of Kazakhstan, Russia, the Kyrgyz Republic and China,

which have struggled to sustain the practice. This is because, during the Stalinist Era, falconry was actively suppressed as bourgeois in present-day Kazakhstan and Russia. For varied reasons in the Kyrgyz Republic, herders have become largely settled, which makes the mechanics of hunting with eagles very difficult. Finally in China, the sport of falconry is currently forbidden by law, though many ethnic groups practice various forms of falconry in hiding. (Simakov 1998)

All told, the eagle culture of the Mongolian Altai is vibrant and accessible. Additionally, in many places practitioners of falconry are limited to the raptor and the human. However in the Mongolian Altai it is a complex multi-species assemblage. Dogs and horses are important participants in the hunt. During the course of an eagle's hunting flight in the Altai, several humans, horses and dogs are involved. The orchestration on the part of the human, and each animal's ability to understand its role towards the common goal, speaks to a deep interspecies communication. This population of Kazakhs almost entirely relies on animals for their livelihood. The vast majority of the land is not arable, and with virtually no local agriculture to speak of, animals such as goats, sheep, yaks, horses and camels are what allow Kazakhs to thrive in the landscape. Animal communication is built into the fabric of the society in the Mongolian Altai; it is as an essential skill as breathing. I could not think of a better group of people to help elucidate the nature of human-animal relationships.

I spent a cumulative two years conducting fieldwork on the human-eagle relationship among Kazakhs in the Mongolian Altai. The Mongolian Altai lies within the westernmost Mongolian province of Bayan-Olgii. Within the province, I chose

the *soum*, or county, of Daluun as my primary field site. Daluun lies right on the path of eagle migration, and is itself an artery of eagle culture. Daluun's residents in particular were very attuned to the movements and behaviors of the wild community of eagles. These falconers were far enough from the provincial center that tourism was of little influence, and thus eagle knowledge was entirely focused on effective training and hunting partnership. In some places that see large amounts of tourist traffic, certain eagles are kept for their tolerance of tourists, rather than their usefulness in the hunt.

The method I employed during my fieldwork was participant-observation. I have been a licensed and practicing falconer in the United States since 2001. I trapped and trained my first hawk, a red-tailed hawk for hunting rabbits, when I was fourteen. I've practiced falconry continually since then, and started specializing in golden eagles in 2006. I came to Mongolia well versed in the methodology of training raptors and with a lot of confidence in handling and hunting with golden eagles. I knew that the Kazakh philosophy and method would be different, but communicating with eagles was a language I was already fluent in. This was extremely helpful, as I was not fluent in the Kazakh language when I arrived, nor in the other essential skill of horsemanship.

The basis for my fieldwork was undergoing an apprenticeship under a Kazakh *berkutchi* (Kazakh for 'a person who hunts with eagles'), and the process of becoming a successful *berkutchi*. I felt an apprenticeship was essential, as the relationship of an eagle to a human is both a subjective and intersubjective experience. If I were to only interview and observe, but not participate, I would be

denying myself a wealth of experiential information that would inform my understanding of the mechanics and reality of this unique multi-species partnership. Under the guidance of an elder, accomplished *berkutchi*, I trapped, trained, and caught foxes my own golden eagle. The frustrations, epiphanies, joys and sorrow that I felt, that ultimately came from transforming a 'wild' eagle into a hunting companion, is what allowed me to understand and function in Kazakh culture. These strong emotions – elation when an eagle is successful and anguish when it is injured – transcend language, age, gender, and class. It was from that visceral commonality that I built my relationships with the people of the Altai.

Fundamentally, this thesis is about the meeting point between hunting theories and herding theories, and the relationships between species that result.

It is through continued interaction with one another that both an eagle's humanity is revealed to the *berkutchi* and the *berkutchi's* animality is revealed to the eagle.

### A Multi-Species Ethnography

The eagle participants in this ethnography are not the property of humans, nor are they treated as objects or as creatures without agency. My informants see eagles as individuals of their own mind and agency. Individuals that a human must, as with any friend, establish a rapport as a path toward communication. In fact, eagles are often referred to as 'friends' by Kazakhs. This is to say, that to only look at the human side of this relationship would be inadequate. The eagle's own experience is as important as the human's. I assert that just as the human

apprentices himself to an eagle, so does the eagle to a human. My aim is that the following ethnography is a multi-species ethnography. I take into account, as best as I am able, the eagle's perspective, and the lives of eagles in their entirety, with or without their occasional human companions. On one level, a *berkutchi* changes his perspective by borrowing his eagle's eyes and his horse's speed, and weaving his intellect around it to make a successful hunt. It's a reflexive act.

Perspectivism is an important concept in this multi-species ethnography. Of course, in perspectivism, no way of seeing the world can be definitively true, but circumstances of individual perspectives integrate to reach 'truth'. When one considers the origin of perspectivism, the literature on Amazonia, the notion is of a particular configuration of distinctions between humans and non-humans, which is very different to Western distinctions. Through shamanism and hunting, it is revealed that the previous human condition was not entirely overcome. Objects, animals and spirits can still reveal an inner human form usually associated with their 'soul'. Non-human skin hides this, and determines a point of view. Although such souls may view themselves as humans and live similar to humans, they may perceive humans as jaguars. Thus, humanity is a reflexive condition. (Kohn 2007) At the core of this is the philosophical distinction of whether all beings have the same nature and different cultures (Western beliefs) or the same culture and different natures (Amerindian).

What is the most relevant to this thesis is Broz's work on a pastoralist perspectivism. He gives the example of pastoralist hunting in Siberia, and how if conducted improperly, it is analogous to livestock theft. What to humans is a deer, is a cow to the 'forest masters'. In many ways, morality transcends



perspectivism in the Altai. (Broz 2007) Indeed, it was said to me by my informants many times that wild animals were ‘god’s herds’ and could not be hunted carelessly.

In Mongolia, Caroline Humphrey writes of how mirrors are instruments of perspectivism. Shamans can travel through the dark side of the mirror to the land of the dead, giving two perspectives at the same time. (Humphrey 1974) I would expand on this with the Kazakhs to say that a *berkutchi*’s ability to bring eagles into the human sphere and humans into the eagle sphere make *berkutchi* akin to shamans. The eagle’s flight, and the way a *berkutchi* feels an ability to travel along with the eagle spiritually as it flies, is akin to a shamanic flight over a sacred landscape.

Although my primary focus is on eagles, I will examine the animals that inhabit other orbits in a Kazakh herder’s life. Dogs, goats, yaks, sheep, camels, horses, wildcats, foxes, hares, marmots, falcons, crows and leopards are all animals that Kazakhs interact with on a regular basis. ‘Domestic’ and ‘wild’ are terms that I will unpack, they represent opposite ends of a spectrum that these animals inhabit. What makes eagles unique and especially worthy of study, is that they can move from one end of the continuum to the other. An eagle can both thrive independent of humans in remote wilderness and in the most intimate human environments (inside the Kazakh herder’s home).

## **Chapter One - Communities of Golden Eagles and Nomadic Kazakh Pastoralists in the Mongolian Altai: A Natural History**

The first chapter will examine the big picture of eagle and human populations in the Altai, and why historical, cultural, and evolutionary circumstances have allowed them to intersect so profoundly.

It is important to understand what biologists understand about eagles. Golden eagles are an incredibly successful predator; they have a circumpolar range, and have adapted to a staggering variety of habitats and prey species. (Watson 2011)

There are few physiological differences between golden eagles in different locations (North America vs Mongolia for example), which would indicate that it is their adaptive intelligence that allows them to behave differently in different environments. It is this intelligence that Kazakhs have recognized. There is plasticity in an eagle's mind – in the right circumstances, it can be socialized with humans. Biological science has come to the conclusion that many birds have elements of a 'theory of mind'. They are able to take the perspective of another bird or sense its needs, which is necessary to a theory of mind. Adaptability is a strong signal of intelligence in birds and other animals. The neural circuits, genes, and chemicals in birds that govern social behavior are similar to humans. They follow the same chemical pathways and are wired similarly for sociality. Bird behavior has far less to do with instinct, and far more to do with the products of learning, memory, experience and choices. Just as humans are not only products of their culture, animals are far from being products of only instinct. (Ackerman 2016: 9-15)

The very fact that Kazakhs have exploited this to their advantage speaks to their innovative culture. In the American west, when eagles were noted to prey upon

vulnerable livestock, ranchers and cowboys killed them en masse. Eagles were seen as a threat to the western way of life. (Bodio 2014) In Mongolia, it could not have been more different. Eagles were enlisted as hunting companions to take game animals that traps, arrows and even guns could not. This can in part be attributed to conflicting worldviews. The Judeo-Christian worldview pegs animals as objects, as subservient beings to humans. It can be argued that industrialized farming, and the many morally dubious ways in which meat is produced on a grand scale in the West, is only possible through the Judeo-Christian worldview that views animals only in terms of subservience and even mindlessness. It would be difficult to align such things with the co-domestication and trust implicit in the way that many pastoralist cultures interact with animals. Truly the long-held animism and shamanistic tradition of the nomadic peoples of the region allows for a more nuanced view of the animal communities. Eagles are powerful beings, of course they can be allies!

The geography of the Altai is equally important. Its steppes and mountains are conducive to populations of eagles and humans observing one another – which they have done for millennia. Herders are expected, whether *berkutchi* or not, to note the demographics and behavior of eagles they observe when out herding. This is not only because it is useful knowledge to eagle hunters in search of a new eagle, but because eagles are an indicator of the health of an ecosystem (called a ‘keystone species’ in biology see Watson 2011). If eagle numbers are declining, or are behaving strangely, it is almost certainly symptomatic of a larger problem (such as overhunting another species or desertification). This continual observation translates into a rich ethno-ornithological knowledge; Kazakhs are well versed in the lives of eagles, even when eagles aren’t being trained or socialized. Hunting

with a human might only make up fraction of an eagle's entire life. Humans and eagles are two long-lived, independent species whose lives might only intersect for a short time before they continue on their own way.

The depth of indigenous knowledge about animal lives can surprise biologists, especially when biologists come to a conclusion that was long-known by an indigenous culture, but rarely acknowledged outside it. For example, Inupait hunters revere whales. Through generations of hunting, the Inupait knew that whales had a keen sense of smell. The success of hunts often depended upon the wind and what scents were available to the whales. It wasn't until recently, when biologists actually dissected such whales looking for a sense organ capable of smell, that they realized that smell was indeed an important sense to whales. Similarly in Australia, firespreading, which is defined as the transport of burning sticks to flush out prey via fire and smoke, was a known behavior in some birds of prey among indigenous cultures. These indigenous Australians had incorporated the knowledge into sacred ceremonies for centuries, at least. This was largely ignored until a team of biologists documented the firespreading phenomenon and it made headlines around the world. It would serve humanity well, and better inform our understanding of non-humans, to pay more attention to the traditional knowledge of indigenous communities. (Bonta 2017)

It is important to think about the converse to the previous example of humans observing eagles. Eagles observe humans. In North America and Europe, eagles have a large 'flight range', meaning that the slightest disturbance or appearance of humans causes them to flee. In Mongolia, this does not occur. It is my belief that these eagles accept humans as part of the landscape there, just as they do herds

of horses. Even when nesting, eagles will incorporate manmade objects, such as prayer flags, into their nests – something unique to this population. In Mongolia, prayers are literally borne on eagle's wings.

It is essential to overlay this natural history of eagles with human history of the region; one can't be understood without the other. The Kazakhs of the Mongolian Altai have remained insulated to an extent from the political upheaval of the 20<sup>th</sup> century. Whereas in Kazakhstan proper eagle hunting was banned as a bourgeois pastime, no such limitations were enforced in Mongolia, which allowed the practice of eagle hunting to continue unfettered. (Diener 2009)

What about Kazakh pastoralism in Western Mongolia has allowed for human and eagle lives to occasionally intertwine? Partly, to be sure, is the fact that land in Altai is hardly arable, and relying on hunting or livestock is the most reliable way to sustain a community. Both hunting and herding require a deep, nuanced understanding of animal behavior and husbandry. As hunting with eagles demonstrates an ability to take an animal from 'wild' to 'domestic' and back again, there isn't a huge psychological leap required between hunting and herding. Vainshtein asserts that Central Asian pastoral nomadism arose from tribal hunters borrowing domestic pack animals from their settled agricultural neighbors (Vainshtein 1981). While it can likely never be known, from my fieldwork I find the line to be fine between the skills needed for herding and those for hunting. In fact, falconry eloquently combines both and it is a compelling idea that pastoral nomadism independently arose in Central Asia as a natural extension of the requirements of falconry.

However Kazakh pastoral nomadism arose, globalization is now a force in the Altai. It cannot be ignored. Many children are choosing to pursue careers in the city and forgo a herding lifestyle. Eagles have become symbolic of that traditional lifestyle. Among Kazakhs, value is seen in being 'close to nature' – being a *berkutchi* is the ultimate embodiment of this. Characteristics of the eagles, the people, and the area allowed this relationship to occur, but politics and the need for preservation have sustained the relationship. It is interesting that falconry in Central Asia has persisted despite the advent of the gun and sophisticated traps. While at one time eagles were the most efficient means to procure fox fur, that can no longer be said. It speaks to the inherent cultural value of cultivating a relationship with an eagle that such a time and skill intensive activity has been enthusiastically continued into the 21<sup>st</sup> century. In many cultures prestige is often attached to hunting irrespective of its minor importance to the economy. (Ermolov 1989:108)

## Chapter Two – Human-Eagle Socialization: A Hunting Partnership

This is where I zoom in to the individual level. My primary focus is to explain how this human-eagle relationship occurs by narrating my experience in trapping an eagle, training her, and ultimately hunting with her. Just as no man is an island, no *berkutchi* can do it on their own. To be a successful *berkutchi*, you must cultivate a complex web of relationships with the relations and friends around you. For me, it began with the elder whom I apprenticed myself to. But I soon realized the endeavor extended far beyond us. My informants are introduced to the reader as I begin to understand the social circles within circles that make human-eagle

relationships possible.

Trapping my eagle was the most physically demanding endeavor of all my experiences with Kazakhs. We had a small two week window in which to find suitable eagles on migration, and recruited the help of several male relatives who neglected their own herding duties in order to assist. Setting traps required travelling vast distances on horseback, the traps themselves required constant monitoring, and we visited family after family in order to ask for advice on eagle habits and whereabouts. Trapping is only possible through all the collective knowledge I explored in the previous chapter.

Once I had a new eagle in hand, the process of training her began. The entire village and assemblage of local herders was interested in the new eagle. They visited in droves to inspect her and give advice. It was a participatory activity for many. Physical characteristics of eagles are used as the basis for deducing all sorts of knowledge about their constitution before training commences. While I used offers of fresh meat to gain her trust, my mentor and his brothers fashioned all the eagle equipment I would need out of wood (perches) and leather (hoods). After three weeks of progressive socializing/training, my eagle was ready to be flown free. This is when I learned that another eagle, my mentor's, would be used to teach my eagle. They were flown together, and indeed, my eagle mimicked the pursuit flight of the experienced eagle and they caught a fox together! This whole process involves apprenticeships within apprenticeships.

All the while I learned to communicate with my eagle. I learned to read her state of mind and react accordingly. The differences between a content eagle vs an

uncomfortable eagle are subtle in the beginning, but its paramount that a *berkutchi* be attuned to every change in his eagle's mood. Moment-by-moment evaluation and communication are necessary. If done correctly, the eagle, in turn, starts to learn to read human body language and can anticipate your behavior. It is important that this process is intersubjective and equal. To try to 'force' an eagle to do what you want, or to let an eagle 'bully' you into giving it what it wants, is a recipe for a failed relationship. It is precisely the reason Kazakhs believe not everyone can be an eagle hunter. This chapter will introduce visual examples of eagle body language, common human body language towards eagles, and photos of the material culture of eagles.

The fact that the relationship with an eagle is the most valued by a *berkutchi*, and the intersubjectivity required on both the part of the eagle and human to make it possible, speaks to the similarity of the minds of the beings involved. In the West, what was once laughingly referred to as anthropomorphism is now mainstream science. Many qualities are not exclusive to humans and extend to animal beings, this includes empathy, language, altruism, self-awareness and mental time travel. (Smuts 2001) There are convincing reports of proto-spirituality and grief in animals. (Hurn 2012) Humans do not even have a monopoly on morality, a complex trait that has shown itself in many species. (Bekoff 2009) An acknowledgement of these traits, long known by Kazakhs but recently addressed in the literature, helps inform how a true relationship with an eagle born in a mountain eyrie and raised by its eagle parents is indeed possible.

Going back further, when animal psychologists look to explain the evolution of a complex brain, they first look at the social lives of that species. The complexity of social life frequently gives rise to intelligence. Eagles aren't particularly social, but



the other factor psychologists look at is hunting behavior. Hunting and foraging can cultivate exploratory and curious tendencies, as well as engagement with novel objects. (Godfrey-Smith 2016: 69) From the eagle's perspective, hunting with a *berkutchi* is a novel way to hunt. A biologist would argue that the way eagles have evolved over millions of years to hunt small animals on the steppe has allowed for a curiousness and novelty in their psyche that opens them up to the possibility of a human hunting partner. Another line of thought is that "a large nervous system evolves in order to deal with coordination of the body, but the result is so much neural complexity, that eventually other capacities evolve as by-products." (Godfrey-Smith 2016:72) Coordinating a two meter wingspan and the propulsion required of flight, to say nothing of the speeds and G-forces that an eagle is required to navigate when diving to catch prey, would require an extremely complex nervous system, and potentially emergent properties of intelligence as a result. This is stated to demonstrate the way that science and ethno-ornithology can merge to better understand such unknowable things as, "What does an eagle think?"

As winter progressed, hunting with my eagle gained a lot of dimension and complexity. There is a lot of strategy required in showing an eagle a fox that it is capable of catching. This chapter further aims to break down the logistics of orchestrating these incredible flights across mountain and sky. Although the purpose of these hunts was to secure a fox pelt, a less tangible reward that I experienced was the endless variety of flight styles and dramatic aerial maneuvers by the eagle. Many a time I sat open-mouthed on my horse, in awe at the acrobatics that played out before me. After the pursuit, the trust that my eagle displayed in either flying back to me after a miss, or allowing me to take the dead

fox if successful, was one of the most rewarding aspects of it all. My aim to is deduce for the reader how my Kazakh informants taught me to cultivate a relationship with eagle, and the unexpected risks and benefits therein.

### **Chapter Three – Learning, Apprenticeship and Communication among Humans, Animals, and Between Them**

In the previous chapter, my goal was to explain “how hunting in partnership with an eagle works” – the nuts and bolts, the mechanics of it. Here, I want to explore the why of it. Namely, why Kazakh notions of learning and apprenticeship, and what we theorize about apprenticeship as anthropologists, lends itself to explaining the human-animal relationships Kazakh engage in. The skill of eagle hunting has many different facets, including bodily skill. Touch is important for Kazakhs; with eagles, with herd animals, with babies, with craft.

In the process of training an eagle, there are many levels of apprenticeship. I am apprenticing myself to both my mentor and my eagle. The eagle, in turn, learns from both myself, and the experienced eagle whom she is paired with during early hunts. My learning process is shared with many others. Very young children will watch me socialize the eagle and mimic my behavior. I might ask them to do simple tasks such as to help me prepare the eagle’s food or to touch the eagle.

Usually, it is only men whose children are grown and self-sufficient who are dedicated *berkutchi*. However, old men too infirm to fly eagles, young boys too busy with school to fly eagles, and men with too many herding responsibilities to

fly eagles, were a constant companion on our hunts. It was their job to find and flush the foxes. Their engagement with the hunt is part of their learning process for when they do become *berkutchi*, or perhaps in the case with the old men, a way to reconnect with the hunt.

Women were important to the hunt, undoubtedly. Over the season I learned about specialized eagle equipment that women would sew for us – ingenious ideas that I had never encountered during my experiences with western falconry. When I rode to the house at the hunt's end, too sore, cold and exhausted to move, they would guide our horses to the stable and prepare tea and food. All the eagle hunter's wives whom I encountered were capable of caring for eagles when needed. Gender is an interesting topic when looking at Kazakhs and eagles. Kazakhs only choose female eagles to hunt in partnership with, and yet the vast majority (all the *berkutchi* I encountered) are men. Many *berkutchi* I spoke with referred to their eagles as their "other wives" or mentioned they cared for them "more than my wife". Here, eagles allow Kazakh men to have relationships with female beings in a way fundamentally different to, and in a way that transcends, the relationships they have with Kazakh women. However, the womanhood of the eagle is in no way diminished, even as the *berkutchi* extols the hunting prowess of his eagle, something that could never be said about a Kazakh wife. In a society where there are strict gender norms and roles, it is very interesting that eagles are allowed to transgress them, and are celebrated for it.

Most learning with Kazakhs is experiential. An opportunity is given, and after observation, a task is attempted. There is little in the way of exposition beforehand. Children developing skills in herding goat and sheep, or breaking

horses, accompany older siblings until they try on their own. There was no theory on eagles I was meant to know before I began – errors were pointed out to me as I made them, but I had the freedom of trial and error, and accepted the responsibility of getting the best individual response from my own individual eagle. The intersubjectivity between eagle and human, and the individualism of both, was widely acknowledged. Apprenticeship worked from inferring answers to my own situation by observing others, but there was no set of rules to follow in any work with animals.

Even when hunting, no animal was taught specifically what to do. The Kazakh hunter makes sure he can communicate effectively with his eagle, horse and dog, but then waits for the opportunities to arise where they can work together in a hunt. Successive successful hunts deepen relationships. All this learning is non-verbal, often bodily, and rather than directing an animal to task, the desired task is simply made the easiest path and is positively reinforced.

#### **Chapter Four - The Continuum from the Wild to the Domesticated**

Anthropology, since at least Franz Boas, has striven to understand the relationship between nature and culture. After all, humans have been thinking about animals since the advent of known history – 30,000 year old animal cave paintings which depict predation, like lions pursuing buffalo, speak to the meaning we give animals. (Bodio 2014). ‘Domestic’ and ‘wild’ are words fraught with meaning and multiple definitions. It is important to unpack its meaning in older works of anthropology, in newer works of anthropology that challenge human exceptionalism, and in

science. This chapter deals with the importance of such words, and the challenge in classifying animals this way, by their tolerance of humans.

I reject the older anthropological definition of 'domestication', namely, that domestication is an example of control of objects; a form of exploitation and domination. (Ducos 1989, Ingold 1987) I have found no evidence that suggests that Kazakhs view the animals they live and interact with in this manner. This emphatically does not describe the Kazakhs' relationship with eagles. *Berkutchi* see eagles as belonging to nature. There is a shift anthropologically of moving the focus away from static definitions which focus on human manipulation and control of other organisms. Instead the shift is towards what is defined as "human action and alteration of ecologies impacting and shaping the behavior and physiology of the species in and around the humans. This results not in traditional domestic species, but species that are being directly shaped by processes ("domesticatory practices") resulting from human action. (Fuentes 2007: 124). I think it is important to "decenter the human" even as we talk about domestication.

Eventually eagles they will be returned to nature, perhaps sooner than the *berkutchi* intends. Riding horses and herding livestock requires a mutual understanding rather than pure domination. A culturally and phenomenologically informed perception of animals equals a better coexistence.

Newer works in anthropology are starting to acknowledge this shortcoming and describe domestication as simply the outcome of a series of complex relationships between humans and animals. (Cassidy 2007, Bekoff 2009, Tidemann and Gosler

2010, Fijn 2011, Willerslev *et al* 2014) They state that the animals are actors themselves. More often than not, that domestication is a form of symbiosis, a form of co- domestication with mutual benefits. As there is a benefit to the animals (safety from predators for example, safety from starvation) it can be argued the animals themselves take an active role in influencing the relationship.

However, domestication, in the scientific sense, requires captive-breeding. It requires having absolute control over which individuals in a population are allowed to breed and usually results in animals that are genetically and behaviorally distinct from their 'wild' counterparts. (Clutton-Brock 1999)

Although I intend to explore this as it relates to all animals Kazakh herders interact with, I am looking particularly close at eagles. While it cannot be claimed that eagles are domesticated in the scientific sense (no captive-breeding occurs) – in a cultural sense – these eagles *are* domesticated, even if only temporarily. The eagles live in the home, they interact willfully with humans, and can even learn to seek out human interaction. An eagle freshly pulled from the trap is nothing like the eagle that has become a hunting partner. With humans a trained eagle hunts cooperatively, shares food, and exists alongside them. A human fills nearly all the roles that its parents, siblings, and prospective mate would. Eagles inhabit this liminal space on the continuum from wild to domestic and can freely travel about it. An eagle can potentially inhabit both ends multiple times in its life.

Kazakhs uniquely treat eagles as persons (bringing them inside the home and singing to them, for example). In Japan, monkeys are the only animals addressed as “san”, the adult human address, and referred to as “humans minus three

pieces of hair”. There is an aspect of social inclusion of monkeys in Japanese culture that is unique from all other animals. (Fuentes 2007: 130) Cultures make exceptions to include certain other animals as humans.

This ability of eagles to travel along the space of ‘wild’ and ‘domestic’ affects language. As a parallel example, among the Eveny, “although they are perfectly aware that they (wild and domestic reindeer) belong to the same species, there is no single species name that encompasses *buyun* (wild reindeer) and *oron* (domesticated reindeer). The distinction is not morphological but behavioural, in terms of their different potential for sustaining a relationship with humans.” (Willerslev *et al* 2014: 17) To Kazakhs, however, an eagle whether ‘wild’ or tamed, whether living freely in the Altai mountains or within a *berkutchi’s* home, is referred to as *berkut*. There isn’t a way to distinguish, with a single word, where an individual eagle sits on the spectrum from ‘wild’ to ‘domestic’. An exception here would be the word *kiran* which denotes a *berkutchi’s* eagle that has proven itself to be an exceptional hunter, courageous and often successful. That is reserved for individual eagles that have earned that title, and were that eagle to be released to live on its own again, it would still be referred to as *kiran* if it were seen again. That distinction can only be discovered through hunting with a *berkutchi* but it is not contingent on staying in the domestic sphere.

So then, what is ‘wild’? To a Kazakh, wild merely means an animal that will not tolerate the presence of humans. Is it fair for me to refer to both an unbroken horse and an eagle that has fledged from a nest and living independently as ‘wild’? It is fair to refer to things such as ‘the wild’ and ‘wilderness’ when Kazakhs do not

have a concept of this? To them, everywhere in the Altai is a potential place to make a living. There is nowhere humans can't or shouldn't go – some places are harder to herd than others. If communities of eagles and humans share the same steppes and mountains, can it really be “the wild” to one group and “home” to the other? Words matter, and it is my intent to delve deeply into this as humans exert a transformative effect on the animals around them, through moving them along the wild/domestic spectrum.

The anthropological work that has been done with the reindeer peoples of Siberia and northern Europe and Asia is among the most useful in reaching a better understanding of these concepts. There are few other relationships that can match the uniqueness of the human-eagle relationship, but one of them is the human-reindeer relationship.

What do these relationships say about the transformation from hunting to pastoralism? Through the taming of reindeer 2,000-3000 years ago, the ability to ride these reindeer dramatically altered Siberian peoples' ability to move and ride through North Asia. Their wild cousins were still hunted, and many 'domesticated' reindeer still required frequent human contact to maintain their domesticity. Reindeer can move on the spectrum from 'wild' to 'domestic' like eagles.

Ingold writes extensively about how these hunters use gained trust to hunt wild reindeer, elk or moose. If all procedures are correctly followed, the animal willingly gives itself to the hunter, and the act of killing is itself quite nonviolent. Ingold then disparages herders as using domination, pain and force with livestock, and equating herd animals to slaves. (Ingold 1987).



I don't find these concepts to fit with my fieldwork and the conversations I had with my Kazakh informants. However Willerslev *et al* has refined these ideas of trust in hunting and produced a very compelling analysis that I see as applicable to Kazakh pastoralists. (Willerslev *et al* 2014). Erotic imagery, songs, clothing, dreams and not openly speaking of killing or an intention to hunt, are still important and a way in which reindeer herders like the Eveny see themselves as building up trust for a successful hunt. An animal giving itself to the herder in a non-violent death is the ideal, but the day-to-day reality of hunting in Siberia changes this, and there is another set of rules that the hunters tacitly follow to still be spiritually correct and obtain meat – the hunter's 'double bind'. In a place where animal economies are highly moralized, the ritual sacrifice of a herd animal can occur in the manner of an idealized hunt, that is bloodless and without struggle. The sacrifice is equivalent to the hunt in key respects, like singing, clothing and prayers which appeal to success and luck. (Willerslev *et al* 2014: 9-12)

Kazakhs too face these dilemmas. The highly ritualized sacrifice of a horse and several other herd animals each autumn to sustain the family for the winter, is done in a way that would be ideal in a hunt, but too often impractical. For example, singing a prayer shortly before the death of the animal is important, but the distances an eagle flies to catch a fox, and the time it takes the *berkutchi* to arrive to the fox on horseback precludes a prayer.

Even more interesting is the significance that emerges when a reindeer becomes a personal companion to a Eveny person. This is a consecrated reindeer called a *kuijai*. Each person has one, and each *kuijai* has extraordinary features. It is the most magic-

imbued reindeer and the one with the most intense personal relationship with a human. It is like an animal double that offers protection. It takes misfortunes thrown at its person, and when it dies, it has saved its person from death. This parallels the wild animal in an ideal hunt that gives itself up so that humans may live. (Willerslev *et al* 2014: 17) Just as a *berkutchi* speaks of how he loves his eagle like his wife, or even moreso, the Eveny also cultivate these intense relationships with once-wild animals.

In response to Ingold, the *kuijai* is held as an example of 'hyper-domestication'. Domination is absent from the relationship. The primal reindeer that first made contact with humans sought domestication themselves, offering humans a social contract of sorts. The trust between a herder and his *kuijai* (indeed an eagle and his *berkutchi*) is far more sure than a hunter and his prey. "Rather than *from* trust to domination, the progression is from unpredictability to reliability, from evasiveness *to* trust." (Willerslev *et al* 2014: 19).

## Chapter 5 – Landscape, Seasonality and Nomadism

To borrow a line from Donna Haraway and apply it here: For Kazakhs the eagle is an animal for whom people tell stories and around how they measure change itself in the world. Eagles are a marker around which story is told. (Haraway 2007) It is important to keep in mind, that although we have thoroughly considered the Kazakh herders, their eagle companions, and the culture that overlays them both, and now turn to the other 'character' to this multi-species ethnography, the landscape, that the eagle is still central. And of course the

environment that humans and eagles inhabit is critically important to understanding both communities.

The perspectivism that we've addressed previously adds to our consideration of the landscape. Take the example of Yukaghirs, who hunt elk dressed as an elk, therefore crossing species boundaries. The hunter sees the elk as both woman/wife and daughter. Persons can be many forms, such as humans, rivers, spirits, forests and animals. They have a 'perspectival ontology' in which all creatures – humans and non-humans – see themselves as humans and everyone else as prey and predators. Mountains, rivers and forests are included entities here. (Willerslev 2009)

Both eagles and humans have strong seasonality in their lives and movements. Eagles migrate annually based on instinct and food availability, and Kazakh herders occupy different areas based on tradition and resources. To both, the Kazakh proverb "Movement is life" applies. (Shayakhmetov 2007) Most golden eagles in the region spend the summer in Siberia, where prey animals are abundant. When fall arrives, these eagles migrate to spend the winter in northern China, where the weather is far less harsh. The midpoint between these two places is the Mongolian Altai, and where eagle hunters lie out and wait in October to trap the eagles passing through.

Eagles will return to precisely the same nest site in Siberia, and precisely the same territory they claimed in China, year after year. Their offspring, won't stray far from those places. Generation after generation, 'families' of eagles will make the same journey. I find a profound parallel there with Kazakh families. My mentor and his

extended family visit the exact same summer and winter spots (and sometimes additional fall and spring spots). The area was claimed by his great-grandfather, but each son varies the route slightly to stake out his own place. Overall, generation after generation makes the same annual journey. There is a possibility of a profound parallel; that related groups of eagles and Kazakhs have interacted with each other over millennia.

Caroline Humphrey, who writes of how horse brands in Mongolia can denote the landscape and its human history, was my inspiration for this tantalizing train of thought. This chapter aims to explore the scientific and cultural ramifications of the landscape on its human and animal inhabitants. (Humphrey 1974)

Taking it down to the individual level, the land affects everything, and everything leaves its mark. To be a successful eagle hunter you must ‘read the white book’ of the steppe, and discern the slightest subtleties in animal tracks. (Cherkassov 2012) Without that skill, you simply cannot present your eagle with anything to catch. The land is too vast to rely on randomness.

How do Kazakhs themselves define and think about landscape? The Kazakh word for nature, *baynur*, conveys an idea of landscape. As my primary informant told me, it includes “the mountains, the steppe, the rivers, the eagles, the argali, the snow leopards, the hares, and all the spirits, both benign and evil.” *Baynur* is, simply put, the land and all its inhabitants, both seen and unseen. This word is similar to the Mongolian word for nature, *baigal*, which includes culture. The Western tendency to view the land as a simple, unchanging amalgamation of rock,

plants and water doesn't have a place in the Central Asian concept of the land. To Kazakhs, you are a fundamental part of the land, your daily actions can affect its prosperity, and as a hunter you must strive to maintain good relations with the neighboring communities of beings and spirits.

I came to realize how naïve my viewpoint of the land there was. I saw it as a desolate, remote and dangerous wilderness. No Kazakh viewed their home like that, of course. Every valley, every mountain, every formation had a name. My great fear during my fieldwork was getting lost – and such a prospect was inconceivable to my Kazakh informants. They always knew where they were, and even if they didn't, they did not fear the land as I at first did. Their relatives were everywhere – every mountain had a home someone on it that they were welcome within. Not only was the whole landscape accessible, but it was full of vibrant humanity and news that spread like wildfire.

I came to understand the land as a series of concentric circles based on their animals. Dogs stay near to the home, sheep and goats might wander up to a mile, yaks might be expected to live within a five mile radius, and horses, especially independent, within twenty miles. Dependent on which animal you concerned yourself with, the landscape that you inhabited, your temporary world, grew and shrank. The way that humans and animals altered the landscape wasn't just physical, but psychological as well.

Food is one of the most important elements of the landscape and seasonality among Kazakh people. From April to October, during the lactation period of

livestock, milk products dominate the diet. In winter preserved meat serves as the main source of nutrition for Kazakh pastoralists. Horse meat is the most prestigious and coveted, particularly in winter. Indeed, scientific investigations have shown that horse meat contains more carbohydrates, and fat that is far more easily digested, than other meats. (Shakhanova 1989: 112)

This also applies to eagles. I recall a day where an eagle flew weakly after foxes. When we returned home that eagle was fed *kazy*, traditional horse sausage, as a method to boost its strength. In summer, camel milk takes the place of horse meat as the most coveted. Similarly, one pint contains more calories than mare or cow's milk, and all the daily vitamins and minerals one needs. (Shakhanova 1989: 113).

Of course, communal eating is the primary method of forming and maintaining social relations among Kazakh pastoralists. Complex ritual meals are attached to births, weddings and deaths, the milestones of human life. (Shakhanova 1989: 115) Further, there are ritual meals when a *berkutchi* traps an eagle, when he catches his first fox with the eagle, and in the summer if the eagle is released. An eagle's life milestones also have important food attachments. Eagles are brought into Kazakh food rituals, part of their journey to the 'domestic' from the 'wild'.

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All in all, the practice of hunting in partnership with eagles can give us insights into the nature of learning, wildness, and human-animal relationships. It involves an intense apprenticeship of embodied skill, an individual's willingness to reconcile the wild with their own humanity, and the ability to build trust into a meaningful relationship with a creature that has no commonality of understanding. It is

incredible, and it brings out the best in us.

## Chapter One

### Communities of Golden Eagles and Nomadic Kazakh Pastoralists in the Mongolian Altai: A Natural History

*From the ancient days when our hunter-gatherer ancestors first brushed color on cave walls, leaving glorious animal images behind, or when the first village settlers entered into an unspoken contract of domestication with goats and sheep, our lives have been entwined.*

*– Barbara King*

The focus of this PhD is the nomadic, pastoralist Kazakh people of the Bayan-Olgii aimag in Mongolia and their unique, ingenuous, multi-faceted and deeply cultural relationship with the golden eagle (*Aquila Chrysaetos*). This area, without arable land or agriculture, is a cradle of domestication and human-animal relationships.

Archeological evidence suggests that both dogs and horses were first domesticated in this region of Central Asia, and falconry, a global phenomenon with several thousand years of documented history, likely had its origins among Turkic peoples and golden eagles. (Bodio 2014) The Kazakh people of Bayan-Olgii primarily rely on their livestock, both wool and meat, for their livelihood. This income is supplemented by the hunting of furbearing animals. While both gun and trap are limited in their ability to procure pelts, trained golden eagles are a remarkably efficient means to this end. (Simakov 1998) However, the ability to hunt with an eagle requires great skill and strong character. As hunting in the Altai



Mountains is primarily the purview of older men, this is whom I spent the majority of my time with, and the demographic that my research will focus on.

I followed the dual lives of golden eagles and Kazakh men – from birth to death and where they briefly entwine. Golden eagles are not bred in captivity in Central Asia; each and every eagle that has a human hunting partner is first born on a mountain cliff and is taught to fly and hunt by her eagle parents. When she is captured by a Kazakh man, there is a process of mutual learning that takes place. An eagle cannot be dominated in the way of a dog, or broken in the way of a horse, she is a confident apex predator. It is only through positive reinforcement and true intersubjectivity can man and eagle become a successful hunting team.

### An Ancient Relationship

To add some context to the enduring nature of this relationship, Man has interacted with eagles since before he was Man. The Taung Child, a 2.2 million year old skull belonging to a 3-5 year old *Australopithecus africanus* and found in South Africa in 1924 is perhaps the most important in the history of human evolution. It marks the first evidence of early human bipedal walking and was the find that placed the origin of the human family tree in Africa. Even more interesting than how the Taung Child lived, was how it died. There are several large punctures in the skull. For decades the culprit was thought to have been a leopard. In 1995, anthropologist Lee Berger proposed that, rather, it was a large forest eagle that had killed the Taung Child. (Berger and McGraw 2007)

This initially caused an uproar in the anthropology community because the hunting behavior of crowned eagles (*Stephanoaetus coronatus*), the closest modern day homologue to the forest eagles of the Taung Child's day, was not well understood. It was not believed that an eagle could predate on something as large as the Taung Child (thought to weigh approximately 15 kgs). In 2006, anthropologist Scott McGraw examined prey remains from 16 crowned eagle nests and found wounds on dozens of primate skulls (including subtle scratches in the skulls' orbits from the eagle's beaks) that were identical to those of the Taung Child. Many of the primate remains found at the nest sites belonged to species that weighed near or exceeded 15 kgs. With this compelling evidence, it is now widely accepted among paleoanthropologists that a large eagle caused the death of the Taung Child. (Berger and McGraw 2007)

This is significant because the predators that stalked our ancestors inevitably shaped our evolution, and birds of prey may have been one of the most significant selective forces. Forest eagle predation may have contributed to selective pressure for the larger body mass and larger brains of early hominids. Further, pressure from forest eagles may have influenced our change from arboreal creatures to animals that walk the savannah. Simply put, we are who we are, because of eagles!

Fastforwarding to 130,000 years ago, remains of our Neanderthal cousins in Croatia have been found to have been adorned with bracelets and necklaces made from talons of the white-tailed sea eagle (*Haliaeetus albicilla*) strung together. The Tomb of the Eagles on Orkney, a 5,000 year old burial site where thirty humans and fourteen white-tailed sea eagles were entombed together, is another example

of ancient human-eagle significance. (Morin and Laroulandie 2012) Onward, eagles have been powerful symbols in a myriad of cultures. Harpy Eagles were gods to many tribes of Amazonia, golden eagles were the symbol of the Roman empire, and even in modern-day Kazakhstan a Golden Eagle is emblazoned against the sun on the national flag. Eagles are often symbols of power that inspire reverence across ages, continents and cultures. The hunting partnership that Kazakh pastoralists enjoy with their eagles in the Altai Mountains is one of the most complex, symbiotic, ingenious expressions of this trend.

### A Multi-Species Ethnography

The eagles in this proposed ethnography (like the horses, dogs, and livestock) are active subjects with the capacity to impact on relationships of humans. It is important to consider not only how anthropologists think about animals, but how anthropologists think their informants think about animals. Though we can never really know what it is like to be an eagle or another human being, we can make assumptions, and try to better understand things through shared embodied experiences. I aim to write a “multi-species ethnography” – an ethnography that considers the entirety of the lives of the humans and eagles involved in these Kazakh hunting communities, of both their individual and shared experiences. In reality humans exist within multispecies communities, and the existence and survival of these multiple species are interrelated. The embodied knowledge that arises when species meet and interact is uniquely insightful.

In recent years, the field of anthropology has experienced an animal turn, where the lives and experiences of non-human animals are considered, integrated with, and analyzed alongside humans. It is the recognition that animals are much more than property, and they can't be separated from humans. Anthropologist Barbara King explains it well, "Often defined as the comprehensive study of humankind, anthropology increasingly embraces the natural world. I lean towards what the anthropologist Eduardo Kohn has called 'an anthropology of life,' an embrace of elephants, bison, monkeys, crows, dogs, frogs and a thousand other species. Or, more precisely, it's an embrace of the intersection of the lives lived by these animals with the lives lived by human animals." (Kohn 2007: 3)

What precisely is different about a multi-species ethnography? The aim is to decenter the human, and to recognize that we are utterly entangled in non-humans, from the microscopic scale up to the global scale. In understanding a cultural way of life, it is a mistake to assume that the human must be dominant or even central – rather humans are a component in a vast multi-species community. The emphasis is on the subjectivity and agency of organisms whose lives are entangled with humans.

Donna Haraway, who has written definitive multi-species ethnographies, urges us to "Appreciate the foolishness of human exceptionalism." She continues, "then we know that becoming is always becoming with—in a contact zone where the outcome, where who is who in the world, is at stake." (2007:244) Anna Tsing's scholarship pushes readers to consider the variety of actors present in a multi-species ethnography, suggesting that "human nature is an interspecies relationship". (2012: 19)

Tsing charts the way that mushroom and human nature shifted historically and altered one another across histories. In this way, multi-species ethnographies can be interdisciplinary and bring together many different modes of inquiry. One can hardly consider the mushroom without microbiology or the eagle without biology. It is difficult to view the horse without archeology or the dog without evolutionary history. Many understudied organisms, like fungi, insects and bacteria, can be brought into anthropological conversations.

In these ethnographies, we also look at individual encounters between species, and relationships forged over time between individuals of different species. Being and sensing propel these interactions forward and create complex webs of behavior that show symbiotic (or otherwise) trends when viewed in the long term over a historical context. For example, anthropologist Celia Lowe considers how the H5N1 influenza virus, wild birds, domestic poultry and human communities swirl together in Indonesia to create a 'multi-species cloud' of narratives and material processes. (Lowe 2010)

In my view, this human-eagle relationship is the perfect vehicle for such an ethnography. Whereas dogs and horses may be overly familiar to us in our daily lives and experiences, the eagle is a sufficiently alien interaction to most people that it requires a deep analysis. In the process of making this strange become familiar, it would be hope that reader can recognize the wonderful strangeness in all the familiar animal interactions they have in their daily lives.

Historian Justin E.H Smith said "We tend to think about history as human history. Yet a suitably wide-focused perspective reveals that nothing in the course of

human affairs makes complete sense without some account of animal actors. History has, in fact, been a question of human-animal interaction all along.” (2014) The history of the Kazakh people in the Altai Mountains can not be examined without consideration given to eagles, and the many animals in their lives.

Anthropologist E.E. Evans-Pritchard famously argued that the social life of the cattle-herding Nuer of southern Sudan might best be summed up as “cherchez la vache” or “look for the cow”. (1940) The Altai Mountains are a place where the land is not arable, and no agriculture takes place. Every element of their livelihood must be sustained through relationships with animals, be they ‘wild’ or ‘domesticated’ or somewhere in between. Although horses and other livestock animals are integral to nomadic, pastoralist Kazakh society, in a way, you could argue it is all best summed up by the phrase, “look to the eagle”.

For a people primed to look to eagles, ornithologist Roger Troy Peterson summed up that importance, “Birds ... are sensitive indicators of the environment, a sort of ‘ecological litmus paper,’ ... (2008) The observation and recording of bird populations over time lead inevitably to environmental awareness and can signal impending changes.” Kazakhs in the Altai Mountains are hyperaware of the status of the community of eagles around them. Whether or not a Kazakh engages in hunting with an eagle, he is still looking for them while he herds, watching their habits, and taking note of their numbers and movements. This is because the health of the population of eagles is a prime indicator of the health of the landscape around them. When I first visited Bayan-Olgii aimag in 2004, I went hunting with an old Kazakh named Yntan. For the three days we hunted, we couldn’t find any foxes for his eagle to chase. While sitting on top of a mountain

Yntan despaired, “Too many people are trapping and shooting foxes to sell to China. The powerlines and roads came through my village, and so did the gunhunters and trappers, and now there are no more foxes. Because there are no foxes, there are no more eagles here. Without eagles, this place is like a dead place.”

### Historical Context

To gain historical context, we must ask - who are the Kazakhs? The Kazakhs are the ethnolinguistic descendants of Turkic peoples who occupied the Mongolian steppe before the formation of the Mongol Empire. The steppes of Central Asia have for millennia been home to upheavals in migrations, invasions, ethnic blending, intermarriage and cultural assimilation. Tribal affiliations and identities have been gained and lost, and have existed as part of unified confederations and also as distinct ethnopolitical structures. By the 15th century, dominant Turkic identities based on nomadic lifestyles and livestock economies began to emerge in the region: Uzbeks, Turkmen, Kyrgyz, Karakalpak and Kazakh to name prominent examples. (Diener 2009)

The early 18th century marked the zenith of the Kazakh Khanate, and by the 19th century Russia began expanding into Central Asia. Russian attempts to settle and assimilate the nomadic Kazakh tribes were met with resentment and sparked a national movement to preserve the Kazakh language and identity. It was to little effect, as hundreds of thousands of Russians poured into the region, and Russian

colonial rule decimated the Kazakhs, culminating in the Central Asian Revolt in 1916. The soviets were ultimately victorious and in 1920, present-day Kazakhstan became an autonomous republic within the USSR. The late 1920s and 1930s brought some of the darkest decades to the Kazakh people – collectivization and purges of the elite brought about famine and mass emigration. The Kazakh population declined by 38% in the 1930s, some 1.2 million Kazakhs died of starvation alone. (Olcott 1986)

Hunting with eagles was seen as bourgeois (as was the sport of falconry among the Russian elite) and so soviet authorities stopped all keeping of eagles and severed all connections to eagle hunting. Within present-day Kazakhstan, eagle hunting as a tradition nearly died in the 1930s. In 1936 Kazakhstan became a Soviet Republic, and millions of prisoners or undesirable ethnic groups were exiled to the region from Russia, which rendered Kazakhs a minority within Kazakhstan. (Shayakhmetov 2007). In 1953 Nikita Khrushchev began his 'Virgin Lands' program which sought to turn the vast pasture lands of Kazakhstan into a hub of grain production. Though the program itself had mixed results it served as the final nail in the coffin of the traditional nomadic, pastoralist Kazakh lifestyle. Agriculture was now fully integrated into Kazakhstan, and was the source of employment for the majority of ethnic Kazakhs. In 1991, Kazakhstan gained its independence, and though it moved towards oil production as a major source of its GDP, there was no returning to the traditional way of life for most Kazakhs. (Diener 2009)

My field site of course is not in Kazakhstan proper, but just across the border in western Mongolia. The Altai Mountains represent an area where four states meet:



Kazakhstan, Russia, China and Mongolia – Kazakhs have long lived throughout the Altai Mountains in each of these countries (see Figure 1). When Russian colonialism and later Stalinism threatened Kazakh lives, hundreds of thousands of Kazakhs fled, and many settled in western Mongolia. They then became isolated from their ethnic kin as the modern state system hardened borders and nationalized even the most remote regions. (Diener 2009) In western Mongolia in the 19th and 20th century, eagle hunting was not prosecuted, and so the tradition was passed down without interference. Neither was nomadism looked down upon nor settlement imposed, and the traditional, pastoralist way of life continued in western Mongolia. Hunting with eagle is not mutually exclusive with nomadism/pastoralism. To be a *berkutchi* is to be a nomad and pastoralist. One can not live an urban life in Central Asia and also venture into the mountains to look for foxes – the skills of nomadic pastoralism directly foster the skills required to be a successful *berkutchi*. Chapter four examines this phenomenon in detail.



Figure 1 – The ‘Four Corners’ area of Central Asia

The only *aimag* of Mongolia's seventeen *aimags* to hold a majority Kazakh population and have eaglehunting is Bayan-Olgii. As of the year 2000, there were some 91,000 citizens in Bayan-Olgii, 81,000 of which were ethnic Kazakhs. (Diener 2009) Of these, about half enjoy a traditional nomadic pastoralist way of life. Numbers are difficult to ascertain, but some 300 Kazakhs keep eagles in Bayan-Olgii. In the Altai of Russia and Kazakhstan, there are perhaps only a dozen people who keep eagles, and there they struggle to reconnect with a tradition that was long stamped out, and there are very few, if any, mentors for those who aspire to be eagle hunters to learn from. In the Chinese Altai, the Kazakhs have salvaged their traditional way of life, but the Chinese government is reluctant to issue visas for those wishing to study minority cultures. It was not accessible to me. Thus, I came to a remote village in Bayan-Olgii to write a multi-species ethnography.

### Eagle Context

We must also ask, who are the golden eagles? Golden eagles are a large, powerful raptor, or bird of prey. They are a member of the genus *Aquila*, one of several allied general known collectively as 'booted' eagles. This term derives from their identifying feature of feathering on their legs, right down to their toes. Hawks, falcons and most other eagles have scaled legs. They are named for their golden colored nape feathers, the rest of the plumage being shades of brown. They are among the largest eagles, with a typical body wingspan of 2 meters and a mass between 2.7 and 6.3 kilos. They are exceptionally successful predators, having wide circumpolar distribution, and inhabiting mountains regions, tundra, taiga,

steppe, prairie, and deserts. They specialize in hunting small mammals such as hares, foxes and roe deer. Their eyesight is seven times sharper than a human's, and they hunt by soaring high above the landscape, or perching on a mountain top, and scanning the ground below for movement. They possess eight razor sharp talons, which they use to kill prey by instinctively driving the talons into the head of a small mammal (they do not use their beak to kill, nor speed in a stoop, like falcons). Golden eagles are typically serially monogamous, with females being about a third bigger than males (to allow for better incubation of eggs).

In captivity, golden eagles are known to live up to 55 years, and breed annually. Typically one or two young are fledged, and sexual maturity is reached around 3-5 years of age. Golden eagles in temperate climates do not migrate, while those nesting in higher latitudes and more extreme environments migrate south each autumn. They are among the most intelligent of birds of prey, and can discover innovate ways to hunt. In the Western United States, there are some 20,000 pairs of breeding Golden Eagles. However, it is not known how many pairs are in Russia, Central Asia and China, as there have never been studies to determine this. A rough estimate, based on land mass, might be 10,000 pairs. (Watson 2011)

The stories we tell ourselves about animals absolutely colors how we see them. A fascinating example occurred in the arctic regarding photos of wild polar bears appearing to play with chained huskies that belonged to a local Manitoba man. National Geographic released a series of photos depicting just that in article entitled "Animals at Play" in 1994. The reader reaction was furious – people were certain that the play was merely a prelude to a kill, that these chained dogs were

cruelly put up as bait in the path of a bear who could only kill them. Thirteen years later, in 2007, the photos resurfaced on the internet and this time the reaction was the opposite – people loved the notion of a polar bear perhaps playing with a dog. The photos had not changed, they were identical, so why did the public perception change? (Krulwich 2014: 1)

Jon Mooallem asserts that in 1994, there were many documentaries depicting polar bears as man-eaters that were in constant conflict with residents of arctic settlements. They were scary beasts that were not to be trifled with. However, by 2007, climate change had ingrained itself as an issue in the national psyche. Polar bears now were depicted as ragged and starving on ice floes, endlessly searching for unmelted ground on which to hunt. Predators always elicit strong emotion from the humans they find themselves in cohabitation with, and the pendulum can swing many different ways.

As Mooallem puts it, "Emotion matters. Imagination matters, and we are free to spin whatever stories we want about them." The wild animals, he says, "always have no comment." (Krulwich 2014)

It is rare to see such a stark flip in such a short period of time, but this is essentially the difference in the perception of golden eagles in the United States and in Central Asia. In the 19th and 20th centuries in the United States golden eagles were seen as direct competition for cattle and sheep ranchers. People became convinced that eagles, along with wolves, were largely responsible for wholesale deaths of lambs and calves. A narrative emerged that eagles were killers, and

would kill just for the pleasure in it, beyond what they could eat or carry away. The US government became involved, and in an effort to bolster livestock production, offered bounties for eagle carcasses. Shooting eagles from helicopters became a favored past time of many sportsmen. By the 1970s, golden eagles were in serious decline across the continent. (Watson 2011, Bodio 2014) Consider that turn of events, and then consider the Kazakh people.

Kazakh livelihood, in Bayan-Olgii and for centuries in present-day Kazakhstan, has relied on livestock. Horses and camels are used for transport, meat and dairy, but goats and sheep are the staple of the Kazakh herder. They are the most numerous animals, and their meat and wool makes up the primary source of income for most herding families. The breeds (the Fat-tailed Sheep and Cashmere Goat) are hardy but small, and their offspring is occasionally predated on by golden eagles. However, Kazakhs have never viewed eagles as a threat to their livelihood. (Bodio 2004)

I asked my informants about this directly, inquiring how it makes them feel when an eagle kills a lamb. I was told by a *berkutchi's* son that “a good herder knows when his animals are near to giving birth, and never leaves them alone when the time is near. An eagle will never attack when humans are nearby” and further that “the eagle is like me. It must hunt to feed his family. Of course it will eat the easy meal (referring to a lamb) if it available. It is my job to make sure it is not available to the eagle”. My translator, Jagga Baatar, who grew up as a herder among a herding family, once wondered aloud to me, “I wonder if a man seeing an eagle kill

his lamb is what inspired him to try to train it". Whomever the very first *berkutchi* was is often a subject of idle speculation among my informants.

Regardless, the occasional lamb loss to eagles is accepted, and eagles are viewed as free-living communities of beings that every good Kazakh man must try to understand. I suspect part of the difference in how eagles are perceived is due to religious tradition. In the United States, especially in the days of westward expansion, the Judeo-Christian worldview of resources (animals included) being placed on earth by God for humans to consume freely and with abandon, prevailed. That mindset is how the passenger pigeon, which once numbered in the hundreds of millions, was driven to extinction, and how the buffalo nearly followed suit. We can only dream of what the vast flocks and herds once looked like. However, in Kazakh culture, animism and shamanism color every interaction with nature. Although large numbers of Kazakhs have identified as Islamic since the 14th century, the traditional animism which informs their understanding of the natural world, has never left. (Bodio 2014 and Diener 2009)

To take this further, the Kazakhs don't view the primary characteristic of an eagle as the fact that it is a predator (as a 19th century American might), but rather, that it is a being. A being that has its own life, its own family, its own ancestors, and its own worthy purpose. A being whose life may briefly entwine with a human's life. Humans and eagles are equally subjected to the will of Allah, and in many ways, lead similar lives.

## Parallels in Human and Eagle Lives

A Kazakh proverb reads “Movement is life” (Shayakhmetov 2007). Indeed, a Kazakh pastoralist’s life is predicated on movement, and his ability to care for his herd by leading them to different areas and utilizing different landscapes around him for different purposes. Piers Vitebsky writes of this same sentiment among Reindeer herders in Russia, “For the Eveny, the long, backward-turning gaze is not comforting, but dangerous. And extreme attachment to one place is suitable only for the dead: a living nomad must keep moving.” (Vitebsky 2005: 12)

Among the informants with whom I lived, they had four stopping places. This proved to be typical among Kazakhs in Daluun *soum*, my field site. Daluun is a southern county in Bayan-Olgii *aimag*, a mere 20 kilometers from the Chinese border. I first arrived in the autumn place, where the family lived in yurts on the low steppe. By November, they had moved to the winter place, which was in adobe style homes that had been previously built in the mountains. In April, once the snows subside, the family moves to the spring place and puts the yurts up again. This is a move to higher elevation, in a high altitude valley where glacial melt provides a robust water source. In August, the family moves back to the autumn place and the low elevation steppe. Each stopping place provides superior grazing for the livestock for that time of year – grazing is the primary consideration for each stop. My informants had stayed in the same stopping places their entire lives, gifted to them from their fathers and grandfathers. Extended family choose spots nearby (so livestock may be pooled together when extreme conditions necessitate)

and thus when traversing the landscape in Bayan-Olgii one often travels through extended family lines as they travel through valleys and mountains.

As golden eagles in the area are migratory, they could also adopt the proverb “Movement Is life”. Jaken, the son of Kukan, the *berkutchi* whom I apprenticed myself under, once explained it to me. He formed his hands into the shape of a funnel. The wide mouth of the funnel he called ‘China’ and the narrow end ‘Daluun’. He reversed the shape and, this time, reiterated the narrow end was ‘Daluun’ but pointing at the wide end said ‘Russia’. Eagles spend their summers in Siberia and their winters in Xinjiang, China. To get from one place to the other, they pass through a relatively narrow area in Mongolia, a bottleneck of sorts before they fan out to claim territories on their summer and winter places. Like generations of Kazakh families, an eagle is most likely to return to the same specific area each year. Kukan made it clear to me that his father and grandfather grazed their herds on the exact same slice of steppe and mountainside he does. Similarly, an eagle’s summer place is usually near to where it was hatched. During an eagle’s first winter, it often follows its parents and attempts to beg for food. Where its parents stop for winter is usually near to where it will become fully independent and return to in the future. Lineages of eagles occupy the same places, like lineages of Kazakh families.

Vitebsky writes of the meaning imbued in a reindeer that has lived with men, “When you give away a domesticated reindeer, it does not forget its past association with you and can act as a link between its two owners”. (Vitebsky 2005: 278) I think Kazakhs conceive of this on a longer scale. Although an eagle that was a hunting partner,



when released to live on its own, is completely independent and returns to its migration, Kazakhs believe it still retains a connection to its owner. A small white cloth is attached to the underside of one wing as an identifier. Many times I saw a Kazakh man excitedly come up to say he'd spotted an old hunting partner cruising on the wind, and was happy to see that she was doing well. That meaning is passed to her offspring, and although the offspring of a previous hunting partner will of course not recognize humans, it will carry the physical characteristics of its mother. An eagle that was long kept or beloved will carry certain desirable physical characteristics, and young eagles that are trapped with them, are thought to be descendants of great hunting eagles. (Humphrey 1974)

Even when an eagle is not directly in the "possession" of a Kazakh hunter, their lives can be entwined. Just as I aim in this multi-species ethnography to explore the lives of Kazakhs outside the realm of hunting with eagle, I aim to explore the lives of eagles outside hunting with a Kazakh.

### Entwined Lives

To fully understand the interactions between eagles and humans in the Altai, I feel it is important to understand the entirety of an eagle's life. An eagle has a long life (potentially spanning several decades) that can be inextricably linked to humanity, though its direct interaction with humans may only make up a small very portion of its lifespan. As an apex predator, perched at the top of the food chain, eagles are long-lived and slow-reproducing. It typically takes 4-5 years for an eagle to reach

sexual maturity and a pair usually raises one eaglet to fledging age each year. Though an eagle might lay three eggs, typically two hatch. Unless there is an unusual abundance of food, most commonly a 'cain and abel' scenario ensues. This means that one eaglet – usually the bigger, more aggressive eaglet – begins to bully the smaller one. This can mean pecking, standing on, or most importantly, taking food from the other eaglet. The parents do little to intervene and within a few weeks the weaker of the two is usually dead with the surviving eaglet monopolizing the resources provided by the parents. This is the first battle of survival that an eaglet faces. (Watson 2011)

When an eagle fledges, a few important things happen. First, the parents assist their offspring in learning to hunt. This progresses from bringing crippled prey animals to the young eagle to kill, to cooperatively hunting fully capable prey species on the steppe. Within a few weeks, however, the parents begin to drive the young eagle away from the nest – if it returns they push it away. Finally, with the coming colder weather, the urge to migrate south overwhelms the young eagle and it begins its independent life looking to establish a territory in warmer lands. This is the second battle of survival for an eagle. The mortality rate of eagles on their first migration is very high – 70-90%. This number decreases every year by about 20% until sexual maturity. Yet if an eagle can reach this milestone, they can be expected to live 30-50 years. (Watson 2011)

Kazakhs prefer to trap eagles after they've fledged but before they've become mature – this means an eagle trapped on its first, second, third, or even fourth migration. The exact age is a matter of preference. I was told by Kukan, my

*berkutchi* mentor, that “nothing teaches an eagle better than its parents and the steppe” meaning that a first year eagle was too young as it had not yet learned enough. His preference was second or third year eagles. Once an eagle reaches its fourth year, though it can still be trained for falconry, it is a little more set in its ways and the process may be prolonged.

After it is, an eagle may be kept between one and ten years. No matter what, a Kazakh will give an eagle at least one year to reach its potential. Even if they are struggling as a hunting team, it is seen as lazy and undedicated to try for any less time to build the relationships and strengthen the bond. Just as two people may be incompatible, this can be the case with human and eagle, though any fault is generally accepted to lay with the human. It would be at this point, a year in, that such an eagle might be released. On the other end of the spectrum, an eagle that has proven itself a wonderful hunting partner may be kept for up to ten years before it is released. A Kazakh man is seen as duty-bound to release his eagle eventually, and it is considered selfish to not do so. This gives an eagle the opportunity to breed (and thus produce more eagles like it for future generations of *berkutchi*) and live out the rest of its long life. As long as the eagle was trapped as a subadult, it will always revert back to the teachings of its parents and a life of independence when released. Though the bond with a *berkutchi* can be deep, if it is not maintained, it is rather quickly forgotten. The desire to migrate, nest and mate proves too great.

An eagle’s breeding cycle takes place almost entirely outside the purview of humans. Eagles prefer steep cliff faces on which to nest that are usually well

camouflaged and inaccessible to most animals. They also require soft material with which to make nests. The irony here is that, on the Mongolian steppe, there is little vegetation. Rather than intertwined twigs, nests in the Altai are often made of material created by humans. This includes felt scraps, prayer flags, and general rubbish. Prayer flags, a beautiful blue streaming scarf-like material, are most commonly used by ethnic Mongol Buddhists. A prayer is said at a sacred site – usually an ancient burial mound on the steppe, and the flag left as a sign of respect. It is these flags – literally prayers borne on eagle’s wings – that are then taken to the nest.

Prayer flags are a truly ancient tradition that is nearly ubiquitous to the disparate cultures of the Central Asian region. Eagles have probably been using flags as primary nest material for thousands of years. Indeed, prayer flags are an inescapable part of the landscape. Humans have been unknowingly influencing eagle nest building techniques and structure in the Altai through their religious traditions.



*Image 1 – A blue prayer flag used as nesting material by golden eagles.*

Though a released eagle is expected to go on and live its own life, the Kazakhs I met took a lot of pleasure in knowing about the lives of their former hunting partners. Before release, the *ukuh* is removed and replaced by a bright, white piece of cloth. The *ukuh* is a plume of feathers from the Eagleowl (*Bubo bubo*). Eagleowl feathers are streaked with fine black lines, which are thought to resemble the Arabic writing of the Koran, and thus to bring divine protection to its wearer. This cloth is attached mid-way down an eagle's wing, which makes it highly visible from the ground when an eagle is soaring. Every so often Kazakhs will be out herding their livestock and an eagle with a small bit of white fabric on one wing will drift overhead. It might stay for a few minutes or a few hours, but it will eventually leave. The eagle will never be tame again (not without capture) but she has lost her fear of humans and sometimes strays close to the places she once knew. Even though this eagle may go on to live for decades and travel across the vast expanses of Russia and China, she still maintains a connection, however slight, to the Altai and its inhabitants.

These eagles inhabit a liminal space between the 'domestic' and the 'wild'. Biologically, they cannot be considered domesticated because each individual eagle utilized must be trapped from the wild. There is no captive-breeding, not altering of genetics. Hunting with eagles represents a continuity of action that extends backward many, many generations: trapping an eagle, gaining its trust through training and hunting, releasing back into the wild to breed. Eagles are seen by Kazakhs as belonging to the wild, and are merely borrowed for periods of time by the *berkutchi*. However, when an eagle becomes a trusted, proven hunting

partner, their status is elevated beyond any other animal that a Kazakh might interact with. They are nearly treated as human. They live in the home with the humans, songs are composed for them, food is carefully prepared for them every night, and husbands often profess to loving their eagles more than their wives. Indeed, during this time eagles become what might be considered incredibly tame. And yet, as they are imprinted on their eagle parents, as they fledged from a lonely cliff face, that tameness is transitory. When it is decided that an eagle should be released back into 'the wild', without the constant presence of humans that bond and tameness slips away. They return to their solitary, wild lives.

### Sociality in Eagles

Eagles are not social animals in the way that dogs, horses, camels, sheep and many other animals in Kazakhs' lives are. In behavioral ecology, 'social animals' refer to animals which have a recognizable level of social organization (a distinct society) that goes beyond mother-offspring bonds and mated pair bonds. Ants, penguins, orcas, and chimpanzees are diverse examples of social animals which have a highly interactive society. (Davies and Krebs 2012)

Golden eagles, beyond rearing young to fledging and pairing with mates, generally don't form bonds with members of their own species or other species. (Watson 2011) The bond an eagle forms with a *berkutchi* is a prominent exception here. During the course of their lives, eagles experience what a human might consider unbearable loneliness and boredom. An eagle might sit on a cliff top for several

days, conserving energy as it awaits a fox or hare to pass by unaware. If the eagle makes a kill and gorges, it might return to the cliff for several more days, unmoving as its body slowly digests its meal. Alfred Lord Tennyson condensed this tendency into a precise and beautiful poem:

*He clasps the crag with crooked hands;  
Close to the sun in lonely lands,  
Ring'd with the azure world, he stands.*

*The wrinkled sea beneath him crawls;  
He watches from his mountain walls,  
And like a thunderbolt he falls.*

My aim with this discussion is to help the reader understand the community in which the wild eagle lives, its mindset and motivations, and how eagles can come to be the hunting partners of humans.

From a biological point of view, eagles are capable of recognizing patterns and predicting an outcome based on pattern recognition. When food, or the opportunity to chase prey is involved, their capacity to learn and modify their own behavior is significant. An example of this that I have observed would be, if meat is offered on the glove every day, the eagle will soon learn to fly great distances to the glove in expectation of being fed, whether or not it can see any meat being presented. A more subtle example that I've noticed, is if an eagle sees a man galloping on horse, it will soon learn that this only occurs when a fox has been

flushed and is being pursued. The eagle will strive to see the fox, and even if it cannot, it may fly over to and follow the galloping horse in expectation of seeing it.

Kazakh *berkutchi* often asserted to me that eagles can form deep bonds with their human partners. Sometimes the relationship is tenuous, and *berkutchi* are afraid their eagles might fly away and not return, but other times the bonds run deep – beyond food. I hunted with men who were so fearful their eagles would fly away, that they tied portions of eagle’s primary wing feathers together to restrict its flying ability. I also hunted with men who were so confident in the bond they had with their eagle, that they flew in extremely windy conditions, where the eagle would have to continually fight the weather to stay near the *berkutchi*.

There is some support for this in the ornithological literature for the idea that an eagle can form a deep bond. While most mated raptors only associate with each other for nest building and raising young, Golden eagles will often stay together year round. Mated pairs of golden eagles have been observed to hunt cooperatively throughout the winter, bringing down large and dangerous prey that perhaps might not be possible for a single eagle. (Watson 2011)

Although a *berkutchi*’s relationship with his eagle will at first be food based, over seasons, the relationship begins to transcend hunger. Kukan, my mentor, told me his old eagle hunted with him “because she enjoys catching foxes”. He believed that she had come to see him as a kind of mate, and so hunted with him as she would a mate. In the summer time, this eagle had even laid an egg. Of course, without a male eagle mating with her, it is was infertile, but laying an egg when with



a *berkutchi* is a rare occurrence, and Kukan believed she would never do that unless she considered him a mate. I heard several *berkutchi* refer to their eagles as their “second wife”, which lends itself to the notion that this feeling could be mutual.

When working with a dog, one might try to position themselves as the ‘pack leader’ or the ‘dominant’ one – but such attempts at socialization would be incommunicable to an eagle. In the wild, though eagles may have territorial disputes, or attempt to bully other eagles or scavengers out of food, there is no complex, organized social structure. The majority of eagle lives are spent in solitude – and when faced with confrontation, the eagle reaction is to retreat to a new territory devoid of competition. Because you cannot dominate, break, or cause submission in an eagle, cultivating a relationship is seen by Kazakhs as a rather intellectual pursuit. There is no short cut. In this case, hunting is the lens through which interspecies learning occurs. When the human and eagle share the same goal (to catch a fox) they learn from each other. Communication between them is subtle, nonverbal, embodied knowledge that requires intersubjectivity.

If *berkutchi* can’t control his temper, or isn’t attentive enough to read subtle body language for when an eagle is content or uncomfortable, he is unlikely to make a lasting relationship. Kazakhs see this as unique to eagles. Although a uncareful Kazakh may not get the best out of a horse, camel, or dog that he has difficulty communicating with, the relationship is still salvageable and workable. Kukan never saw half measures with eagles. He warned me, as he warned his sons and relatives that showed interest in hunting with eagles, that “Your eagle comes first,

over livestock, over family, over everything. This is the only way to succeed.” Indeed, this is why so few young Kazakhs attempt becoming *berkutchi* – their obligations to the herd and their family is too great to justify the time cultivating a relationship with an eagle requires.

Whereas every male Kazakh herder is expected to learn to ride and learn to care for his herd animals, only certain people are capable of being *berkutchi*. In this same vein, horse trainer Sterry Butcher cautions that, “Riding a naughty horse can uncover an otherwise unknown and bottomless well of frustration, anger, insecurity and even embarrassment, none of which are useful emotions in dealing with animals who have their own opinions and are the strength to make these opinions known.” However she follows this with a phrase that I think both Kazakhs and myself would recognize regarding eagles, “In them, I see what I hope are the best pieces of myself.” (Butcher 2014: 34) When I asked Kukan, my mentor, what the best traits in a *berkutchi* were, he responded with “Patience. Dedication. Bravery.”

## The Bigger Picture

I’d like to step further back to give the reader a broader overview of the pastoralism and eagle culture of Bayan-Olgii. This westernmost province or *aimag* of Mongolia, which is 80% ethnically Kazakh, is comprised of several counties or soums. The provincial capital is Olgii, a city of some 30,000 people. The Kazakhs of Bayan-Olgii are somewhat isolated – torn between their nation-state of Kazakhstan, within which they would not be able to live a traditional nomadic,

pastoralist lifestyle, and the country of Mongolia, a state that is populated by ethnic Mongols, who are primarily Buddhist and have an entirely different linguistic, historical and cultural tradition. Kukan and my informants proudly referred to themselves as “Mongolian Kazakhs” and felt that they would neither fit in, nor desire to live in, Kazakhstan or in the other *aimags* of Mongolia.

Within Bayan-Olgii, there are some 300 Kazakhs who keep eagles. The majority of them live in Olgii city or in Sagsai, a village some 30 kilometers from Olgii. In the more remote soums, such as Daluun, Bayan-Nuur and Bulgan (200-500 kilometers distant) there are perhaps a dozen *berkutchi* in each. Hunting with eagles changes quite profoundly the further you travel from Olgii city. The key to understanding this is tourism.

In the 1990s, Mongolia devoted a lot of funding and resources to encouraging tourism and creating a navigable tourist infrastructure. It has been very successful, and outside mining, tourism now represents the primary source of GDP for the country. In 1999, the Golden Eagle Festival was founded in Olgii City in order to encourage tourism to Bayan-Olgii. The Festival takes place in October, and is comprised of three events over two days in which a panel of judges scores a *berkutchi* and his eagle. The first event is a judging of the *berkutchi's* appearance. Is he (as well as the horse and eagle) wearing traditional clothing, and how exceptional does it look? The second event is a judging of an eagle's willingness to fly to the *berkutchi's* glove. How fast does the eagle respond? The third and final event is a judging of an eagle's willingness to attack a dragged fox pelt. Does she attack it aggressively as if it were a real fox? Since actual hunting takes place in deep winter and is very physically demanding, many tourists are not able to

experience it. The Festival is a substitute. However, the eagles that will excel at the Festival are very different from eagles that will excel at catching foxes in remote areas.

In the next chapter, I will write about how sub-adult eagles are trapped and socialized with humans. These eagles, fiercely independent creatures, are ideal hunting partners. However, they aren't so tolerant of new situations or crowds of people. At the Festival, which has become very popular in recent years (hosting several hundred tourists), wild-trapped sub-adult eagles will not tolerate flying near huge crowds. They'll fly away instead, back to the safety of the remote, sparsely inhabited stretches of the Altai. In order to have eagles to fly at the Festival, some Kazakhs have taken to using *colberkuts* or 'hand-eagles'. These are eagles where are taken from the nest as downy chicks, or eyasses to use the falconry term, at mere days of age. These eagles become imprinted on humans, and know nothing other than life with humans. Thus, they are impossible to lose and have no fear of the largest thronging crowd. They will fly to the glove and the fox pelt at the Festival without issue.

However, these eagles, deprived of the learning experience with their parents, don't know how to hunt. As any fox-catching eaglehunter will tell you, humans can only do a poor job of teaching an eagle how to hunt. The utility of trapping a sub-adult eagle, is it already knows how to catch foxes, you merely have to convince the eagle that you are an ally in that pursuit. What I then found, is that the closer I was to Olgii city, the more *colberkuts* I saw. These hand-raised eagles gives themselves away by continually begging for food (these eagles are too mentally

stunted to reach adolescence, and can never be released). The food call is a loud “psh-ack psh-ack psh-ack” sound. They also fly weakly and have no level of fitness. As useless as *colberkuts* are for hunting, they are great for tourism. Tourists don’t know the difference. A large portion of the 300 *berkutchi* mentioned are Kazakhs who keep these *colberkuts* purely to take to the Festival and to show to tourists. One can hardly blame them, as to be able to invite tourists into your home can represent a lot of income for a family that typically relies on volatile cashmere and meat prices.

However, this recent phenomenon of the Festival and *colberkuts* is not within the scope of this thesis. This thesis is focused on eagle culture and the tradition of hunting with eagles as it relates to the practical catching of foxes. That is, the millennia sustained tradition of trapping sub-adult eagles, socializing them to hunt in partnership with humans, and then releasing them. This is the tradition from which the vast well of ethno-ornithological knowledge of the Kazakh people comes.

Outside the magnet of Olgii City, Kazakhs are watching for clues about the movement of eagles. The window for trapping, when migrating eagles bottleneck in Bayan-Olgii, is a few short weeks in October. This rush can initiate a flurry of activity. Herders are in constant contact to try to spot the first individuals coming down and ascertain when the migration reaches its zenith and when the most advantageous time to lay traps is. It’s a period of extreme uncertainty. There is necessarily an element of luck involved in trapping an eagle, especially one that will be a great hunting partner. Many superstitions about the natural world come

into play when one is searching for an eagle. Trapping an eagle is almost seen as a gift from the divine, and if you've harbored bad thoughts or acted unscrupulously against nature, you will look in vain until the window is closed. But if you've done well by your family, livestock and nature, you might trap an eagle so fine she'll be with you for ten years.

Kukan, my mentor, used the eagles in his life to mark the passage of time. At 59 years old, he counted backwards the 8 eagles he had flown in his lifetime. The great hunters, the *kirans* he flew for a decade. The mediocre eagles he stayed with for a year or two. Eagles colored everything he mentioned from his past. A son was born when he had a kiran, and his wife had died when he had an eagle that seemingly couldn't catch anything. He spoke of the time of his wife's death with anguish – he didn't even have an eagle then that could help him escape the pain he had felt. One of the happiest times in Kukan's life is when he used to hunt with his father in his twenties. They both had eagles that were wonderful hunters, true kirans, and many days they would come home with a fox affixed to each horses' saddle – no easy feat. When I asked Kukan of all the eagles he had flown, which was his favorite, he didn't hesitate to answer that his favorite was the eagle he flew with his father. I suspected that though the eagle was great hunter, the fact that she brought him close to his father was the true reason she was regarded so highly. Eagles can be intergenerational glue.

As individual eagles helped Kukan mark different periods of his life, so did the greater community of eagles. He spoke of years where there were eagles everywhere and years where there were no wild eagles to be seen. Eagles were an

indicator of the health of the natural world, and whether the Kazakhs were being responsible to Allah or not. On low eagle years, Kukan and his brethren were reluctant to hunt wild game, as they feared that had taken too much previously. On abundant eagle years, Kukan was always organizing hunts for wolves and deer as it was the time to harvest. From a biological perspective, when a top tier predator species is abundant, the animals that comprise the rest of the pyramid must also be robust and numerous in order to sustain that level of predation.

### Hunters and Values

If one were to draw on a map the movements of golden eagles and Kazakh pastoralists, they would be similar – both annual migrations and daily hunting sorties. There would be long, sometimes circuitous, migrations that return to the same apex every summer and winter. And also ten or twenty kilometer ventures along mountain ridges with occasional forays into the valleys (the flights after foxes), only to return to the mountain ridges and then a home base. As eagle offspring mirror the migration patterns of their parents, with only slight variations, the paths of the children of *berkutchi* and eagles would also likely line up. Over generations, I would venture that the same lineages of *berkutchi* would be trapping and hunting with the same lineages of eagles. Over centuries, who knows how each population might subtly come to influence the other.

Another way to measure how integrated human and eagle communities are is ‘flight range’. Flight range represents how easily an eagle, or any animal, is

disturbed by human presence. In the United States, for example, golden eagles have a big flight range. If a human walks within two kilometers of a wild eagle, it feels pressured enough to flee. (Watson 2011) After decades of intense prosecution, eagles are not willing to nest and hunt near any human habitation. That was the flight range I had grown accustomed to. I was astounded to find that, in Bayan-Olgii, eagle flight ranges were sometimes a mere 100 meters. Riding on horseback through small mountains to a house in Daluun, an eagle passed directly overhead, at a height of no more than twenty meters. I could not believe how close it was. Another time a Saker Falcon sat calmly on a cairn as I walked within 50 meters of it during my ascent of the mountain. At first, I could only think it was an escaped pet, but my informants soon made clear that close encounters with wild raptors was a mundane commonality. The avian predators of Bayan-Olgii have not been exposed to persecution, and to these animals, herders are probably as fixed a part of the landscape as goats and sheep are. This ability to physically get close to wild raptors and observe them was something I found fascinating. It also facilitated the important Kazakh pastime of noting how all the animals in an area are behaving and moving. A young herder that watches his sheep on a mountainside for the day is likely to see many wild animals come past, and note their behavior and numbers. When I was trapping for an eagle, or later when we were searching for foxes, our first port of call was always to inquire within nearby herders as to what they've lately seen while herding.

The relationship Kazakhs have with golden Eagles can be an expression of Kazakh values. The prior example highlights the Kazakh value of being close to nature. Another very important Kazakh value is tradition. Of course, hunting with eagles is



practiced because it is enjoyable to many and provides a tangible reward (fox pelts), but the primary motivator to many Kazakh eaglehunters whom I interviewed was the importance of continuing a long-standing cultural tradition that was unique to Kazakh people.

This surprised me when I spoke to my informants. I hunt with eagles in the United States and Europe purely for enjoyment – I like how the experience of flying an eagle makes me feel and the aerobatic flights that I am able to see up close. This reason that was so central to me, was always second, third or even fourth on the list when *berkutchi* ticked off the reasons that they hunted with eagles. I suspect that the American bias towards individualism is part of why I value my own personal enjoyment so much – a rather selfish thing. My informants valued the fact that they dedicated themselves to developing a skill for hunting with eagles, which would ensure it was perpetuated for another generation, for the betterment of the community and Kazakh people as a whole. Learning to be a good *berkutchi* was seen by my informants as a way to honor their ancestors and their people.

This sense of community and doing what is best for the community is frequently noted among pastoralist people. (Shayakhmetov 2007) Although hunting with eagles may at first appear to be a solitary pursuit, it is really a pursuit of the community. The *berkutchi* master takes on apprentices. Interested villagers act as ‘scareboys’ to help to find and flush foxes for the master and the apprentice. Daughters help craft the anklets, hoods, and material culture of *berkutchi*. Wives sew the fox pelts together into clothing. Young boys volunteer to watch the herds while the hunt ensues. Relatives open their homes to the hunting party when they

are too tired to make it all the way home. After sunset, the men recount the flights over vodka and talk about the best eagles and *berkutchi*. One dedicated *berkutchi* can easily involve an entire community in his pursuit. This is why, although there are only a small number of *berkutchi*, the tradition and its practice is thoroughly ingrained in everyone.

Usually Kazakh beliefs about the lives of eagles they could not see aligned with the known behavioral ecology of eagles. As Kazakhs most often directly interacted with an eagle only for a few years of its early life, the time in the nest and the long period of maturity after release are not shared experiences. Among Kazakhs, there is a lot of speculation as to what might make an eagle into a *kiran*, an exceptional hunter. My mentor Kukan's belief was that the very best eagles were twins. That is to say, two eagles hatched from a single egg. The symbol of twins is a powerful motif in Kazakh storytelling. As a biologist, I know that it is biologically impossible for two eaglets to be nourished within a single egg. Science tells us twin eagles is an impossibility. And yet, Kukan was so utterly certain that I never questioned his conclusion. Twins were such a powerful expression of motherhood and strength, that to Kukan it made perfect sense for there to be equal application with eagles.

That was the exception; otherwise Kazakhs are thoughtful naturalists when it comes to deciphering how eagles live on their own. This is no better demonstrated to me than in the understandings of the division between male and female eagles. One sex is about a third larger than the other. This is a constant in the world of birds of prey. In some cultures, most notably Arab culture, it was long assumed that the larger, more powerful sex was the male. Falconers across the Arabian

Peninsula believed this for centuries, until the 1970s in fact, when captive propagation of falcons was established in the region and the falconers actually saw the larger of the sexes physically lay the eggs. However Kazakhs, as far as I can surmise from the literature, have always been aware that the larger, more desirable hunter is the female. (Bodio 2004) They have always referred to their eagles as female, and even affectionately as 'wife'. Though hunting is a solidly male past time in Kazakh society, that fact never blinded them to the fact that female Golden Eagles were the superior hunters.

Fascinatingly, in addition to being symbols of hunting prowess, female eagles are also symbols of fertility. Kukan told me a story about a niece who was having difficulty getting pregnant. Kukan's solution, which he knew to be effective from his father and grandfather, was to perch his eagle in the niece's home. For thirty days, when not hunting, the eagle was hooded and perched in the niece's home. At times, the eagle was even allowed to defecate on the couple's bed. Eagle's shoot uric acid several feet away from their body when they defecate, and as it is often unavoidable, to have it land on you or your belongings is often seen as a sign of luck. Kukan relayed the fact that, after thirty days, his niece did become pregnant and he happily took his eagle back home. Although Kazakh society is heavily segregated along gender lines, eagles are the bridge. Female eagles are both superior hunters and wells of fertility.

Eagles Inform the Lives of Kazakhs

The reader may feel this chapter contains too much information on the idiosyncrasies of Golden Eagles. However, every discussion of eagles here is presented with the purpose of informing the reader about some broad aspect of the lives of nomadic, pastoralist Kazakhs. These broad strokes will be built upon in the subsequent chapters where I detail my apprenticeship to Kukan and my trapped eagle, delve into the theory of learning, the delineation of domestic and wild, the importance of the environment as its own actor, and finally the nuanced theory of how humans and animals think about each other.

Though many other animals will be addressed, I've focused on the importance of eagles because they embody the elements of every other animal that Kazakhs interact with. Eagles can be as elusive and independent as snow leopards or elk, and they can be as tame and interactive as dogs or horses. They uniquely can travel along this continuum and serve as a focal point for so many aspects of Kazakh tradition and cultural values.

Although eagles likely lived in the Altai long before man ever did, and though there may be a future where man lives an Altai devoid of eagles, these few millennia where they've coincided has created a relationship worth analysis and careful consideration. Were the eagle's natural history just a little different, or man's livelihood in the area just a bit more inward and urban, the paths between *Aquila chrysaetos* and *Homo sapiens* never would have crossed.

## Chapter Two

### Human-Eagle Socialization: A Hunting Partnership

*The captive thrush may brook the cage,*

*The prison'd eagle dies for rage.*

*-Sir Walter Scott*

*The foolish think the Eagle weak, and easy to bring to heel. The Eagle's wings are silken, but its claws are made of steel.*

*-Sidney Sheldon*

In the previous chapter, I aimed to take a big-picture approach. My goal was to look at populations of eagles and humans in the Altai, and investigate how each group has interacted through history and into the present day. Now, in this chapter, I aim to examine the individual level. Specifically to myself, my Kazakh mentor, his eagle, and the eagle I socialized and hunted in partnership with. After first introducing my field site and informants, I will recount my experience of finding an eagle, trapping her, training her, and then catching foxes with her and other eagles over the course of two hunting seasons. There are layers of apprenticeships and interspecies learning encapsulated in this experience, but rather than delve into a theory of learning or human-animal relations just yet, I feel it is important to first orient the reader. The method of hunting with an eagle is an alien pursuit to most, and before the why of it can be thoroughly analyzed, I first want to cultivate an understanding in the reader as to the methodology and

mechanics of the relationship. This chapter draws on biology and my own personal experiences training eagles, as well as the philosophy of my informants.

In an effort to acknowledge my own biases and point of view, a discussion of my falconry experience follows. I have been a licensed and practicing falconer (the term 'falconer' is applied to anyone who hunts with any species of raptor, any bird of prey) in the United States since 2001, when I apprenticed under an established falconer who helped me trap a red-tailed hawk and hunt rabbits. I flew red-tailed hawks and peregrine falcons for several years, and began flying golden eagles in Scotland in 2006 when I studied abroad at the University of Glasgow. I flew eagles in Europe for many seasons, but became frustrated that no tradition of hunting with eagles existed in the United States.

After earning an Honours degree in Zoology and International Studies at the University of Oklahoma, in 2009 I was granted a Fulbright scholarship to Mongolia where I aimed to document the practice of hunting with eagles (through apprenticing myself to a Kazakh master) and bring that knowledge back to the United States where I could myself fly eagles. Thus, my first year in Mongolia as a Fulbright scholar was primarily done as a practitioner of falconry. However, in the year that followed I yearned for a deeper understanding of the people and human-animal relationships of the Altai, and so embarked on a PhD in Social Anthropology. I then spent a second year in the Mongolian Altai conducting fieldwork a PhD anthropology student.

In some ways, my previous falconry experience was an advantage when living in Mongolia. I have long felt that three languages are required in order to be a *berkutchi* (the Kazakh word for a person who hunts with eagles). The Kazakh language, of course, but also eagle language and horse language. You must be able to effectively communicate with your human hunting companions, as well as your equine and avian ones in order to orchestrate a successful hunt. As I was already fluent in communicating with eagles, that left more time to gain proficiency in Kazakh and horsemanship.

In other ways, there were disadvantages. For example, I was initially reluctant to employ training methods that were frowned upon in the United States or Europe, or dismissed advice from my Kazakh mentor that might not otherwise fit with western philosophy on training eagles. Further, I may not have asked my informants why they engaged with their eagle in a particular way, assuming I already knew the answer. Once I realized this, I strived to remain cognizant of my bias and avoid its influence in my learning and writing. I worked to “make the familiar strange” again when it came to flying eagles.

Interacting with an eagle is a subjective experience that varies greatly between individual eagles and humans, and additionally, requires intersubjectivity between both participants. Although the basic principles of training an eagle can be taught, the *berkutchi* must learn to read an individual eagle’s body language and behavior and act accordingly. This eagle reacts to its human partner moment-by-moment, and the human must know how to encourage and discourage certain actions from the eagle, without causing injury or resentment. In turn, the eagle learns to

recognize patterns and behaviors from its *berkutchi*, and communicates through body language and action its contentment or discomfort. Eagles are not carbon copies of one another, and can vary greatly in individual personality and characteristics.

Although Kazakhs believe that anyone should be able to train a dog or a horse, not everyone has it “in their blood” to be a *berkutchi*. Like a shaman or an epic poem singer, it is something that the person must have an aptitude for (Bunn 2004). Additionally, for some people the dedication required of a *berkutchi* is overwhelming, and the practice is given up in order to raise a family or tend to herds. For others, the notion of *not* being a *berkutchi* is overwhelming – they must practice it no matter how all-consuming. To these *berkutchi*, they believe the practice helps them reach the best version of themselves.

My informants often gave the analogy of the eagle as a mirror that, when polished (i.e. trained), reveals the true character of a man. Although eagles can vary in their hunting ability (the very best eagles are called *kiran*) a good Kazakh man should be able to create a successful hunting partnership with any eagle he traps. His eagle will fly strong and be comfortable in his presence. A cowardly man, or one not able to control his emotions, will never have a successful hunting relationship, and can never be a *berkutchi*. Such a man’s eagle will be too nervous or too aggressive to hunt. In addition to the importance of communication with the eagle, a critical aspect of caring for an eagle is proper husbandry, as only a well-adjusted, healthy, physically fit eagle can be successful.



## The Importance of the Relationship

What makes this particular human-animal interaction in western Mongolia so unique, is that these golden eagles, which are kept temporarily, are valued for their behavior, rather than any parts or feathers. Many examples of human interactions with birds involve the utilization of avian parts and feathers, rather than a relationship with the free-living or wild bird. When Kazakhs hunt with eagles, only the live eagle is revered. There is no tradition or value given to feathers, talons, or bones of eagles. Indeed, these eagles are either released back into the wild, or if they die when with humans, are gently wrapped in felt and left on the mountaintops; their parts are never kept.

Although the material culture associated with the eagle's time with humans may be kept as a memento – this includes leather jesses or a leather hood – much as a piece of clothing may be kept to remember a far away or deceased relative. All my informants who were *berkutchi* had some such memento from a favorite eagle long passed or released proudly displayed in their home.

Thus, it is the *relationship* with the eagle that is truly valued; the interaction between eagle and human. It is accepted among Kazakhs that both eagles and humans have the means to learn from and influence the characteristics of one another. Not only does a *berkutchi* apprentice himself to the eagle, but the eagle to the *berkutchi*. It is a necessarily reciprocal, reflexive action. Each must learn to read and interpret the other's body language and behavior so that a mutually beneficial goal, the catching of foxes, may be reached. The mutual benefit derives

from the fact that the eagle gets its hunger sated by the fox meat, and the *berkutchi* retains the fox pelt for clothing. It is the *berkutchi*'s task to find the fox and scare it into the open where the eagle has an opportunity to catch it. The task culminates in creating an understanding in the eagle's mind that the *berkutchi* is a provider and a protector. As eagles are kept in a state of freedom, an eagle that does not come to understand this will simply fly away, back to the 'wild', which they are fully capable of living in without human intervention.

Eagles here are active subjects. This intersubjectivity, which occurs when actors consciously recognize and attribute intentionality to each other, be they human or a nonhuman other, is key to how Kazakhs interact with the world around them and its many nonhuman inhabitants. Kazakhs actively try to engage with eagles through considering the eagle's perspective. Eagle training is a communal learning experience, a shared embodied experience between species. It will be shown in fieldnote excerpts in this chapter and next that, during a hunt, eagles are learning from eagles, humans from humans, and the humans and eagles from each other. Therefore, rather than engaging in the anthropocentric projection that is anthropomorphism, Kazakh falconers actively imagine an aquiline perspective. They acknowledge that an eagle's perspective is exceptional, but exceptionally different from a human's perspective, and cannot be conceived of in the same terms.

To look at the world as an eagle would, it is useful to consider their place in the ecosystem of the Altai. They are an apex predator, meaning that they occupy the summit of the food chain. They will enthusiastically defend their kills from wolves

or cinereous vultures (the largest vulture species in the world). They are not gregarious creatures, annually migrating from Siberia to China (and back again) alone. Outside of nest building and raising young, their lives are solitary. There are no packs of eagles, no hierarchy among them. When considering this, it is easier to understand why negative reinforcement does not work with eagles. They cannot be made to submit to a human as no such corollary exists in their 'wild' lives. They submit to no animal – they attempt to dominate and defend, or die. Through speaking with my informants, it is my understanding that this is central to why eagles are held in such special regard by Kazakhs. Though it may not be ideal, one can train a horse through whip and spur, or a dog through a rough hand, but the only way to train an eagle is through intellect. This is why eagles share spaces with Kazakhs that no other animals do: why they are allowed in the home, why they are buried on mountaintops, and why no body parts are ever used or kept.

Most domesticated animals can be compelled to do an action through their dependency on humans and their natural sociality. With eagles however, ingenuity is required. A human cannot be conceived of by an eagle as a master, but through carefully cultivated and shared experiences, they can come to be seen as a partner of sorts. Thus great pleasure is gained on behalf of the *berkutchi* when an eagle begins to show evidence of trust. This is most obviously demonstrated in an eagle's willingness to "give up" a fox that it has caught to its human partner. A mistrusting eagle will raise its hackles, cover the fox with its wings, drag the fox away, or even attack a human, while an eagle that maintains a trusting relationship with its human partner will calmly sit upon the dead fox and gently step off of it for a smaller reward held in the *berkutchi's* glove. The eagle doesn't feel the need to

protect its kill, because it trusts that its human partner will feed it later. This allows the *berkutchi* to collect fox pelts to make traditional hunter's clothing, which then conveys his success as a *berkutchi* when worn, and is thus a marker of respect.

### My Primary Informant

Hunting with eagles has traditionally existed and persists in the Altai Mountains and the Tien Shan Mountains. This includes the 'four corners' area where western Mongolia, eastern Kazakhstan, southern Siberia and northwest China meet, as well as the present day Kyrgyz republic. This thesis is the result of two collective years living with a community of ethnic Kazakh falconers in far southwestern Mongolia, more specifically, in Daluun county. Daluun is in the shadow of *bekut tau* (eagle mountain), where many eagle hunters traditionally gather to trap young golden eagles on their migration from Russia into China. As the act of acquiring an eagle is so important, this area becomes a focal point for dedicated and aspiring eagle hunters.

However, when I arrived in the capital of the western-most province of Mongolia, Bayan-Olgii, in September of 2009 as a Fulbright scholar, I did not know whom I would apprentice myself under to learn the Kazakh tradition of hunting with eagles. *Berkutchi* are nomadic pastoralists who reside in remote areas without internet connections and with very limited access to phone, and thus there was little I could do beforehand to make arrangements to meet these men. I hired a translator, and together we hired a jeep, and set off into the remote villages

surrounding the provincial capital of Olgii. I was searching for a well-respected and skilled *berkutchi* for whom the practice was part of his family tradition and who knew the mountains, eagles and foxes well.

The method employed over millennia to acquire a golden eagle as a hunting partner is to trap a self-sufficient subadult. These are fit, confident eagles that are already catching and eating foxes in the wild. I was determined to find a mentor that engaged in the kind of eaglehunting that involved these subadult eagles and truly embraced hunting. To do that I had to travel far from the provincial capital where the Festival is held and the pull of tourism is strong. The farther you travel, the more likely you are to encounter those who focus is on fox hunting rather than tourism.

When I inquired about *berkutchi*, local herders continually pointed me towards Daluun. Daluun is about 300 kilometers south west of Olgii, a mere 20 kilometers from the border with China. It is high-elevation, mountainous landscape, home to Ibex, Argali, and snow leopard. *Berkut tau* casts a long shadow over Daluun village. Hosting guests is an important part of daily life to the nomadic Kazakhs whom I encountered, and honour is conferred on those who have guests in their home, particularly when guests have travelled great distances. Thus, rather than being met with suspicion or resentment when reaching the homes of Kazakh herders, I was enthusiastically welcomed inside. It was suggested that I visit Kukan, as “he is always chasing foxes with his eagle”. I arrived in the afternoon to his collection of gers about 15km from the village on the steppe. Kukan was away in the nearby mountains hunting with his eagle, but his two daughters, 22 and 26, and his

youngest son, 19, quickly gestured I come inside the home. They immediately put milk tea on the stove and began preparing a meal. Kukan came back near sunset. His silhouette left no mistake – a golden eagle on his right hand and a stocky but powerful horse beneath him. He rode up to the yurt’s entrance, placed his eagle down on the *tor* (perch) next to the door, tied his horse, then warmly shook our hands.

Jagaa, my translator, carefully explained why I was there and my goal to document the practice of hunting with eagles through an apprenticeship. I mentioned my desire to find *berkutchi* who were passionate about the tradition. Kukan responded, “You came to the right place. We are wild people (*acaou adamdar*). Our onions are wild (*acaou sarumsak*), our eagles are wild (*acaou berkut*).” He grasped a wild onion in his hand and gestured to his eagle. “My eagle was trapped one year ago when she was three years old, she has caught thirty foxes so far”. Kukan was kind, and judging by his actions as well as the fox skins adorned on the walls, an excellent hunter. Over a dinner of mutton and a long conversation, Kukan agreed to teach me how to fly eagles the Kazakh way, but warned: “Eagles can be very strong and you must be careful. A horse can kill a man, a wolf can kill a horse, and an eagle can kill a wolf, therefore, an eagle can kill you. You must respect eagles.” We made a plan to trap an eagle for me to fly that winter.

Finding Alema

Trapping an eagle is neither simple nor easy. As an apex predator – an animal that, when fully grown, has no predators to fear – a landscape cannot support many individuals. A long-lived, slow to mature animal with a low reproductive rate, similar ecologically to tigers or elephants, eagles are far and few between in the Altai. Added to this, is the fact that only eagles of a certain sex and age are sought after as hunting partners. If one is looking for an immature female eagle, that demographic might represent only 10% of the entire eagle population in an area. I'll never forget how it felt when, after fourteen days of trying, a freshly-caught golden eagle was placed in my arms. This eagle was wild (*acaou*). She had been born on an unknown, lonely cliff face, likely hundreds if not thousands of miles from here. Her parents had patiently torn off the tiniest bits of meat to feed her while she was a down-covered eaglet, and once she had fledged and learned to fly, they had brought her injured animals to hone her skills of catching, grasping and killing. She eventually left the eyrie, driven by the overwhelming urge to migrate south. For two years she hunted over the mountains and steppe. She killed marmots, snakes, hares, wildcats and foxes. She eyed humans and wolves warily from her high vantage point. She ate carrion when the opportunity provided itself. She huddled against mountain faces when the bitter winter blizzards came, and bathed in glacial streams when the summer sun appeared. She was an adolescent, approximately two years old.

Kukan, Jaikan (Kukan's 35 year old son), Cerkbo (Kukan's 50 year old cousin) and I carefully constructed a 'jealousy trap'. We placed a dead hare on the ground and nearby staked a live raven. Small spring-loaded steel jaw traps, also called leg hold traps, were carefully set around the hare and raven. We collected dried horse dung

and crumpled them over the leg holds to conceal them with little added weight. Were an eagle to attempt to steal the dead hare from the raven (an easy meal for an eagle, and one to incite 'jealousy') the eagle's foot would likely brush one of the hidden trap and set it off. Day after day after day (fourteen in total) we watched the traps from afar. We sat behind a rock formation, a natural blind, and quietly observed the trap site with binoculars. After days without activity, and talk of whether someone was sabotaging our efforts with ill thoughts, I saw the kind of eagle we had been searching for drift overhead on an evening sortie. She was a Golden Eagle, young and female, big. Unable to resist stealing such an easy meal from the raven, she stooped onto the hare. In an instant she sprung one of the leg hold traps and was caught.

We rushed to the site to secure her - I remember the electricity I felt in my fingertips when I placed my hands on her. Whereas many animals would attempt to escape at the sight of an approaching human – she was defiant. She spread her wings menacingly, opened her mouth, and lunged for us. I quickly placed a hood on her head to cover her eyes and calm her down. Kukan tied a felt blanket around her wings to restrict her movement. I wrapped her feet, more importantly those eight talons the size of grizzly bear teeth, in felt and cradled the bound eagle in my arms. Then we mounted our horses and began the journey home.

Everyone was abuzz when we made it back; they wanted to see the new eagle and make their speculations about her. To the non-ornithologically inclined, all eagles might look alike. They are all, after all, big, brown birds with yellow feet and beaks and fierce eyes. But in actuality, individual eagles are all very different, both in



terms of personality and physicality. I placed her hooded on a *tor* (an eagle perch) and she stood still. Men, young and old, herders and patriarchs, appeared out of nowhere and began to gather around her. Women and children brought celebratory candies and threw them upwards into the air around the eagle, shouting “*Ceshu!*” – the exclamation used when a family member has gained something important (often the birth of a child, a good cashmere harvest, or in this case, an eagle).

Although characteristics that are valued in eagles are often intangible, in terms of the relationship with the human partner, and intrinsic, in terms of the eagle’s innate desire to hunt, that is not to say that close attention is not paid to the physical characteristics of individual eagles. There are minutiae that Kazakhs will take into account. When my eagle was trapped, she was compared favorably with a wrestler. Her broad back and thick legs were seen as indicative of her strength as a powerful flyer. She also had indentations on her talons, which were viewed as attempted bites from foxes, and thus proof of her desire to hunt them.

Additionally, eagles molt in a very erratic pattern over the course of several years, and it is often difficult even for ornithologists to accurately age a wild eagle. Kazakhs will pour over the slightest differences in feather color to ascertain an eagle’s age, with older and younger eagles being valued for different reasons. In falconry in the United States and Europe, it is considered rude to touch another person’s raptor without permission. This was an etiquette that had been ingrained in me since I was a child with my first hawk. I am sure I twitched and groaned when a large group of men descended on the newly trapped eagle to inspect her. They

picked up her feet and counted the scales on each toe (seven). They noted the slight nicks in her talons (from fox bites). They spread her tail feathers and poured over their exact coloration to determine her age (two years old). They felt her pectoral muscles to determine how fit she was and what her fat stores were like (fit and lots of fat). They removed her hood for the briefest of instants to determine how alert and bright her eyes were (very). But what they were most interested in was her shoulders. Her back was broad. She was heavily built. Kukan grinned widely, “Lauren, she is like a wrestler! I think she will be *kiran*.” Again, *kiran* is a Kazakh word denoting a brave, strong eagle that makes a loyal hunting partner. Then, though still hooded, she suddenly flared her wings and whipped the air in anger. She was defiant and intimidating; full of life and vigor.

*Berkutchi* never name their eagles. There is an extensive Kazakh vocabulary for each year of an eagle’s life and its characteristics (particular feather coloration, mentality, etc) and so an eagle is usually referred to as “the second year eagle” (*turnik*) or “the brave eagle” (*kiran*) or sometimes just “Kukan’s eagle” (*Kuka berkut*). I have always named my birds of prey, and found it a very difficult habit to break. Inspired by the nightly starry display in Daluun, I decided to name her for the bright band of light that was especially clear on moonless nights. The Kazakh word for Milky Way is “*aspan alema*” or literally, “the sky’s road”. Though among my informants I called my eagle *turnik* for her second year plumage, privately, I had taken to calling her Alema.

From Trap to Partnership

How does one take a newly-trapped wild eagle and convince her to be a hunting partner? Here I will outline the steps from a methodological point of view. In chapter three and four, I will delve into the theory behind the method, but the purpose here is to orient the reader as to mechanics of how Kazakhs train eagles.

As soon as an eagle is trapped, it is hooded (so she cannot see), anklets are placed around its tarsi (the lower part of the leg) and connected to these anklets are jesses and a leash (long leather straps). Eagles (like hawks and falcons) are primarily visually oriented creatures. An eagle's eyes weigh as much as its brain, and the majority of the brain is dedicated to visual processing (Watson 2011). The purpose of the hood is to calm an eagle by covering its eyes. Kukan told me that, at night, sometimes the eurasian eagleowl (*Bubo bubo*) will prey on eagles. "The eagle and the owl are mortal enemies. During the day, the eagle can catch the owl, and at night, the owl can catch the eagle." Because of this, Kukan continued, "the eagle is very still and quiet at night, so as to not attract the attention of an owl."

When hooded, the eagle effectively considers it night and becomes very still. Additionally, without visual stimulation, the eagle is rarely going to take action. The hood helps you control the stress level of the eagle, and its mental state. The anklets, jesses and leash help you control an eagle physically. An eagle's legs are very strong and when the *berkutchi* tightly holds the jesses and leash in his gloved hand, the eagle can't fly away. Similarly, he can tie the leash to the ger or a heavy object, and if the eagle tries to fly, it'll be held back. This is important because, if an eagle flies away during the early stages of training, it has no incentive to come back

to the *berkutchi*. It doesn't yet understand the role of the human. It takes between two and six weeks before the eagle is ready to fly free, and the *berkutchi* is confident that she will return.

A new eagle is hooded and placed on a perch, tied to the side of the yurt, and left alone. As she is hooded, she will simply sit on the perch. Once a day, the *berkutchi* will pick up the eagle on his glove and take inside the yurt. There, amid the commotion of his family cooking, cleaning and going about their daily lives, he will place a meaty hare's leg on his glove next to the eagle's feet. He will unhood the eagle. At first, the eagle may be too surprised or stressed to eat. He will wait for ten or twenty minutes to see if she has any interest in the meat on his glove. If not, he will hood the eagle and try again the next day. She will be hungrier the next day, and perhaps bold enough to try to eat the hare's leg. Once she starts to eat the leg, a positive association with humans is made.

When she is eating comfortably on the glove, the *berkutchi* will ask her something new. Now, he leaves the eagle on the perch and, after unhooding her, offers his glove with meat half a meter away. The eagle must hop to the glove to get her reward. If she refuses, the *berkutchi* rehoods her and will try again the next day. If she hops, she gets to eat the hare's leg before she is rehooded. If she is successful in hopping to the glove, the next day the distance is doubled. When she will fly across the yurt for food, she is taken outside and a twenty meter leash is attached to her jesses. The *berkutchi* will gradually increase the distance he asks the eagle to fly each day, until she is coming about twenty meters instantly. Once she is flying that distance, he will mount his horse and ask her to come to his glove for a reward

while on horseback. The eagle may find this too difficult, in which case she will be rehooded without food and given the opportunity the next day. Once she comes to the mounted *berkutchi* the final step is the lure.

The lure is a fox pelt rolled around a bundle of leather to simulate a live fox. The lure is attached to a long line and dragged across the ground. The eagle, recognizing its similarity to prey, should instantly attack the lure. When the eagle is on the lure, the *berkutchi* will offer her a meat reward in his glove. She will step off the lure to eat the meat and is then hooded. The final step before hunting is to drag the lure behind a galloping horse. The lure is moving fast and requires a lot of effort on the part of the eagle to catch it. The *berkutchi* will stand on a hillside to simulate a hunt, and once rider is galloping and the lure in sight behind it, the eagle is unhooded. She should leave the glove, fly fast and strong to the lure, and enthusiastically bind to it. If she does so, then she is ready for a real hunt.

When hunting, *berkutchi* carry their eagles hooded on horseback. They ride from mountaintop to mountaintop to have a height advantage. Other helpers will ride across the low ground and attempt to scare foxes into the valleys between mountains. As long as the eagle has a height advantage, it has an opportunity to catch the fox. However, as soon as the fox runs up a mountainside and gets above the eagle, it cannot be caught. An eagle cannot fly uphill as fast as a fox can run uphill. Further, an eagle derives its strength from stooping at a great height and transferring the tremendous energy gathered during its stoop to the fox with one massive hit.

In a fox-rich environment, a *berkutchi* might see between one and three foxes a day. In a place where foxes are scarce, he might go days without seeing a fox. Typically, an eagle is only unhooded after the fox is flushed and the *berkutchi* sees it. However, it is recognized that an eagle has far better eyesight than humans. Sometimes the *berkutchi* will stand at the top of the mountain with his eagle unhooded. They are both scanning the vast area before them. If the eagle acts like it has seen a fox, the *berkutchi* may release the eagle purely on trust. This can work out well, with the eagle catching a very distant fox beyond the eyesight of any man. Or, it can be frustrating, with the eagle chasing a wildcat, hare, or even other eagles off into the distance. This disrupts the fox hunt while the *berkutchi* retrieves his eagle. It is a judgement call based on experience whether or not to release an eagle.

The following field note excerpt occurs after I had trained Alema using the method above. It had only been three weeks since she was trapped, and though she was ready to hunt, I was nervous to fly her freely. As foxes can be so difficult to find and because they can be very, very distant, for an eagle's first kill, she is often flown in conjunction with an "already made" eagle. In this case, I was to fly Alema with Kukan's successful eagle, *ana*. Once they killed together, and our role as *berkutchi* was cemented in Alema's mind, I would be ready to fly her alone.

Field note excerpt:

*I am waiting on the mountaintop. Below me the jagged shale stone covered mountain descends, and before me the snow covered valleys stretch. It is a frozen, barren, beautiful landscape. I feel as if I can see the curvature of the*

*earth from my vantage point, though no sign of life is visible - not one browned blade of grass nor one passing crow. Thankfully, I am not alone. I am sitting on a horse - a shaggy, sturdy gelding with frost-covered nostrils and a heaving belly. He's exhausted from the zig-zagging trek up the mountainface. On my glove sits a golden eagle. She's magnificent – cloaked in bronze feathers with golden nape, she has a deep yellow beak, eight talons as long as bear claws, and a seven foot wing span. She is ten pounds of sinew and electricity ready to spring into action. I am intensely nervous because I trapped her a mere three weeks ago. Three weeks ago, this turnik, this two year old female golden eagle, was touched by human hands for the very first time. Though I have taught her that if she comes to my gloved hand she will receive a food reward, today we are hunting. This will be her first free flight and her first opportunity to chase wild quarry. She doesn't quite understand what is happening. When I remove the hood for her to see the landscape, she fidgets on the fist. She looks far into the distance, as if she wants to catch a thermal and drift away. She seems uncomfortable being so close to my horse's head and opens her wings as if to catch the wind.*

*Thankfully, we are not alone. Next to me is Kukan. His eagle ana, is a four year old and very experienced female that has countless foxes to her credit. She looks experienced. Her feathers are sun bleached, her feet riddled with small cuts and scars. When Kukan unhoods her, she stands very differently from my turnik. She leans forward and bobs her head, scanning the valley. Her attention is focused on the landscape, she has no interest in catching the wind or flying off. She can anticipate what is going to happen.*

*I watch Kukan. His horse is perfectly still. My horse has begun to take a few steps. I need him to be still so I can focus on the eagle. I find it very difficult to hold the reins and manage the eagle at the same time. I see that Kukan is cueing his horse primarily with his feet. I try to do the same.*

*We are waiting for a fox to appear. Waiting isn't a relaxed state. Though it is often mind-numbingly, bone-chillingly cold, you must be primed for action. You must be ready to spring into life at a moment's notice - to send the eagle on its way, in an advantageous manner, and then gallop to its assistance. Coordination is key. The fox will likely be extremely distant, on the edge of human sight. As eagle eyesight is far superior, the eagle could potentially see the fox before us. Even if we cannot see the fox, if the eagle acts like she sees one I must release her. However, if the eagle is perhaps just trying to fly to another mountain or to play in the wind, she must not be released.*

*Differentiating between the subtle differences in how an eagle launches herself from the glove is vital. If you hold her back when you shouldn't, you will have blown your chance, something that takes enormous effort to produce. If you release her when you shouldn't, you will likely have to chase her to get her back, and if a fox does appear, she will not be in a good position to catch it. All in all, a berkutchi must be able to precisely interpret his eagle's behavior in a split second.*



*Our friend Biete, Kukan's cousin, is riding through the valley. Biete is older than Kukan at 71, and considers himself too old to fly his own eagle anymore. Occasionally, he helps to find and flush foxes for other falconers, and is an expert at 'reading the white book' – that is tracking animals in the snow. He has been following fox tracks today, and if one is going to appear, it will be here. Suddenly, Kukan's eagle explodes off the fist. In a flurry of quick, powerful wingbeats, she is off and cutting through the sky. I don't see the fox. Neither did Kukan, I think – he was trusting his eagle's eyesight. Then, like a warm flame in the snow, I see fox. He is the only sign of life in the barren snowscape and his electricity is contagious. Almost immediately, I shed the layer of suffocating cold, and experience a surge of adrenaline. But my eagle isn't flying. However, she sees the fox now. She is interested. She stands on her tip toes and partially unfurls her wings but is unsure. Then she looks left and sees ana, now a feathered missile hurling towards the fox. That's it, turnik makes the leap and gives chase.*

*Once an eagle is airbourne, all sorts of strategies can come into play. Eagles are often highly individualized with how these choose to execute their attack on a fleeing fox. Some prefer to power out level until directly over the fox, and then stoop vertically, while others prefer a long shallow stoop from their starting point. It is endlessly variable, and in many ways, that is what can make it endlessly exciting. Ana has a particular way of flying. She likes to dive sharply and then, when close, use the momentum to pitch back up before rolling over again for the coup de grâce. It is a distinctive and skilled way to fly. As ana began these maneuvers, I watched my eagle begin to mirror her*

*movements. Ana pitched up – turnik pitched up. When ana rolled over and slammed into the fox, turnik did precisely the same and they hit it like a one-two punch.*

*Kukan shouted in excitement. “They caught it! Let’s go!” I gather up my reins with sudden concentration, and try to follow Kukan down the mountain. It is steep, and is nothing but snow studded with shale. I can’t believe the speed he and his horse are moving. They are half sliding, half galloping directly down the mountainside. I’m too nervous, and instead dismount and, grabbing the leather lead, half-slide half-run myself down the mountain with my horse following behind. Once the ground begins to level out, I remount, and move up to a canter. Several hundred yards out I can see a red and bronze colored tussle. Kukan is nearly there. He leaps off his horse and into the struggling fray. After a few seconds, during which he must’ve dispatched the fox, he relaxes, gently picks up his eagle off of the fox and sits nearby.*

*When I arrive I see my turnik on the now-dead fox. She is excited. She is squeezing her feet on the pelt and alternately bending down to pluck fur and look up at me. This is an important moment. Again, she is unsure. In the wild, any animal that approached her on a kill had been trying to steal it from her. She wants to eat, but doesn’t know what I intend to do. I remove a hare leg from my pocket. Its fresh, I tear away some of the fur to reveal bright red meat and make it look as attractive as possible. Then I get on my belly and crawl up toward her. I am slow, non-threatening. I look over to Kukan for*

*approval – he nods and encourages me forward. I place my glove on top of the fox carcass at the eagle’s feet. Her hackles flare up. She’s upset that I am touching her kill, but then notices the meat. Tentatively, she bends down to take a bite. I don’t move. Another bite. Then I inch my gloved hand backward ever so slightly. To get a better grip, she lets go of the fox carcass and steps up to my fist. She is now eating the hare leg enthusiastically. The fox is forgotten. As soon as she takes the last bite of hare, I put the hood on. For her, it is now dark. Darkness is calming to an eagle. Her crop is full – she has been viscerally rewarded for flying hard and catching a fox. She fidgets a moment, then shakes her feathers all over – a sign of contentment – and becomes still. “Good finish!” Kukan says. Biete arrives, and we recount the flight. “You see Lauren, you have a teacher and your eagle has a teacher.” He raises his hands and mimics both eagle’s flight pattern. “Ana taught turnik what to do.” I nod, smiling like crazy. I am so pleased with her progress.*

*Biete takes his knife and carefully removes the front legs of the fox, from the elbow joint down. He hands them to me. “For you. For your hunter’s hat”. He then proceeds to tie the carcass behind his horse’s saddle. There is a strict hierarchy about who has the right to a fox when it is caught. The falconer who caught it is actually the least entitled. First, is the person whom helped find and flush it, then the falconer who’s eagle was not successful, then only if enough are caught, can the falconer bring his entire fox home. But the front legs, which are believed to possess the finest, softest fur, always belong to the falconer that caught the fox. The bushback tamack, a falconer’s*

*traditional hunting hat, is made exclusively from this fur. It takes many catches to have a sufficient amount – thus having one is an important sign of success. Technically, Kukan should have gotten these legs, but I sensed he was happy that my eagle had taken its first step towards proving herself a kiran (a naturally brave eagle). We remounted our horses. I carefully tucked the front legs in my saddlebag. Both eagles were statuesque on the fist. I was looking forward to the leisurely ride home after those taut hours of tracking and mountain climbing. Kukan and Biete began to discuss whose homes we should visit first to rewarm ourselves with tea and share the day's success...*

*December 1<sup>st</sup>, 2009*

## Hunting Mechanics

A week after those events, Alema caught her first fox on her own. From that point forward, I was considered a *berkutchi*. With Kukan's guidance, I had taken an eagle from trap to successful hunter. The remaining three and a half months of winter we spent hunting, together and with other *berkutchi*, 3-4 days a week. Horses are the limiting factor. The horses work harder than any other member of the hunting team. They are the ones scaling the mountains with significant weight on their backs. As hay and grazing is a scarcity in winter, the horses require significant recovery periods after a few days hunting. Over several weeks of hunting with eagles, the horses will become quite thin. That is when they are released back to the free-living herd to fatten up, and other horses are taken up for riding. During the course

of the hunting season, we'd go through 2-4 horses each, dependent on how hardy each individual horse is.

An area can only support a limited number of foxes. Once a few are caught, *berkutchi* tend to travel to other areas between 15-80 kilometers from home to hunt. In each new location, Kukan and I would stay with friends or relatives, who would host us for several days and accompany us on the hunt to help scare foxes. In many ways, hunting with eagles is a communal activity, and why most men, even if not *berkutchi* themselves, understand how to hunt with an eagle.

During the 2009-10 winter, Kukan and I caught roughly 35 foxes – 10 for Alema the *turnik* and 25 for *ana*. In the spring after the hunting season had finished, Alema died suddenly of an unknown ailment. As little medical treatment is available for humans in the region, there is nothing for eagles. I climbed the tallest mountain at Kukan's 'spring place' and buried Alema, wrapped in felt as Kukan urged me to do, there.

When I returned in 2012 as a PhD student, I flew Kukan's Ana – who was now six years old. Catching foxes provides visceral satisfaction and something tangible for your efforts. But my second hunting season with Kukan, I was beginning to understand why he sometimes viewed the fox as secondary to his enjoyment.

"Lauren I enjoy watching my eagle fly strongly. I have caught many foxes, but now I enjoy more the eagle than the fox. If I only wanted to catch foxes, I would buy lots of traps."

In this field note excerpt, I had just watched spectacular flight – and marveled at how privileged I was to have witnessed it, successful hunt or no.

Fieldnote excerpt:

*These men, these old cowboys, are a dying breed. Sure, there will probably always be men with eagles, but men who live and breathe wild-trapped eagles, who venture out in the snowy worlds in search of foxes, whose habits they have intimate knowledge of – and they catch them in vast orchestrated dances across the sky – these cowboys are a dying breed. The three patriarchs of this cluster of homes – Beite, Chukan, and Kukan – are all old, few of their sons (only Biete's one son) is taking it on.*

*Had an incredible flight yesterday – the kind I live for. Chukan and I were on the mountaintop while Kukan walked the valley below. Instantly with goshawk-like intensity, the eagles bolted. So immediate I had no time to even consider if I wanted to hold the jesses. Where was the fox? There. Streaking across the valley, the fiery red oblong spot crossing the distance, running full out. Ana was the more serious of the eagles – she powered out, kept 300 ft of height, got right over, and did a vertical teardrop stoop. Oh it was beautiful! Reminded me of dear Alema. Down, down, down...they connected, rolled – she had him – and then he was free and she was back in the air. A miss! But what a flight.*

*December 30<sup>th</sup>, 2012*

Factors that determine an eagle's motivation to hunt:

These are four factors that can affect an eagle's behavior: Condition, appetite, confidence and weight. Kukan went through great lengths to help me understand each factor and how I should use it to determine what to feed the eagle and whether it should be hunted that day. Condition refers to the muscle build of an eagle. In lay terms, how 'fit' they are and their capacity for aerobic and anaerobic activity. A just trapped eagle is in very good condition, as is an eagle at the end of the hunting season, after it has had several months of consistent flying. An eagle that has had its weight dramatically dropped, or has been molted (eagles are not flown during the summer when they are molting) and is at the start of the hunting season (having sat, inactive, for half a year) is in a state of low condition. One way to determine this is to physically feel parts of the eagle, places where built muscle is apparent and where fat is quickly deposited and removed. These points include the keel, the thighs, and the neck. The keel is the keel-shaped bone prominent on the breast. How 'fat' or 'sharp' it feels can give you an idea of condition. The top of the thighs can additionally. Finally there is the neck. These are meant to add information to a *berkutchi's* assessment of an eagle's condition, and rarely on their own would preclude an eagle from being flown. Every time before we flew, Kukan would ask me to feel his eagle and my eagle, and ask what I thought. If the keel felt "fat" and my eagle didn't put in much effort to catch a fox, then I would know to slightly reduce her weight for the next hunt.

Appetite is another factor. Although wild eagles have periods of gorging and fasting, *berkutchi* feed their eagles daily. By feeding a set amount of food daily, in addition with a high metabolism from frequent flying, the appetite is stimulated. Even if the condition or numerical weight isn't what one wants, if one can anticipate that an eagle will have an appetite that can be enough for it to hunt effectively. Even if we knew there were several days in a row that we couldn't hunt, Kukan insisted that I precisely feed the eagle each day in preparation for creating an appetite for the day we were able to return to hunting.

Confidence and routine are others. An eagle that has had many days of successful hunting, especially regularly, will be more keen to hunt because it is confident and will be following its routine. Eagles always perform best when they've been performing the desired behavior regularly. Routine is very powerful with eagles, just as powerful as hunger. In February, after we had been flying consistently since November, the eagles expected the hunt, knew the routine, and would hunt in circumstances that they might not earlier in the year. When other signs had me worried the eagle was too fat, Kukan taught me that the routine of hunting for weeks on end could supersede other factors.

Finally there is weight. This is the number that the eagle weighs were you to put her on a scale. In western falconry this is the most commonly used metric to assess hunting readiness. This is not a common metric used by Kazakh *berkutchi*, but sometimes is. It is fraught with danger as weight can fluctuate dramatically depending on muscle mass and does not account for appetite, confidence or routine. It is almost always better to fly at a higher weight, as these eagles have



more energy. However, if they are lackluster in their pursuit of quarry, this could be through a lack of hunger which could be projected through a high weight. It can also be hazardous because eagles at a high weight and a low weight sometimes behave the same, and if one kept reducing the weight of an already low eagle, death could follow.

Three main kinds of food are fed to eagles to increase weight, maintain weight, or lower weight. If an eagle is deemed 'fat', food of low nutrition is fed. The preferred food for this is washed sheep or goat's lung. The lung is filled with water several times until it takes on a white color and most blood has left it. Then it is sliced up into very thin pieces and again washed. Finally it is fed in a bowl to the eagle. If an eagle is performing well and weight should be maintained, often fox meat is used. This meat is fed in water, but is not washed – the blood remains. If an eagle is suspected to be in low condition, hare meat is given. This is the richest, most nutritious meat. It is deep red color and very bloody. This was a nightly routine for Kukan and I. Kukan would say to me after we returned from a hunt, "First the eagle, then the horse, then the *berkutchi*". Meaning, once we finished hunting for the day we first had to feed the eagle and put her away, then feed the horses and put them away, and only then could we take care of ourselves. Kukan would quiz me on how my eagle flew, and we'd deduce what kind of meat should be fed that night.

Eagles also cast with frequently, sometimes daily. This means that all indigestible material – bones, fur, keratin is balled up and regurgitated by the eagle. If an eagle

is seen to be fat, another strategy is to feed lots of casting material. This is thought to clean out their system, and work it quite hard, but for little nutritional reward. It's a *berkutchi's* job to balance all of these factors and determine when the eagle is most fit to fly, and how to arrive at that point.

### Illustration of Eagle Behaviours

A *berkutchi* is also eminently capable of reading the body language of his eagle. Rather than relay in descriptive terms, I feel illustrations would best capture the subtle ways an eagle communicates with her *berkutchi*.

### Distrust vs Trust

Kazakhs say that, when alone in nature, eagles often have to fight for their food. When an eagle catches an animal, sometimes wolves, other eagles, or vultures might try to steal the kill. Naturally, eagles are very wary and feel vulnerable when on the ground with something they have killed. Their instinct is to protect it. They do this by raising their hackles, covering the kill with their wings (mantling) and displaying aggressive behavior (even leaving the kill to attack a perceived threat). Thus, how a trained, hunting eagle behaves on a kill is a good indicator of its perception of its human partner.



*Image 2 – Distrust*

In Image 2, a female golden eagle is displaying distrust. She has caught a hare – her hackles are raised, she is mantling, and she is looking askance at the human with her head down; a threat posture. She is fearful that her kill might be stolen and feels compelled to protect it.



*Image 3 – Trust*

In Image 3, the eagle has a markedly different posture. Her wings are tucked in, her feathers are slicked back, and she is allowing a human into the immediate area of her kill. Though her head position might appear similar to the above photo, here she is focused on the fox rather than an approaching human. This eagle also understands that a person is able to subdue the fox for her, dispatch it, and eliminate the threat of a bite. Kazakhs often force their riding whip into the mouth of a fox that has been caught – this gives the fox something to bite other than the eagle. She also understands that she will be rewarded.



*Image 4: Trust – acceptance of a food reward and willingness to give up fox*

An eagle that trusts its partner is also willing to give up its kill. This goes against every natural instinct an eagle has – it is an amazing indication of partnership. The Kazakhs place a red, bloody piece of meat on the glove and effectively “trades” the eagle this piece for the fox kill. The trusting eagle shown in Image 4 is willing to step off the fox and relinquish it, as it understands that it will be fed and rewarded. This is beneficial to the falconer as the fox pelt will be relatively undamaged. However, the distrustful eagle from Image 2 would not do this. She rather would try to drag the hare away from the *berkutchi* and eat on her own.

### Fearful vs Relaxed

Sometimes an eagle’s state of mind can be subtle. It is important that a *berkutchi* learn to decipher when an eagle is in a state of fear and when she is relaxed. That way, he can avoid situations where an eagle is likely to be afraid and create situations where an eagle is likely to be relaxed.



*Image 5 – Fearful*

This is a newly trapped eagle in Image 5, and one of the first times she is on a hunter's arm without a hood on. She is afraid. She is holding herself away from the hunter, feathers slicked back ready to fly if necessary. She is staring directly at the hunter, wary of what his next move might be. She is also gripping the glove very tightly. All eagles will be fearful at first, but it is important that in such a situation a positive component is provided. Here, for example, she might be given some meat to eat on the glove. Thus, being near the hunter can be a good experience.

*Image 6 - Relaxed*

In Image 6 the eagle is in the same situation but relaxed. Her feathers are fluffed up, her feet gently gripping the glove, and she is looking around at the landscape and is not focused on the hunter or his actions. When an eagle is in a relaxed state, she is a far better hunter. She is focused on what prey might be out there, not worried about the people around her.

### Stressed vs Content

Even when not being trained or flown, it is important to assess the mental state of an eagle. Most of the time and eagle is sitting hooded on a three-legged perch (*tor*).



*Image 7 - Stressed*

This eagle in Image 7 is stressed. Her mouth is open and she is breathing hard. An eagle can quickly overheat, so she is holding her wings away from her body. They are drooping, a sign of tiredness brought on by stress. She is trying to “see through the hood” and look for a place to fly to. An eagle in this state is not in a good frame of mind to be trained. Before any major training can be done, this issue must first be resolved.



*Image 8 – Content*



Image 8 shows a contented eagle. This is how an eagle should be sitting when not being trained or flown. She is fluffed up, her feet are covered by her feathers. One foot is likely tucked up. She isn't focused on anything and in a relaxed state. This is an eagle that will be very approachable for training.

### Aggression vs Acceptance

Sometimes, when an eagle ceases to be fearful of people, they can become aggressive. Just as eagles are used to protecting their food from other predators in nature, they are experienced themselves at stealing food from other predators. Most eagles, at some point, will try to bully their human partners out of food by showing aggression. If the hunter is intimidated and tries to appease the eagle by feeding it, he can inadvertently reinforce the aggressive behavior and end up with an eagle that is unmanageable. This is one key reason why Kazakhs believe a person's character is very important to be a successful *berkutchi*. One can not be intimidated by an eagle, which can hurt a person quite severely if it wishes, but at the same time, one can not try to dominate the eagle, which will only create stress and fear. Any aggression from the eagle must be ignored. Soon the eagle will learn that it is not possible to bully food from its human partner and will cease such behavior.



*Image 9 – aggression*

This young eagle in Image 9 has just been fed in the home and is displaying the precursors of aggression. She would like more food. She has raised her neck and stood up to a full height. Her nape feathers are raised and she is making eye contact with the *berkutchi*. She is thinking about footing or wing-whipping the hunter to get more food. The hunter is getting ready to hood her. This effectively “shuts down their conversation” and is a good method of ignoring potential aggression.



*Image 10 – acceptance*

A Kazakh will tell you that an eagle's head position is important. When her neck is craned, she is in a powerful, dominating position. When her head is down, she is not. It is common, especially after feeding when aggression can occur, to “pet” an eagle on the back of her head. This motion is called *cepa*. By doing this, the hunter is putting the eagle in a position of vulnerability. In nature, if an eagle's head is down, her neck is exposed to attack from predators – it is not a position she likes to take. However, if she allows *cepa*, she is acknowledging that she is accepting of her human partner. This is illustrated in Image 10.

Chapter Three  
Learning, Apprenticeship and Communication among Humans, Animals, and  
Between Them

*“Animals make us Human.”*

— *Temple Grandin*

While the previous chapter detailed the mechanics of trapping, training, and hunting in partnership with an eagle, the nuts and bolts of the human-eagle relationship, this chapter aims to delve into the nature of learning and apprenticeship among Kazakh pastoralists – specifically how the Kazakh philosophy of learning to interact with animals and eagles in particular fosters mutually beneficial interspecies communication, an essential skill for any pastoralist in the Altai. This learning is done in conjunction with complex layers of apprenticeship between both humans and non-human animals, which will be described and discussed in detail. Coy states that, “Apprenticeship, wherever it is found, is a variety of human relationship.” (1989: xiv) and while I agree, I will argue that it is also a variety of human-animal and animal-animal relationship.

My goal upon arriving in the field as a doctoral student was to deduce the nature of the human-eagle relationship in the Altai Mountains. I strongly felt that the best way to go about this was to apprentice myself to an experienced Kazakh master of hunting with eagles. As Coy explains in his classic work on apprenticeship: “What is apprenticeship? Apprenticeship is the means of imparting specialized knowledge to a new generation of practitioners. It is the rite of passage that transforms

novices into experts. It is a means of learning things that cannot be easily communicated by conventional means. Apprenticeship is employed where there is implicit knowledge to be acquired through long-term observation and experience.” (1989: xi)

This definition holds especially true this circumstance. Hunting with eagles is a tradition that is almost exclusively passed through kinship ties and apprenticeship (Simakov 1989). Although it is essentially a human engagement with the wild through hunting, both the eagle becomes an apprentice to the hunter, and the hunter an apprentice to the eagle. This seemingly contradictory behavior is mediated through the relationship between the wild eagle and the human partner. For a mutually beneficial relationship, the human must learn to interpret avian behavior, and the eagle must learn to interpret human behavior. Indeed, the Kazakhs call the eagle a "a mirror" to its falconer, a reflection of his best or worst qualities (Simakov 1998). This provides an invaluable window into how humans learn from and cultivate a relationship with the wild.

### Learning to Communicate with the Wild

My previous experience of hunting with eagles in Europe and the United States served me well, as I realized that although Kukan agreed to teach me his “family’s tradition of hunting with eagles”, there was little verbal instruction. My learning was meant to be observational and experiential, and I was expected to engage in my own trial and error. Luckily I could draw of my well spring of knowledge on

eagles and apply it towards the problem-solving nature of Kazakh-eagle interaction. However, I did not have that ability with any other species of animal that Kazakhs kept. I had little riding experience, and so horses were largely a mystery to me. I also had little experience with farm animals, thus goats, sheep, and cows (yaks) proved further mysteries. This put me at quite a disadvantage when it came to assisting with the day-to-day chores that involve animals around the homestead.

Children interact with dogs, cats, camels, cows, horses, goats, sheep and eagles from a very young age. They shadow their relatives as they go about their chores, mimic the actions of adults, and some of a child's first responsibilities involve animals. For example, one morning the men were up early, and had pooled every family's goats and sheep together into one large corral. There was much discussion going on between the men; they were determining which fifteen animals to slaughter for the winter. Nurshook, a four year old boy, heard this discussion happening and immediately ran out of his family's yurt and into the corral. He waded through the goats and sheep, rather comical in appearance as they were equal in height, and every so often would grab a goat by the horns and drag it back to the conversing men. At first the men would dismiss his choices, but as they became more certain of the animals that needed culling, they would instruct Nurshook to bring them a goat with certain characteristics. He happily obliged, and would dart into the herd to find an animal with the traits requested. Some of the animals he brought wouldn't meet the criteria and he'd be sent back, but some would. Soon, all the men were in amidst the herd with Nurshook selecting the 15 animals. It was fascinating to me because this young child displayed only eagerness

at being surrounded by animals and helping with a task. Nurshook was often wrong, and a four year old attempting to drag a goat by the horns is just as often dragged around the corral himself, but the adults were inclusive and patient while Nurshook figured out what was needed. In the Altai, the nature of learning to interact with all animals seemed to be in this vein.

When Kukan heard I had little horse experience, he borrowed a particularly tame horse from his nephew for me to ride, but that was the extent of any allowance for my inexperience. The risk of bodily injury was slightly reduced, but I was expected to figure out on my own how to keep up with the other horsemen and convince the horse to do what I asked it. This was a very long process for me, and it wasn't until the end of my first year in the Altai that I really gained some confidence in communicating with my horse. For months, I was always trailing the others on our hunting expeditions. I long had a fear of falling off the horse, or of it galloping uncontrolled across the steppe and taking me with it. Although Kukan told me these were unworthy fears, it took several falls for me to understand that it was a situation easily corrected, and several spooks of my horse for me to appreciate that the horse no more wants to run to the horizon than I do.

I had also assumed that communication with a horse was done through the reins, but I soon began to observe was that this was not the case, and neither was it practical. When you have an eagle on your arm and are actively searching for foxes, you do not have the dexterity to manipulate a rein. Instead, you must use your legs and your body weight to ask your horse to move in the way you wish it to. This was something that was so obvious to Kukan and other Kazakhs that it was

never verbalized to me. However, once I left the reins alone (and given up the illusion of control that I felt from it) and instead began using subtle shifts in my body weight and pressures from my legs on horse's flank, I found myself no longer trailing behind everyone else! It was cathartic to me – I vividly recall the first time that I was the first on the scene when an eagle caught a fox. So long had I always been the last to arrive! Rather than instruct me directly when I was struggling to keep up, Kukan and others gave me room to experiment and praised me when I figured it out (“Lauren, look at you in the front now, please lead the hunt!”). I feel that that is the same treatment children receive when learning to be with animals. In the United States and Europe, training birds of prey is formulaic. A mentor instructs a student on what to do with an eagle, and then they apply that instruction as faithfully as possible to the eagle. In the Altai, rather than apprenticeship strictly existing between a human mentor and their protégé, it also exists between the eagles of the mentor and protégé, and further, a reciprocal apprenticeship is acknowledged to exist between the human learner and their eagle.

After a newly trapped and trained eagle is ready to hunt, that eagle is flown on her first hunt together with an experienced eagle. During my fieldwork, my first hunt with Alema was done alongside Kukan and his experienced eagle, *ana*. The four of us waited at a mountaintop, and when a fox appeared, Kukan sent his eagle. *Ana* stooped powerfully into the valley in pursuit of the fox, and my new eagle simply watched at first. After several seconds, Alema launched and – incredibly – mirrored all of *ana's* movements. When *ana* pitched up to dive vertically onto the fox, Alema came from behind and also pitched up. They hit the fox like a one-two



punch. *Ana* directly influenced Alema's flight style, and demonstrated to Alema how to catch a fox with a human partner. No practice like this exists in western falconry, and I was shocked to see eagles so clearly learn from one another. Kazakhs recognized and utilized the potential of eagles to be teachers to each other, and not just to humans.

Additionally, when someone undertakes learning to hunt with an eagle, they also apprentice themselves to the eagle. A person's will can't just be imposed upon an eagle. The person must learn to read all the minute subtlety of eagle behavior and emotion and react accordingly in-the-moment. The eagle itself learns to interpret human behavior, and this is partly why Kazakhs so often say "an eagle is like a mirror that reflects the qualities of its human partner". For example, an eagle who displays threatened or aggressive behavior in reaction to its human, has undoubtedly been subjected to threatening or aggressive behavior by the human. Eagles are unflinchingly honest about what they have experienced.

Someone who has great skill in reading eagle behavior has acquired immense embodied knowledge. Kukan, when interacting with his eagle, moves like an eagle. He makes sounds that eagles make. He strives to communicate in subtle ways to his eagle by building on what the eagle already knows from its own kin. Over time, this is done without thinking. To watch a Kazakh interact separately with his horse, or with his eagle, or with his sheep, is to watch three entirely different bodily vocabularies express themselves. Kazakhs learn from their animals and try to transform themselves in that animal's presence. Some species require trust

(eagles) and some leadership (sheep) as the key to communication, but the Kazakh pastoralist is fluent in a stunning variety of animal communication.

This brings up an important point. Can you “own” an eagle? Are they objects to be possessed, or beings in their own right that inhabit and traverse the same world we do? Is it a predatory bird or am I a predatory anthropologist? Who objectives who in this situation – the anthropologist/Kazakh to forge a hunting partner, or the eagle who gains a human assistant that makes it far easier for them to hunt and survive?

An eagle’s time with humans is temporary, in fact, the entire arrangement is temporary. A kept eagle is seen as primarily under the care of a single person, but there is a sense of collective responsibility, both for the individual eagle and the wider community of eagles that inhabits the surrounding land. To elaborate on these points: names are not given to eagles. They are referred to by their age – indeed each year of an eagle’s life up until its twelfth year has a very specific Kazakh word. Most of these words are descriptive and in reference to the coloration of an eagle’s plumage at a particular age.

- 1<sup>st</sup> year – балапан (balapan)
- 2<sup>nd</sup> year – тірнек (tyrnik)
- 3<sup>rd</sup> year – тастүлек (tactylik)
- 4<sup>th</sup> year – ана (ana)
- 5<sup>th</sup> year – қана
- 6<sup>th</sup> year – жаңа

- 7<sup>th</sup> year – құм түлек
- 8<sup>th</sup> year – сұм түлек
- 9<sup>th</sup> year – қоңыр түлек
- 10<sup>th</sup> year – кәрі түлек
- 11<sup>th</sup> year – ақ түлек
- 12<sup>th</sup> year – ақырғы түлек

Although the eagle is brought into the domestic sphere and allowed to inhabit it in a way that no other animal in a Kazakh's life is, they have already been named by nature and that is acknowledged. After all, they'll eventually return to nature. Among falconers in Europe and the United States, these facts are taken as evidence that Kazakhs are callous and uncaring about their eagles. I do not think this could be further from the truth. They care greatly for their eagles. If one dies while in their care, they wrap it in felt for a skyburial on a mountaintop.

It was commonly said to me by dedicated *berkutchi* that, "I love my eagle as much as I love my wife." During the hunting season, a *berkutchi's* entire life revolves around the subtleties of the physical and mental state of his eagle. Eagles are seen as a community of beings that inhabit the same land with lives parallel to humanity, which sometimes intersect.



*\*Image 11 - A jealousy trap in use – an eagle has just wrapped herself in the net while trying to ‘steal’ the dead hare from the raven*

From the moment jealousy trap was successful (see Image 11) and I brought my newly-trapped eagle home to our collection of yurts, the entire extended family came to evaluate the eagle. Firstly, Kazakhs are very tactile. With all animals, touch is an important way for them to communicate. With eagles, touch is used to evaluate an eagle’s ‘condition’ – which is to say how robust its musculature and fat stores are. Whereas in the west, a scale and a numerical answer (for example, 9lb 6oz) is used to determine this, among Kazakhs, several places on the eagle are carefully felt. This includes the keel (the ‘breast bone’), the thighs and neck, in descending order of importance. Because of the intuitive nature of this method, often many people are asked, or rather expected, to feel an eagle and give their opinion on its condition. This can be quite helpful, because sometimes if you are

feeling your own eagle everyday, you may not realize a gradual decline in condition.

Eagles are also often passed around for others to handle and even fly, as part of a communal learning process. For example, when I first started to fly my new eagle, she was still nervous and fairly excitable. In addition, I was not an experienced horsewoman, and if I was not careful, the nervousness of the eagle and my horse could feed off one another, and I could find myself in a position trying to control two large, powerful animals. To help me, Kukan suggested that he and I switch eagles. For a few days, I was to fly his calm, well-adjusted eagle. I had never had someone hand me a trained raptor to fly before, and it was a strange invitation to me. However, it worked out very well. I was able to focus on good horsemanship and still practice the mechanics of hunting an eagle without worry. Kukan was able to give my eagle the best chance of catching a fox without fear of distraction. Though instructions were rarely explicitly given in how to work with a particular animal, if I seemed to be struggling, the situation was made easier for me, as in this example.

Another way that multiple people might interact with an eagle, is at the moment it catches a fox. In the United States and Europe, when a raptor catches its prey, it is usually given a wide berth by others in the field and only its particular falconer allowed to advance unless instructions are given otherwise. Among Kazakhs, whenever an eagle makes contact with a fox, it is expected that everyone try to get there as soon as possible, and whomever is closest helps to subdue and dispatch the fox. The reasons for this are twofold: first, foxes are dangerous. They have long

canine teeth and powerful bites, and this is their first line of defense when confronted with an eagle. It is the *berkutchi's* job to help prevent the fox from biting the eagle. Often, a horse whip is inserted into the fox's mouth. This gives it something to bite. Secondly, fox pelts are prized and sold. Fox pelts with talon holes in them and not nearly as valued. With these two very practical concerns in mind, it makes sense to allow others into the intimate sphere of eagle and prey. For me, when my eagle began to catch foxes and, because I was quite slow on horseback to start, others were the ones to arrive at the scene and pacify the situation – I initially felt as if I had been robbed of an experience. Soon however, once I had seen the consequences of a fox bite, and a ruined fox pelt that an eagle left to its own devices had torn to shreds, I began to look forward to the assistance. More importantly, I began to view the hunt as a team effort that not only included the horse, the eagle and I, but all my human companions in the field. Together, we were far more effective.



*\*Image 12 - Cerkbo, our scareboy for the day, was the first to arrive at the scene when my eagle caught this fox.*

There is one more example that bears mentioning of collective responsibility of eagles. There are, inevitably, times when a Kazakh falconer's attention is required elsewhere. Though he is usually in a position of overseeing livestock duties, sometimes he must go to attend to a situation himself. Kukan once left abruptly for several days to help find a herd that had been lost in a snowstorm. If not hunting, eagles are left at home. It is too much work to travel with an eagle if hunting is not the day's primary purpose. In this case, the eagle still needs to be fed on a daily basis and this is usually the job of the *berkutchi's* wife or his children. Even though they do not take the eagle hunting, they are expected to know how to care for an eagle, and be willing to step in should the situation require it. I was quite surprised

that, as quiet as women and children could be in regards to eagles, they had as much knowledge as any practicing *berkutchi*. This is because of the fact that an eagle's daily ration changes from day to day and is dependent on its condition. Eagles are fed different meats and amounts dependent on whether they are wanted to lose or gain weight – in order to do this the women must be able to correctly feel the eagle's body and assess the correct course of action. Though hunting is the purview of men, usually, the whole family participates in assuring an eagle's wellbeing.

Educating a child about eagles can begin very young. There was a two year old boy who had taken an interest in the eagles perched in his family's homes. Though he was never put in a position where he could be hurt by an eagle, he was encouraged to go through the motions and act out what falconers did with eagles. For example, I once saw him examining the large felt-and-leather glove his grandfather used to hold the eagle. He was encouraged to put it on his right hand. Kukan then told the child to, "go ahead and invite the eagle." The eagle was hooded and thus not able or willing to respond, but the child put an imaginary piece of meat on his glove, stood nearby, and immediately began the correct call, "Kaa, kaa! Kaa!" That was precisely how it would look were the child out hunting and trying to retrieve his eagle by asking it to fly to his glove.





*\*Image 13 - A young child learning to interact with an eagle.*

Not all children wanted to, or were encouraged to, interact with eagles. This was not a problem as it was generally acknowledged that not everyone should become *berkutchi*. But all children were expected to learn how to interact with the livestock. This similarly begins at a very young age and takes place in a very similar manner: acting out how the adults communicate with their animals. In general, learning is done by the nature of the thing they are encountering. Because so much of life revolves around interacting with individuals of different species, children must learn to – moment by moment – discover the nature of the animal they are interacting with. They develop a sensitivity to goats, sheep, horses and even eagles.

Interestingly, Kazakh herders teach their young herd animals in the same way that they might teach their children. Herd animals do not have to rigidly follow commands. They are encouraged to be social with one another and to explore their surroundings to a degree. They are rarely punished and rarely rewarded with food items – they are expected to gradually learn from trial and error – like children. Fijn states that, “I observed that a Mongolian herding family uses similar attitudes towards teaching both human children and young herd animals, not so much through punishment and reward, but in allowing them to learn through trial and error and example...It is important for the herd animals to socialize and bond with other members of the herd but just as important for the herd animals to accept humans as members of their social group.” (2011: 132)

D.G. Anderson writes of a similar attitude amongst the Saami reindeer herders: “The reindeer herding dog, like the Saami child, is treated roughly but affectionately, and given little negative feedback. Instead of being rewarded for unique, independent and innovative behavior, both dog and child ripen into maturity at their own pace, picking up skills as needed or desired” (1986: 10). The interesting parallel with eagles here, in terms of herd animals being encouraged to have social bonds with members of the herd, is that when eagles are flown in hunting situation by the *berkutchi*, eagles still maintain their relationships with the other communities of animals that inhabit the Altai. An illustrative example of this would be one February afternoon when Kukan and I were returning home from a hunt with our eagles. Kukan spied a hare and decided to unhood his eagle, Ana, and let her chase it. As is often the case with hares (and one of the reasons they aren’t usually hunted with eagles) it quickly made it to a

hole and safety. The eagle landed, and then over a nearby mountain ridge a wild male golden eagle came into view. Ana was intrigued. She flew towards the male, and he began a courtship display for her. This entails performing a dramatic rollercoaster-esque path across the sky. Kukan began dragging a fox pelt and holding meat on his glove in an effort to entice Ana to return to him. She paid him absolutely no mind, and was soon flying together with the male eagle. Courtship displays cover vast amounts of sky, and can carry on for hours. Kukan swore under his breath, told me to go ahead and go home, and rode off in pursuit of his wayward eagle.

At dark he returned to home with Ana on his fist, exhausted. She had flown with the male for the better part of an hour, but eventually landed on a mountainside. Kukan was able to ride up next to her and offer her a rabbit leg on his glove, which she hopped to his glove for. He then hooded her and rode home. Kukan was not angry with the eagle, nor did he begrudge her. In February, eagles start looking for mates to build a nest with, and she was merely being an eagle. He commented on what a beautiful thing it was to watch, and that he was worried she would choose the male eagle over him (a real possibility). Although an eagle hunts in partnership with you, it continues to look for cues and interaction with its own species.

I suspect that the Kazakh notion of temporality with eagles applies to many aspects of their lives. Due to the harsh nature of being a nomadic pastoralist in Mongolia, death is common and sometimes without reason. The focus of one's efforts is always on the now – *this* animal, *this* home, *this* season – rather than a future animal, home or season. There is thought and deference given to maintaining the status quo (i.e. not overhunting) but rarely multi-year plans. This status quo that is

preserved has aspects that are known to exist beyond what is directly experienced on a day-to-day basis. There are, for example, interactions between humans and eagles that extend beyond the scope of falconry.

Fieldnote excerpt - Transfer of knowledge

*I didn't realize it but Beka (age two) helps Kukan with many aspects of feeding the eagle and is encouraged. He retrieves the eagle bowl. He heats the frozen hood to warm it before placing it back on the eagle's head. He places the lung pieces in the bowl for the eagle to eat. Kukan asks him "Is that enough?" He answers in the affirmative. He is encouraged to say "Ka ka" near the eagle and holds the glove. This mimics how one calls the eagle back to the fist. This word literally ka, used when one wants an eagle to fly to their glove, literally means "to invite". The fact that the berkutchi is offering an invitation (rather than a command) says some for how Kazakhs regard eagles.*

*Thinking on this, I am invited to do very similar things. In many ways in my apprenticeship I am treated as a child. I don't think of this as condescending at all (I often need remedial instruction) but it wasn't until I watched this toddler learn that I realized my learning was similar. Kukan and others would observe me cut food for the eagle to feed in the evening, and ask me what I was doing, why I was doing it, and if necessary make minor corrections. They'd offer opportunities to imitate more complex things in preparation for attempting them (for example, working with boot leather in preparation for making hoods). Or Cerkbo, another berkutchi who came to*

*stay with us, once had just finished skinning the fox by shouting, "Tomorrow its your turn!" Its not easy to pull that skin off, I know. I agree that I'll give it my best tomorrow.*

*Something interesting I've noticed today is that Kazakhs do not give names to animals, but they give animals as names. For example, a favored horse, eagle, or even dog is referred to in a descriptive manner. For eagles, this is typically by its coat color, for eagles by its age, and for dogs by its owner. However, people are very commonly given animals as names – Akmaral (white doe) Botakuz (baby camel's eyes) and Berkut (eagle) are all names I encountered in this family.*

*January 6<sup>th</sup> 2013*

Fieldnote excerpt – Children imitate many roles

*The children really are remarkable. The kids (ages 4 and 8) imitate their parents so much (with eagles, livestock, and now, inviting guests in the home), it really is revealing. Igirum, Tashala, and Desha led me into their home. They pulled up a tactai (chair), ordered me to otor (sit). They did this all by the fire. Desha said, "Yu julua!" (warm house!) with pride. They pulled off my gloves, hat, neck warmer, jacket and neatly folded them on the bed. After tea, Igirum came up to me, handed me a comb, sat down in front of me as one would for a hairdresser and said "Alge" (let's go). I had given her a hairband previously and she wanted me to redo her hair with it in it.*

*I also marveled at how children are entrusted with tasks we in the west would never give them. Three year old Bope is peeling potatoes with a knife or retrieving hammers and other tools for her parents. Igirum, only four years old, left to climb a nearby mountain on her own. Eight year old Desha and Tashala are herding sheep and traversing mountainsides. They are responsible for moving cows and other large animals. In fact, I walked in to find that Bope had cut herself with a knife (Koum? (Who did it?)) I asked and she responded Min! (me!)) She was nursing it and tying a rag around it. Rather than cause concern among the adults, it was viewed as a useful learning experience for Bope.*

*The last several days we've been having dinner – the entire encampment – at another home. Everyone crowded in – two massive beshbarmak plates with prayers before. I'm humbled that I am always put with the men in the place of honor – served tea, etc right after Beite. The conversation is very interesting – I wish I could pick up on more. On eagles, foxes, falcons (“I saw a white falcon today. White!” Jaiken said). In contrast with ravens, sightings of white birds are often a good omen. Dinner conversations almost always revolved around animals, whether it was livestock, hunting expeditions, or observations of animals around the encampment.*

*December 31<sup>st</sup>, 2012*

Fieldnote except - Mishap learning

*I have come to love my horse. A large, sturdy gelding with a chestnut body and black socks. He was fast, he was gentle, and he learned. He didn't scare,*

*and was mostly comfortable on his own. This season I took to riding and holding the eagle quick. I even experienced an incident where my horse tripped in the snow and I was thrown. I did everything right in those few seconds. I got my feet out of the stirrups and rolled away. I held onto my eagle who flapped about a bit but was quick to regain. My horse was fine, too, and I hopped back on. What a relief I can react properly in moments like that.*

*What I wasn't so good at, I've come to realise, is the footwork required to navigate smooth frozen rocks located on cliff faces. I take for granted just how incredibly nimble the locals are. They deftly jump from rock to rock on those smooth cheap leather boots with rubber soles nails in. I have those expensive Kazakhstan over-knee boots. Though they are wonderful for warmth and riding, they are not good for climbing. Scooting over rocks on them is supremely difficult.*

*We went to the land of red rocks early the other day. It was that place where I caught my first fox, and where the landscape looks as if a giant hand had dropped the stones from the sky. These huge red hued boulders are scattered across this landscape. With all the hiding places the boulders provide, foxes are often abundant here. I was directed to climb atop a huge pile with Kukan's eagle ana. Ouni and a young man climbed before me. They managed it with little trouble. I could not. I was scared, but I tried. It was especially hard for me to do that and hold my glove steady. Ana began flapping quite a bit, and I knew a bate (an eagle's attempt to fly when hooded) was likely*

coming. But in general, she rarely bated. I used that gloved and eagle hand for leverage and then, in a split second, she bated while my grip was relaxed and I couldn't prevent her from leaving. She took off, hooded, across the landscape. Oh my God. I was immediately horrified. Horrified. "Oh my God. I'm so sorry. I'm so sorry." I kept repeating over and over. My face was red hot with embarrassment. I remembered that Kukan's favorite eagle, ever, had died this way. She had hit a rock somehow when hooded and accidentally loose, and killed herself. I watched ana fly far and then flutter down. She landed in an accessible place on a similar pile of rocks. "Ohhhh" Ouni said. Bless him - it was not judgment laden. Ouni handed me his eagle, instructed I hold the jesses tight, and went off to retrieve ana. He did. I still never made it to the top of the rocks there. In the beginning they would goad me to the tops. My shoes however, with as slick and frozen as these rounded surfaces were, couldn't safely navigate the terrain. I had to refuse to their insinuations that I continue. They really do have a devil-may-care attitude towards these things! As terrible as the entire situation was, Kukan merely laughed good-naturedly and we carried on our way.

This is a common reaction. I remember one time in my first year, when I had Ana as Alema was being slightly difficult, when I completely messed everything up. Everything. There was a fox - it was a great slip. I had hardly seen foxes at that point. In my excitement and anxiety (at flying his eagle) I got completely worked up and the eagle ended up on the ground, unhooded, three feet from the horse and the fox disappeared. Again, I felt terrible. Kukan merely laughed. I did not feel I was being laughed at, just the situation



*laughed at. It really made me feel better - I had been preparing myself to get yelled at. Later that night we even told stories of when things had gone horribly awry. One time Ouni, in his youth, had a fox run right up him. This never happens. Never. Slips are always extremely distant. It is the nature of an animal, its wily nature and the fear it has of humans, that you never get a close slip. But this fox was close and was running right for Uni. He tried to slip his eagle but "his eagle's ropes got tangled with his horse's ropes" and he could not. He said something like, "I'll get it right the next time!" to Kukan and Kukan said, "Hah! There isn't going to be a next time! Slips like that don't happen!" I thought Uni was a brilliant hunter - that made me feel better too.*

*December 10<sup>th</sup>, 2012*

## Animals in Anthropology

There is little precedent within cultural anthropology regarding human-animal relations. Traditionally, animals were viewed in an objectified way; as things rather than free agents themselves. This has changed radically in recent years. In many ways, animals are a new kind of 'other' in modern anthropology. As Donna Haraway eloquently puts it, "We, as anthropologists, polish an animal mirror to look for ourselves and what it means to be human." The undeniably strong emotional undercurrent that informs our ideas of animality makes us consider our own humanity. (2007)

Philosophers and biologists concur that thinking about the lives of animals requires depth and nuance. David Hume declared that, “No truth appears more self-evident than that beasts are endowed with thought.” Even in biology, the idea of animals as emotional beings has gained a lot of ground. Culture, once thought to be the purview of humans alone, is acknowledged among certain animal species (extended family groups of chimpanzees). If humans are not uniquely cultural, how do we distinguish ourselves from the animals with which we co-exist? The idea of personhood is a slippery one, and the western reluctance to accord it to animals is often not present elsewhere.

Just as primatologists have claimed culture in chimpanzees, so have language, self-consciousness, rational thought and emotion been claimed in other species. Interestingly, Japanese primatologists happily recognize the personhood of their subjects. Samantha Hurn speculates that this because they are the “product of a culture that doesn’t set the human species apart as the only one with a soul.” (2012) Siberian Yukaghirs hold that animals possess qualities paralleling those of humans, which they come to view in the context of close personal and mutual engagement. This is precisely how the Kazakhs of my ethnographic research view eagles, horses, and other animals.

It is important to distinguish between challenging human exceptionalism and anthropomorphism. Recognizing the agency of animals is not equal to projecting our characteristics onto animals. When I go into depth about how eagles and humans understand each other in Altai, I do not mean to imply anthropomorphism is taking place. Fear, hunger, contentedness and confidence are fundamentally

different feelings to an eagle and a human. As Ludwig Wittgenstein eloquently put it, “If I lion could speak, we couldn’t understand him.” But we can acknowledge this shortcoming and attempt to mindfully interpret what it is like to be a lion through shared embodied experiences.

It is helpful to look at this from a phenomenological viewpoint. In such, agency is acknowledged through interactions. Among the Inuit for example, an animal becomes a person as a result of the hunter’s practical experience of that particular individual during a hunt, which follows from embodied interactions. To Kazakhs, an eagle becomes a part of a family, and to eagles, a human becomes a hunting partner, through mutual practical experience with one another as individuals.

People engage with animals in communication daily, and when survival is dependent on this communication, it is honed to an incredible degree. All behavior is communication. Eagles, in addition to many animal species, can easily read human body language. There is a universality in the meaning of eye contact, sudden or slow movements, submission and aggression. Eagles, with their great capacity for learning, quickly gain the ability to recognize patterns and anticipate human behavior once exposed to it. Though some Kazakhs are said to be able to better than others at intuiting an eagle’s body language, this knowledge is also passed down from *berkutchi* to *berkutchi*. However, in this instance, cooperation is always emphasized over domination. The onus is on the human to learn to think like an eagle, rather than the eagle to think like a human.

I would argue that animals can indeed be active subjects with a capacity to shape relationships with humans. That is to say a relationship with an animal can be 'intersubjective'. Intersubjectivity occurs when actors consciously recognize and attribute intentionality to each other. This mutual recognition of intentionality should be extended to animals. Many people in the west – those who hunt animals, who have companion animals, who live in close quarters to animals, who observe animals in nature – would concur. To most in traditional societies, especially those with roots in animism, the agency of animals has never been in question. This topic is important to acknowledge because it impacts how anthropologists think about animals and further, how anthropologists think their informants think about animals.

Primatologist Jane Goodall confidently asserts that: "Engaging in participant observation with wild animals in the wild or close to it CAN work." (2009) This hits upon the heart of multi-species ethnography. That is to say, the merit in applying our methodology used to understand human culture (participant-observation) toward understanding the lives of animals. Our interactions deserve to be viewed from the perspective of the non-human animal as well. In reality, humans exist within multi-species communities. We would do well to acknowledge this. Considering the life histories of individual animals (for example, an individual eagle's life before and after its time with a Kazakh *berkutchi*) can lead to greater understanding of its behavior, just as would be done with a human.

This is a great fit with a phenomenological, intersubjective, and perspectivist framework. After all, phenomenology is a focus on the experiential nature of

learning and the individual nature of emotional responses to an environment. Therefore, individuals who experience the same environment perceive and respond to it in different ways. In perspectivism, animals are thought to reveal their personhood through their actions and interactions with humans. It is through continued interaction with one another that both an eagle's humanity is revealed to the *berkutchi* and the *berkutchi's* animality is revealed to the eagle.

### Co-domesticity and Communication

An animal does not have to be domesticated, or even tamed for humans to have meaningful interaction and communication. Natasha Fijn describes the case of the Honeyguide bird: "Communication between different species by no means arises exclusively from the human's intentions and intelligent design. A good example of a symbiotic relationship between humans and animals is the Honeyguide bird (*Indicator indicator*), who shows individuals from the nomadic Boran tribe in Africa the location of a beehive through communication of specific vocalizations and by maintaining a particular flight pattern just above the height of the humans, until they reach the beehive, whereas in turn the Boran summon the bird through special whistles. The human participant benefits in this relationship from a source of honey, and the Honeyguide benefits from feeding on larvae once the nest has been cut open. The bird has not been tamed or trained by humans but both parties have mutually adopted the cooperative strategy over time" (2011: 20). Among Kazakh pastoralists, the sphere of human-animal communication extends beyond eagles, companion animals (such as dogs and cats) and livestock (from horses to

camels and yaks) to wild, free-living animals. Ravens, for example, will gather and caw loudly around an eagle that newly appears in their territory. If a *berkutchi* has lost his eagle while hunting, he can follow the objections of the ravens to the likely location of his eagle. Once the *berkutchi* gathers up his eagle and leaves the area, the ravens fall silent again. On one particularly windy day, when our eagles had missed a fox and were carried over a mountaintop and out of sight, and we sat pondering what to do, Kukan said, “Wait for the ravens”.

Tim Ingold, from his fieldwork among Lapland reindeer herders, writes of the trust between a hunter and his pursued animal, and that the animal allows itself willingly to be taken by the hunter (1988). I do find that there is an element of trust between Kazakh pastoralists or hunters and wild animals, or perhaps better put, an element of communication, providing each being behaves in the ‘correct’ way. To elaborate, a Kazakh hunter tries to “think like a wolf” or “think like a snow leopard” when he is pursuing Bactrian deer (*Cervus elaphus bactrianus*), argali (*Ovis ammon*), ibex (*Capra sibirica*), marmots (*Marmota baibacina*), or mountain hare (*Lepus timidus*). As Kukan explained to me, “If you behave like a wolf, then you can be successful in your hunt”. I took this to mean that if a hunter employs stealth, careful tracking techniques, and patience as a wolf would, then he would likely be rewarded with finding his prey and being able to get close enough to make a killing shot with his rifle. Were a hunter to bumble around aimlessly, or kill too frequently (“a wolf only kills what he needs” Kukan continued) then the hunter would not be rewarded. Prey would elude him; it would never ‘trust’ him enough to get close. This ‘trust’ also emanates from Nature at large. To practice good stewardship of ‘god’s herds’ as Kyrgyz herders refer to communities of wild,

free-living prey animals is to allow for good hunting when the herding family needs it. A similar attitude has been documented among Mongolian herders, “To Mongolians, Nature (*baigal*) holds the power, not humans. Herders cannot attempt to harness or conquer nature, because it is a part of the existence of all beings. The domestic is distinct from the wild but only in degrees. This degree is often gauged in terms of the extent of an animal’s association to humans. To be a co-domestic animal is to engage with humans and to be encompassed within the landscape, or co-domestic sphere, of the encampment (*khot ail*). Beyond the encampment, animals are perceived as being afraid of humans, but in their struggle for survival these animals have their own power and strength” (Fijn 2011: 219, 220).

In the following chapter, I shall unpack what it means to be ‘domesticated’, ‘tamed’ or ‘wild’, both in the field of anthropology and biology, but also among my Kazakh informants. An individual eagle has the ability to traverse the spectrum from ‘wild’ to ‘tame’ in its lifetime, several times even, while whole species can make the journey to ‘domesticated’ over generations or millennia. However, as apprenticeship and learning cannot be separated from communication, whether verbal or behavioral, and as this level of communication hinges on how one fundamentally interprets the meaning of domestication, I find it important to make a clarification here: I do not believe Kazakhs view domestication is a form of subjugation or domination, but rather, as a form of mutual benefit with other beings. In the previous chapter, I discussed how and why an eagle cannot be subjected to punishment or negative reinforcement – a spur or whip will find no traction with an eagle. One must think their way around the eagle, on the eagle’s

terms, in an attempt to convince it that they should hunt with you rather than fly back to the mountains.

Though it is of course possible to manage livestock through force, that was not what I witnessed with my Kazakh informants. Kazakhs manage their animals largely without fences, without compounds or barns or keep their animals in. Aside from the horses currently being ridden, horses are largely left to their own devices on the land surrounding the yurt. Camels and yaks are treated similarly, rarely tied or kept confined. The goats and sheep are kept in a corral (*kora*) at night, but primarily for their own protection from wolves and rustlers. During the day, they are herded to the best grazing, but again are attended for protection far more than any desire they have to scatter. All these animals, like eagles when they are being hunted, have the power and potential to leave permanently, but they don't. The reason isn't based in fear or starvation, but from fulfillment of their needs by Kazakh herders which is understood through communication. The same communication utilized when a *berkutchi* apprentices himself to an eagle, the same as when a child learns to herd the livestock.

Ingold argues against domestication as a form of progress, and notes that pastoralists view animals as servants, which are mastered, and subjugated as slaves. "Domestication doesn't entail making wild animals tame. Instead, it means replacing a relationship founded on trust with one 'based on domination'". He continues, "The instruments of herding . . . include the whip, spur, harness and hobble, all of them designed to restrict or to induce movement through the infliction of physical force, and sometimes acute pain...In those societies of the



ancient world in which slavery was the dominant relation of production, the parallel between the domestic animal and the slave appears to have been self-evident" (2000: 73).

I fundamentally disagree with this assertion. After all, were this true with Kazakh herders, the communication with animals would be entirely one-sided. It would be the human 'master' issuing orders to the animal 'slaves'. There would be no room for intersubjectivity. It is entirely the space that is created for an intersubjective experience that allows the apprenticeship with eagles and children who are growing up among the herd animals to occur. To address Ingold's mention of the whip, spur, harness and hobble on horses – these are temporary measures, not used on all horses (or even in a majority among my informants). Much like a hood for an eagle, or a leash to tether her – they are means to manage an animal before a rapport can be established, or in a situation that might be beyond an animal's ability to understand. For example, if a wedding or other large party is happening, all *berkutchi's* eagles will be hooded.

Although an eagle can have a good relationship with one person, a crowd can easily be overwhelming to an eagle, and to prevent stress the best method is to hood the eagle so it cannot see the crowds (analogous to a horse with blinders). Rather than a harness, a halter was often used among my informants (this is essentially a harness without a bit – and thus no means to irritate the sensitive inside of a horses' mouth), or when not hunting or traversing short distances, horses were even ridden bareback. Tools to restrict movement or to emphatically ask something of an animal are sometimes needed, but in reality are rarely used.

When I was working with an animal of any kind with my informants and it became visibly upset or agitated, Kukan always instructed me to change my behavior. We never forced the animal to change its behavior. For example, when the eagle was reluctant to chase the lure, I was told “Don’t look directly in her eyes, it is confrontational to her. Look away.” When a horse I was riding was reluctant to leave other horses, I was told, “He knows you are scared. You must be confident and the horse will follow your lead”. Again to emphasize, whether eagle or horse or yak – the vast majority of the time they are completely unrestricted in movement and have nothing save their relationship with the herders and their animal peers tying them to the area around the home.

To describe these interactions, and indeed nearly all the human-animal interactions of my informants, I quite identify with Natasha Fijn’s notion of co-domesticity: “My definition of a co-domestic relationship is the social adaptation of animals in association with human beings by means of mutual cross species interaction and social engagement. I intend to avoid the past connotations of domestication, in which the animals are necessarily restricted within a captive environment, or the reference to animals as economic commodities, purely under human control (2011, 19). Really, the ‘control’ model of domestication, as expressed by Ingold the past connotations of domestication that Fijn mentions above, are hampered by western bias. Really, domestication is the outcome of a series of complex relationships between humans and animals. Animals are actors themselves. There is some symbiosis, and certainly there is mutual benefit on the road to co-domestication. It’s been widely argued that dogs are the product of self-domesticating wolves (Fijn 2011) – wolves that came and fed on scraps left behind

by humans and, because they provided protection from predators, warnings of approaching hostile groups, or some other reason beneficial to the humans that left the scraps behind, the association grew.

### Songs and an Animal Vocabulary

Once, while riding with the *berkutchi* Onui to an area to fly our eagles, he started singing. It was just him and me, with our eagles on our gloves and trotting out across the steppe to the mountains where we would be hunting. It was a long ride – I'd guess three hours and some 40 kilometers, and we mostly rode in silence. Then, Onui started singing. It had baritone and confidence, rhythm and a cadence. I couldn't understand the lyrics, but recognized the words "horse" "mountain" "steppe" and "eagle". The phrase, "We are going to the foxes!" was repeated several times throughout the song. It seemed the horses picked up their pace from our previously silent ride.

Fijn corroborates this with Mongolian herders, "While out herding, or travelling over long distances, riders sing traditional long-songs that are directed towards the horse they are riding. The horse responds to the herder's singing by stepping in a 'more energetic manner'" (2011: 111). Another example of an animal-directed song I encountered in the evening after feeding the eagle its daily ration inside the yurt. No matter how successful a day's hunt is, the eagle is fed the bulk of its daily meal from a bowl, held by the *berkutchi* inside the home. Late evenings could be quite quiet, even with the entire family present.

On several occasions I heard *berkutchi* sing to their eagles after they'd fed, but before the family had gone to bed. In contrast to the long-songs of riding, these were soothing, perhaps with the aid of a *dombra*. Slow, more akin to a lullaby. When I asked Kukan about this he said, "Sometimes when I am happy from a good hunt, I sing my eagle to sleep at night". These subtle ways to elicit an emotive response from an animal are interesting, and not something often acknowledged in Western tradition.

Each animal has a specific vocabulary the Kazakh herder or hunter uses with them. Eduardo Kohn, observing the Runa of Amazonia speak with their dogs has coined this language 'trans-species pidgin'. For example, to signal a horse to canter or gallop, a loud, sharp '*chu*' is spoken by the rider. A soft, drawn-out "ksshu" is used to signal a horse to slow down. Very similar vocalizations are used by Mongolian herders (Fijn 2011: 115). While only directed towards an individual horse, there are a variety of sounds used while herding meant to direct the entire herd. To cue the herd to move forward the herder makes a lilting whistle, but to stop them the herder makes an abrupt guttural noise, "*Heyut!*". "These can further be broken down to animals of a specific age or gender. To move young kids or lambs into the *kora* a repeated "*zelee zelee*" is used. When observing a Kazakh herder who is "fully enculturated into herd society by means of interspecies communication" it appears effortless. Vocal and bodily signals combine to guide a herd, or to ride a horse or camel – the herder appears as a member of the herd, and the horse and rider as a single-minded animal.

Eagles are not exempt from this, and there are several instances of trans-species pidgin between eagle and *berkutchi*. First, as mentioned above, is the invitation for an eagle to fly from where it is perched to your glove. A sharp, “*Ka, ka, ka*” is uttered, and this can be accompanied with spitting on the meat held in the gloved hand. The purpose here is to make the meat appear moist and thus fresher and more appealing to the eagle. In the frigid winter environment of the Altai, eagles are loathe to eat meat that appears frozen or old. Second, is the sound used to get the eagle to stop doing something, usually to stop tearing at its anklets, jesses, glove, or to stop scratching its hood. This is a drawn-out, “*Ka-shhhhhew*” usually accompanied by a quick shake of the glove (if the eagle is on the fist) to throw her off her balance. A third sound signals to the eagle that you’ve seen a fox and she should look for it, or fly after it, if she’s not noticed it yet. This one is a very loud “*Ayy-ahh!*” Experienced eagles will leave the glove and start flying as soon as they hear this sound, even if they’ve not seen the fox yet. This helps the eagle gain as much advantage as possible, the longer she waits to pursue the fox after it has started running, the more difficult the fox will be to catch (he will have covered more distance or climbed a mountainside out of sight).

This brings up an important point of how eagle and *berkutchi* can come to be single-minded during the hunt. V Despret writes of this quality among horsemen, “Talented riders behave and move like horses...mere thought from one may simultaneously induce the other to move. Human bodies have been transformed by and into a horse’s body. Who influences and who is influenced, in this story, are questions that can no longer receive a clear answer. Both, human and horse,

are cause and effect of each other's movements. Both induce and are induced, affect and are affected. Both embody each other's mind" (2004:115).

The point when something analogous happens with eagle and *berkutchi* is at the critical moment of the slip – that is the critical moment of releasing an eagle after a fox. An eagle is usually held on the *berkutchi's* gloved fist when hunting. The hunter clutches the jesses, the leather rope that extends from each leg, in his grip. He can choose to hold fast his grip and prevent the eagle from flying, or with a slight relaxation of his grip, when the eagle chooses to fly the jesses will slip through his fingers and the eagle will be free in the air, in determined pursuit of a fox. There is great skill embodied in these few moments. If over many hours of hunting no fox has appeared, an eagle may become bored and simply try to fly to another mountaintop out of boredom. Kukan says, "She wants to self-hunt, since you don't show her any foxes."

It is critical that you recognize this, hold fast the jesses, and don't allow her to fly in this instance. Otherwise you will simply be chasing her across the mountains and the hunt will be ruined. However, the eagle's eyesight is six times greater than a humans (Watson 2011) and you must trust that there will be times that she sees a fox and you don't. In that case, you must read her body language, recognize her excitement, and release her on faith. If you only released your eagle when you yourself saw the fox, you would not catch many. Commonly, a single distant fox is all that might appear during a hard day's hunt – if a hunter doesn't take advantage of an eagle's superior eyesight, he denies them both many successful hunts.

When a *berkutchi* can recognize the cues from his eagle, they work together as one. An eagle that suddenly sees a fox becomes a spring. She is electric and loads her heavy ten or eleven pound body for launch – she pushes against the glove and looks for the *berkutchi* to push his arm upward and launch her into the air. When done seamlessly, two beings go from calmly scanning the environment to leaping into vigorous action. Eagle and hunter immediately start moving together, and when the eagle is in the air, the *berkutchi* and horse take off in pursuit. Although they are physically separate from the eagle, the *berkutchi* is always watching her, tied to her trajectory. He never takes his eyes off her, and trusts his horse to navigate the snow, ice and rock laden mountainside in an effort to follow the eagle and fox. If he sees the eagle and fox connect, it becomes all the more urgent to reach them and help the eagle subdue the fox. Once he has, and the fox is dead or has made its escape, the multi-species assemblage of eagle, human and horse becomes calm again. The *berkutchi* takes his eagle back on his glove, again borrowing her superior eyesight and the horse's superior speed, weaving them together with his superior intellect, which allows the *berkutchi* to truly become himself. Kukan related to me that, "To be without my eagle and horse feels as if I am without my wife and children. I am nobody".

John Loft, a dedicated British falconer, captured this sentiment well. Although I would argue with his 'thoroughly anti-social' assertion in regards to Kazakhs) in his poem, APOLOGIA:

*APOLOGIA*

*Hawking is useless,*

*Brings no advancement,  
Is economically negligible, ecologically neutral,  
Ethically irrelevant, and thoroughly anti-social.  
That's what makes it so attractive.  
Accomplishing the death of a lark is  
Too insignificant to register on the Richter Scale  
Of human endeavour  
Yet is the Enterprise that transports me to the platform  
Where I become myself. (1967, 1)*



## Chapter 4

### The Continuum from the Wild to the Domesticated

*"What does that mean--'tame'?" "It is an act too often neglected," said the fox. It means to establish ties." "'To establish ties?'" "Just that," said the fox. "To me, you are still nothing more than a little boy who is just like a hundred thousand other little boys. And I have no need of you. And you, on your part, have no need of me. To you, I am nothing more than a fox like a hundred thousand other foxes. But if you tame me, then we shall need each other. To me, you will be unique in all the world. To you, I shall be unique in all the world..."*

*The Little Prince, Antoine de Saint Exupery*

What does that mean – ‘tame’?

Taming or socializing as it concerns eagles, an animal which is not domesticated in the scientific sense, is fundamentally different to the taming of domesticated animals. This is not a distinction often made in the anthropological literature, but it is vitally important. In this scientific sense, a ‘domestic’ animal is not an animal that merely resides in the home, or area around the home of a human – it is much more. A domestic animal is the result of the selective breeding of a species over generations, usually for some specific purpose (i.e. meat, transport, companionship, etc). A commonly cited definition of domestication is Juliet Clutton-Brock’s: “A domesticated animal is one that has been bred in captivity for the purposes of economic profit to a human community that maintains complete

mastery over its breeding, organization or territory, and food supply” (Clutton-Brock 1987: 21). This is rather a narrow view among the many degrees of domestication and the many forms it can take. Additionally, this ‘control’ model of domestication is hampered by western bias. Really, domestication is the outcome of a series of complex relationships between humans and animals.

Domesticated animals are considered property in most cultures, including Kazakhs. To Kazakh pastoralists, wealth is measured in terms of herd animals that a family possesses. I discovered this when, after asking my informants how many herd animals they had, I realized by their embarrassment and reluctance to answer that I might as well have asked, “how much money is in your bank account?”

Domesticated animals often (though not always) can’t survive without human intervention or care, or at the very least, a human environment. A trait virtually all domesticated animals have been bred for is tameness. Namely, an animal’s ability to tolerate and even welcome human presence and interaction. This is because an animal that isn’t stressed by humans is more likely to breed, or feed, or do a specific task. It is the ability to socialize with people that is the key to tameness. In order to tame an individual horse, or cow, or goat, or dog, a person is able to rely on a genetic disposition for tameness that is innate within the animal.

Ingold emphasizes this aspect of domestication: “I do not mean selective breeding towards a form that is physiologically dependent on man, but the element of socialization of the animal into a human environment” (Ingold 1974: 524). Fijn writes, in this same vein, on the degree of tameness that herders prefer in their

ungulates: “Herders like animals to be quiet and placid but not too closely bonded to humans and reliant on them for survival. It is important for the herd animals to socialize and bond with other members of the herd but just as important for the herd animals to accept humans as members of their social group.” (2011: 132). A similar thing can be said in regards to eagles, and is the primary reason why Kukan and my informants preferred to trap immature or sub-adult eagles rather than take an eaglet from the nest. An eaglet raised by humans (and deprived of parental interaction) is forever dependent on humans for survival, it knows no fear, and it does not recognize members of its own species. These are not desirable traits in any animal, to a Kazakh. Kukan said, “*Colberkuts* (hand-raised eaglets) are useless. They have never been and can’t be good hunters. Ana (his four-year old eagle trapped on migration as a sub-adult) was already catching many foxes before I found her. She is *kiran* (a good hunter).”

To illustrate the powerful effects of selective breeding, in this case for tameness, and to understand that, in a Kazakh pastoralist’s mind, one could take tameness too far, it is useful to look at Russian scientist Dmitri K. Belyaev’s famous fox experiment. In Siberia, he took wild silver foxes (a variant of the red fox) and attempted to handle them and offer them food. Only foxes that were the least fearful towards humans and the least aggressive were selected for breeding. The result, after 40 generations, were friendly foxes that had floppy ears, wagged their tails, licked their caretakers, and generally sought out human contact (Goldman, 2010).

Selective breeding is essential to this scientific notion of animal domestication. Sandor Bokonyi defines animal domestication in the following way: “The essence of domestication is the capture and taming by man of animals of a species with particular behavior characteristics their removal from their natural living area and breeding community, and their maintenance under controlled breeding conditions.” (Bokonyi 1989: 22) Kazakh pastoralists cannot breed eagles in captivity, and therefore, Kazakhs cannot selectively breed them for certain traits. Eagles are the product of selective pressures in their non-human environment: prey availability, weather, landscape, etc. An incredible degree of tameness can be achieved in an eagle, but here a Kazakh must rely on his own ingenuity (using food association and positive reinforcement) to create it. Thus, although a cat and an eagle may both reside in a Kazakh’s home and welcome human interaction, there is a world of difference in how each animal came to be that way: one was selectively bred for tameness over thousands of years by humans, and the other was convinced to be tame by a dedicated human in a matter of months.

Juliet Clutton-Brock denotes a ‘tame’ animal by stating that, “A tame animal differs from a wild one in that it is dependent on man and will stay close to him of its own free will” (Clutton-Brock 1987: 12). I found the Kazakh definition to be similar. To a Kazakh, a wild animal (*acyou*) is one that will not come near humans, whereas a tame animal (*juass*) is one that seeks out humans and lives near them. Kazakhs don’t differentiate between domesticated animals and tamed wild animals. To them, an eagle can be equally *acyou* and *juass*. Fijn confirms a similar perspective among Mongolian herders: “To Mongolian herders, ‘wild animals’ are those that do not enter the domestic sphere of the encampment. Herd animals are seen as

part of the extended family....Mongolian herders view wild animals and plants as harboring great power, with a strong “spirit” ...The herders I spoke with characterized wild animals as those wanting no contact with humans, or those animals that are afraid of humans....To Mongolians the behavioral element of a fear of humans is a key factor as to whether an animal is wild” (2011: 204).

Additionally, *acyou* and *juass* are most often used to describe behavioral characteristics, rather than the scope of all ‘wild’ or all ‘domestic’ animals. Again, very similar to Mongolian herders: “There is a term for wild, ‘*zerleg*’ in Mongolian (this is the same word often used to mean “crazy”). It is my impression that *zerleg* is a term used by Mongolian herders for a behavioral characteristic, rather than in terms of a separate domain that is perceived as “wildness” or “wilderness”. Herders recognize that some animals can be wild (*zerleg*) and yet others can be tame (*nomkhon*) in their behavior.” (Fijn 2011: 202)

It should be noted that *acyou* and *juass* is not a one-way street. Once an eagle is tamed, it does not mean that it will always be so. In fact, it requires daily human interaction for an eagle to maintain its tameness. This is not unique to eagles, but is also an element of keeping livestock: “To remain ‘tame’ requires a constant social interaction with humans and is a crucial element in the co-domestic relationship between the herd animals and herders” (Fijn 2011: 139). When a *berkutchi* is preparing to release his eagle permanently, he will cease contact with her for several days in order to encourage an eagle to become *acyou* again. Throughout its time with a *berkutchi*, the relationship between human and eagle is an equal one and necessarily so. There is trust between human and eagle, but not

dependency. On its final day with a *berkutchi*, after a year or years of hunting together, the eagle is fed as much it can eat, and taken to the mountain nearest the home. She is launched from the glove, and often catches the wind or a thermal and soon disappears over the horizon. Many *berkutchi* speak fondly of released eagles that come back weeks, months, even years later to visit the yurt (Simakov 1998). The eagles simply pass overhead or perch nearby, far closer than a truly wild eagle would. Kukan told me of tossing some marmot meat to an old eagle that came to visit. She came down, grabbed the meat, and then carried on her way into the distance.

Herd animals are quite different, and are thought by Kazakhs to view herders as elders. Whereas it is close to a relationship of peers with eagles, it is almost a parent-child relationship between herder and herd animal. Natasha Fijn expands on this: “In some respects the herd animals in Mongolia are semi-feral, as they are not contained within fencing, ranging freely while grazing, and are able to live according to their inherent social structure. Herders can approach most of the herd animals while out grazing and come within a few meters, especially while on horseback. Herders may be dominant in a behavioral sense but the herd animals have an undeniable trust for the herder, through early habituation to their presence and frequent interaction on a daily basis, especially through daily milking. The herd animals’ early engagement with humans means that the herders are essentially accepted as elders.” (2011: 139-140) Kazakhs also perceive of herd animals (as well as eagles) as beings. They are all individuals, with their own personalities and characteristics. Though they are symbols of wealth, they are still beings capable of intersubjectivity with a herder or hunter. Fijn continues,

“Mongolian herders do not view the herd animals as objects, or wholly as economic commodities, but as “persons” ...In other words, Mongolian herders have a different perspective and attitude towards their herd animals compared with most views espoused in Western discourse, where an animal is perceived as an economic resource that can be made by humans for their own consumption”(2011: 18). Western views of animals, along with older anthropological definitions of domestic animals as simply commodities, shed little light on the complex multi-species communities of Kazakh pastoralists.

The interesting parallel with eagles here, in terms of herd animals being encouraged to have social bonds with members of the herd, is that when eagles are flown in hunting situation by the *berkutchi*, eagles still maintain their relationships with the other communities of animals that inhabit the Altai. An illustrative example of this would be one February afternoon when Kukan and I were returning home from a hunt with our eagles. Kukan spied a hare and decided to unhood his eagle, *ana*, to let her chase it. As is often the case with hares (and one of the reasons they aren't usually hunted with eagles) it quickly made it to a hole and safety. The eagle landed, and then over a nearby mountain ridge a wild male golden eagle came into view. Ana was intrigued. She flew towards the male, and he began a courtship display for her. This entails performing a dramatic rollercoaster-esque path across the sky. Kukan began dragging a fox pelt and holding meat on his glove in an effort to entice *ana* to return to him. She paid him absolutely no mind, and was soon flying together with the male eagle. Courtship displays cover vast amounts of sky, and can carry on for hours. Kukan swore under

his breath (“*Eken bassam!*” or literally, “By your father’s head!”), and told me to go ahead and go home. Then he rode off in pursuit of his wayward eagle.

At dark he returned to home with *ana* on his fist, exhausted. She had flown with the male for the better part of an hour, but eventually landed on a mountainside. Kukan was able to ride up next to her and offer her a rabbit leg on his glove, which she hopped to his glove for. He then hooded her and rode home. Kukan was not angry with the eagle, nor did he begrudge her. In February, eagles start looking for mates to build a nest with, and she was merely being an eagle. He commented on what a beautiful thing it was to watch, and that he was worried she would choose the male eagle over him (a real possibility). Although an eagle hunts in partnership with you, it continues to look for cues and interaction with its own species.

The reason that hunting with eagles is often a successful endeavor among Kazakh pastoralists, is that the *berkutchi* doesn’t attempt to curtail or manipulate the eagle’s natural behavior. There will be times, like the instance above, where you have little control, but it pays dividends in terms of allowing a reciprocal relationship and maintaining a healthy, motivated eagle. Among herd animals the philosophy holds true, “Manipulation in terms of behavioral modification is kept to a minimum, with herders taking advantage of the animals’ normal behavioral repertoire and predispositions....because Mongolian herd animals are not fenced in, the herd animals are free to engage socially. This lack of containment allows social hierarchies, bonds and learning to form naturally without limitations from lack of space or overcrowding.” (Fijn 2011: 141)



In an ethnographic account of rodeo in the US, Lawrence states that the horse encompasses the polarities of wild and tame. The process of “breaking a bronc” symbolizes “conquest itself, the subduing of the wilderness, the transforming of nature to culture through the process of taming that which was wild and that which was free, as it was enacted upon the American frontier” (Lawrence 1982: 223). I included this quote to note that it is the polar opposite of how Kazakhs view eagles. To a Kazakh an eagle belongs to the wild. To Allah. To Nature. The Kazakh merely borrows the eagle for a time. Of course, Kazakhs would not have a perception of taming the frontier – there is no frontier – only a place where they have always lived, with animals that inhabit the continuum from domestic to the wild.

Furthermore, to engage in questionable behavior or to fail to be a good steward of “God’s herds” may result in poor weather, little hunting success, and a dearth of luck. When our small group, led by Kukan, set out to trap an eagle for me, several days went by without even a sighting of an eagle. Soon there were whispers that perhaps someone in our camp did something “bad” which had sabotaged our chances of finding an eagle. Feelings of frustration grew until day fourteen, when finally Alema was trapped. Accusing eyes were suddenly gone and the feeling that someone was displeasing the spirits was forgotten. Although Kazakhs have both an Islamic and shamanistic tradition, as opposed to the Buddhism and shamanism of their neighboring Mongolians, the belief that nature itself hold the power remains true in both cultures.

## The Question of Domestication

As has been previously established, domestication, in the scientific sense, requires captive-breeding. It requires having absolute control over which individuals in a population are allowed to breed (Clutton-Brock 1987). The first captive-bred raptors were produced in the 1970s in the United States and Europe. Unlike breeding horses or cattle, breeding raptors requires large, isolated aviaries or precise techniques in artificial insemination (Bodio 2014). Captive-breeding of eagles has never been part of Kazakh culture or *berkutchi*, and is generally outside the means and knowledge base of most individuals in Central Asia. Over the four thousand year tradition of falconry in the region (Bodio 2014), each generation of eagles had to be taken from the wild, and was usually released back into the wild. *Berkutchi* were and are not directly controlling which eagles were able to breed.

However, it could be argued, that the presence of Kazakh *berkutchi* has influenced the Central Asian population of Golden Eagles. The vast majority of eaglets will not survive to sexual maturity (90% perish as juveniles – Watson 2011). The younger, immature female eagles are the eagles trapped by *berkutchi*, and over the course of the several years that they are kept, both their health and the honing of their hunting skills is of primary importance. These kept eagles are immune from the starvation and the occasionally hazardous conditions that their wild counterparts might encounter. When it comes time for them to be released, they are mature, skilled hunters, and ready to breed. This practice, continued over hundreds or thousands of years, has the potential to influence the population in a number of ways.

The overall population might come to be comprised of slightly more females than males, as females are being selected for. The females that *berkutchi* bring through to maturity are the ones that make the best hunting partners. These then tend to be bigger and more “tamable” individuals that then have a higher likelihood of passing on their genes. Potentially, falconry could influence the overall size of eagles and their “tamability”. It has been established that tamability does have a strong genetic component (Goldman 2010). To be sure, though, any influence would be subtle, and would not affect the eagle’s ability to survive in the wild.

Yet, in a cultural sense, these eagles are domesticated, even if only temporarily. The eagles live in the home, they interact willfully with humans, and can even learn to seek out human interaction. An eagle freshly pulled from the trap is *acyou* and yet within a few weeks or months, becomes *juass*. A fully socialized eagle hunts cooperatively, shares food, and exists alongside humans. Most Kazakhs keep their eagles for a period of one to ten years. Ouni told me, “I like to keep a *kiran* (a good hunting eagle) for four or five years. After too long they wander. They lose focus on hunting. They want to build a nest and migrate. It is best to release before this happens.” Considering this, their existence in a domestic space is limited, and thus a cliff-born eagle can transition from wild to domestic and back to wild during its long life span. Once released, the eagles will continue on their migration routes and seek out mates, but many times Kazakhs told me of their old eagles flying very near to, or landing on, their homes. They’ll never deign to be touched again, but the fact that they are there speaks to the close contact they once had.

In and near the Kazakh home, there are many animals that also exist on this continuum from domestic to wild. These include game animals, horses, camels, yaks, cows, goats, sheep, cats and dogs. As discussed at the end of the previous chapter, nowhere in the Kazakh discourse is there a narrative of domination when it comes to animals. Certainly some animals – such as *acyou* colts – are seen to require a stern hand. I would argue that the thinking though is more along the lines of educating an unruly child rather than beating a deviant into submission. After all, all the horses eventually become part of the family's free-living herd, where instilling fear or resentment of humans will do nothing but a disservice to the Kazakhs who rely upon them. Goats and sheep, which make up the bulk of Kazakh pastoralist' winter diet, truly embody the notion of co-domesticity. Every morning the door to the *kora* is opened and the goats and sheep filter out onto the steppe. The herder than nonchalantly walks near them and makes delicate calls. There is a call to turn, to move forward, to stop. The livestock follow the instructions of the herder. To my eyes, in the beginning of my fieldwork, it appeared that a man was simply out for a stroll and if by magic the herd was moving in a controlled manner. It became readily apparent to me the skill and communication involved when I tried my hand at herding and quickly found myself with a chaotic scattering of sheep in all directions! It isn't fear or reprimand that is motivating the livestock, it is a mutual enculturation of the herder into the herd and the herd into humanity.

Dual Beings – Both Wild and Domestic

When I inquired about the distinction between ‘wild’ and ‘domestic’ animals, Onui stated that: “A wild animal does not want to be near people. Tame animals look for people. Animals can be both. An individual animal can be both at different times, too”. There are indeed many examples of these ‘dual beings’. When in the wild, golden eagles avoid humans. This is why they must be expertly trapped. However, once an *berkutchi*’s partner, they may actively seek out humans if they are separated from their hunter. And yet if they are lost from their hunter for a long period of time, several days, they may slowly revert to their original state, and again start to avoid human contact. Throughout their lives they ride along a spectrum of might be thought of as ‘wild’ and ‘domestic’.

My interpreter, Jaaga Baatar, an ethnic Aranghai Mongol from Bulgan province, told me a story about animals changing in this way. Bulgan is arguably the most remote village in Mongolia; it is in the most mountainous region, and requires traversing dangerous high passes to reach. In the winter, it is particularly susceptible to extreme snowfall. In February of 2012, when we visited his village, the snowfall was so extreme that many animals were leaving the mountains to try to survive in the valley where the village was located. Argali and Ibex were appearing near homes and attempting to forage. There were even reports of them coming close enough to homes to eat stockpiled hay. Foxes were spotted riffling through rubbish piles at night, even within the front walls of many homes. These are animals that, under normal circumstances, would never elect to venture near human habitation. And yet, the hunger they faced in trying to feed in the mountains led them to shed that fear in favor of the increased chance of finding food. In effect, they were taming themselves.

## Wilderness and Home

The very words 'wild' and 'wilderness' can be fraught with problems. As geographer Bill Adams states: "But that word 'wild' – with its connection of pure nature, untrammelled by culture – is highly problematic. 'Wilderness' is a word with powerful meanings in western culture, and a dangerous one to apply idly to inhabited land where people have a long history of occupation and rights...one culture's 'wilderness' is another culture's 'home'". (2010)

Simply put, pastoralists have inhabited the Altai mountain range for millennia, and relied on their relationships with animals to survive for as long. Every habitat and animal inhabitant in the Altai has a wealth of local knowledge surrounding it – the notion of an area untouched by culture, or one that should be left untouched, is completely foreign to Kazakh pastoralists, simply because nature and culture are not separable. As has been mentioned, Kazakhs take seriously the stewardship of 'god's herds' and see themselves as an integral part of the landscape. William Cronan puts it well: "We must abandon the false dichotomy of dualism between wild and artificial." (2013) There is nothing artificial about this pastoralist culture, and especially not when it comes together with nature over countless generations.

Here, in much the same way as eagles, Kazakh pastoralists can range across this spectrum of 'wild' and 'domestic'. The lives of Kazakh pastoralists revolve around the seasons. Kukan recalled to me a time when he took a large portion of his

family's herd and drove them to an area with lush grass. The family's current summer place couldn't support the whole herd, but this new place couldn't support the family, so Kukan watched over the animals alone and slept under the stars for a few weeks while the small herd grew fat. Kukan's interactions with other people was very limited during this time. In a way, he is avoiding human contact in order to tend to the needs of his herd. The other extreme is when, typically in early autumn before the family's migration, Kukan will go to the city of Olgii for a few weeks. He lives with relatives that have urban jobs (typically as a driver, or store clerk) and spends time at the markets buying supplies (such as a new stove, hay, or flour) for his family for the winter. In this instance, Kukan is not interacting with hardly any animals, only humans. Kukan's urban relatives don't keep a herd, and his eagle is back with his own herd and family on the steppe. It's a fascinating annual immersion in both communities of animals and humans, and it requires skill to understand both.

I have experienced this duality in another way in my own personal falconry in the United States. With my eagle, I travel to undeveloped, uninhabited land, usually restorative prairie. When I am there, I feel as if the eagle allows me to blend into the landscape. The eagle is almost a kind of camouflage – with an eagle on my arm I feel as if I am a part of nature, that I am wilderness. I've seen falcons and owls go about their daily routine when on the prairie with the eagle – I suspect the eagle affords me a disguise and the ability to see nature in a way that wouldn't be possible, were I walking alone. Horse riders have long attested to this phenomenon. Namely, that you are perceived more as a horse than as a human by wild animals when riding across a landscape (Lawrence 1989). Or, I can take the

eagle to an urban environment. Sometimes this is advantageous because commercial development can artificially increase the prey animals in an area. In this case, when I fly an eagle in an urban area, I feel like I am creating the wild. Something primal, and ancient – Alfred, Lord Tennyson’s famed ‘nature red in tooth and claw’ (1850: 80) – is playing out before me in a concrete jungle. Motorists race by and dog walkers pass, unaware of what is happening nearby. In this way, eagles can allow you to transform yourself or the environment around you.

Although this feeling was difficult to translate to my informants, when asked about this notion they added another dimension. Kukan: “My father and grandfather were very good eagle hunters. From the time I could ride a horse I would help them hunt. I will hunt with eagles until I can no longer ride a horse. Hunting reminds me of my father and grandfather.” Of course there are components of nostalgia and pride at carrying on a cultural tradition, but perhaps also an element of private time travel. When an *berkutchi* is in the mountains, there is very little to identify whether the year is 2012, 1912, or 1512. I struggle to think of other activities, even among Kazakh pastoralists, that wouldn’t betray modernity. Yurts are equipped with solar panels to fuel TVs and cell phones, and motorbikes abound for herding and travel. When you hunt with eagles, there isn’t a modern influence. Experiencing a continuity of history is powerful.

One of the most enduring memories I have from my fieldwork is when I summited a particular mountain on horseback with an eagle on my glove. Next to my horse’s hooves were several petroglyphs. They could have been horses, goats, or argali – I



couldn't tell – but they were undoubtedly old. Down the ridge, at the pinnacle, was a small cairn. As it was the highest point, it was covered in a white chalk I immediately recognized as falcon poop. Falcons will take great pains to perch on the highest point in an area, so something constructed to be high, such as a cairn, is almost always utilized by falcons. As I looked out onto the steppe there were many warrior's graves, lots of them fading into the distance. These are large, loose piles of rock that accumulate over centuries to mark an important person's passing. The thought hit me: how many people have stood on this very spot with an eagle and a horse waiting for a fox? What appears to me to be a barren "wilderness" was endlessly utilized by humans – to celebrate the animal inhabitants with petroglyphs, to make that they were here with cairns, and to mark that others were here with graves. A man or woman from countless generations past could have stood on this same spot in the same way and wondered the same things as I. It was moving, and to me, motivating. The thought that I was doing something others before me did gave it value. I can only imagine how I would have felt were those others my kin.

## The Hunt

Many societies which rely on hunting or livestock, while far from culturally homogenous, have an essentially animistic way of relating to the natural world. Nomadic Kazakh pastoralists are no exception. When people are directly dependent on relationships with animals and the environment for survival, this worldview is often prevalent. Animists, of course, accord animals agency. Animals are independent actors. Animal actors can have highly meaningful consequences

and result in complex interactions. The examples of this are many. Trackers in Bostwana explain the pursuit of a kudu: “You read minute clues. You attempt to think like the animal and get inside its head. When it tires, you take its energy. When its eyes glaze, you can control its mind. It is no longer wild. You take the kudu into your own mind.” (Leibenberg 2013: 37)

Hunting is a serious business that must be done properly. As an Inuit puts it, “The greatest peril in our life is the fact that human food consists entirely of souls.” (Freeman 1998: 53) Hunting is often founded on the hunter’s ability to think like an animal. Among many societies, a successful kill is celebrated as an indicator of the harmonious and mutually beneficial relations between humans and animals. Gratitude protects the hunter and community from retribution of spirits. This is, of course, paradoxical, to the Euro-American notions of dominance over animals and land, and the vilification of predators that transgress humans. Kazakhs and eagles are not so different from Inuit and whales. Only through thinking as an eagle, can you learn to hunt in partnership with one, and only through thinking as a fox can you find and successfully pursue them with an eagle.

Hunting is really a culturally specific representation of predation. It can be highly ritualized. Cartmill defines the hunt as an act that separates humans and animals. To Cartmill, animals predate for sustenance, and for humans, hunting has become cultural. (1996) Hunting with eagles in Mongolia is now a protected activity, as it was accepted by UNESCO as an Intangible Cultural Heritage. To Ortega y Gasset, hunting is a maker of culture (Gasset 1995). Undoubtedly, the suitability of golden eagles as hunting partners has greatly influenced Kazakh culture. The fact that it persists in

an age of modernity speaks to its cultural import. Being a skilled *berkutchi* is an ideal that is often conflated with masculine ideals. A well-known Kazakh poem lists seven things that every true Kazakh man should possess. After a beautiful woman, but before weaponry, it lists: a “brave eagle, a swift horse, and a smart dog.”

Although Anthropology long considered domestication as an example of control over objects, possessions, or commodities - a form of exploitation and domination – the field has become far more nuanced. An accepted, common definition of domestic animals was “tamed animals which are incorporated into the social structure of the human group to become objects of ownership”. (Clutton-Brock 1987) As I repeat, time and again, this does not accurately describe the Kazakh’s relationship with eagles. Rather, domestication is the outcome of a series of complex relationships between humans and animals. These animals are actors themselves. More often than not, this domestication is a form of symbiosis, a co-domestication with mutual benefits. As there is a benefit to the animals (safety from predators for example, safety from starvation) it can be argued they take an active role in influencing the relationship. The prevailing theory of dog domestication at present contends that dogs are the descendants of self-domesticating wolves; wolves that dared to eat the scraps humans left behind, to follow human camps and breed near them. (Fijn 2011)

Domesticated animals can sustain people both physically and emotionally. They give social capital and consume human resources (time, food, etc). Simultaneously, they are an advantage and a disadvantage. Eagles among the Kazakhs are a fitting example of this. The honor bestowed upon a successful *berkutchi* is more valuable

than the fox pelts the hunter procures. *Berkutchi* make huge expenditures of time and resources to trap, train and hunt with an eagle that is not proportionate to the material reward of fox pelts. In the twenty-first century, eagles are far less effective means of hunting than rifles or traps. But, having an eagle as a hunting partner, something rare and respected, that in itself, is sustaining to the hunter.

Famed ecologist and environmentalist Aldo Leopold, though speaking of western falconry in the early twentieth century, summarizes this sentiment well:

*“The most glamorous hobby I know of today is the revival of falconry. It has a few addicts in America and perhaps a dozen in England – a minority indeed. For two and a half cents one can buy and shoot a cartridge that will kill the heron whose capture by hawking required months or years of laborious training of both the hawk and the hawk. The cartridge, as a lethal agent, is a perfect product of industrial chemistry. One can write a formula for its lethal reaction. The hawk, as a lethal agent, is the perfect flower of that still utterly mysterious alchemy – evolution. No living man can, or possibly ever will, understand the instinct of predation that we share with our raptorial servant. No man-made machine can, or ever will, synthesize that perfect coordination of eye, muscle, and pinion as he stoops to his kill. The heron, if bagged, is inedible and hence useless. Moreover the hawk, at the slightest error in technique of handling, may either ‘go tame’ like *Homo sapiens* or fly away into the blue. All in all, falconry is the perfect hobby.”*

## Classification and transgression

Classification is a “prime and fundamental concern of social anthropology” (Wittig 1975: 24). It shows how people make sense of the world around them. Individual experiential engagement with other beings influences how we think about animals, and too often, little is considered outside the western, scientific tradition of animal classification. For example, to the Karam of New Guinea, Cassowaries are not birds. These large, flightless, very aggressive and fast-running animals do not fit into the Karam’s experience of “bird”. However, bats are considered a kind of “bird” to the Karam. (Wittig 1975)

Another example of cultural classification concerns the Comanche Indians of North America. They believed the golden eagle (the very same species the Kazakhs use to hunt with in Mongolia) to be two distinct species: a day eagle and a night eagle. Immature golden eagles retain a white tail and white wing patches for the first five years or so of their lives. Afterwards, plumage becomes a solid golden brown and black coloration. To the Comache, the immature eagles were the children of the sun, and the mature eagles were the children of the moon – distinct animals and entities with very different meanings and symbolism. (Fehrenbach 2003)

To the Kazakhs, golden eagles are unique. They are not classified with other kinds of birds of prey. To illustrate, the value in an eagle is in its relationship with its human partner or in the meaning of seeing it independent in nature. There is no value in feathers, claws, or parts of an eagle. When an eagle dies, it is wrapped in felt and given a “sky burial” at the mountaintop. Other birds of prey, especially

owls, are freely killed for their parts. It is not uncommon at all to see an owl plume or foot hung around an object for luck. Eagles are not seen in the same space as other domesticated animals nor are they placed with completely 'wild' animals. As the same individual can move more freely between domestic and wild spheres, eagles inhabit a category unto themselves

Interestingly, Kazakhs allow eagles to transgress on humans. Neither snow leopards nor wolves were given this allowance. By transgress, I mean to say it is acknowledged and forgiven that a wild eagle may kill livestock and a domestic eagle may harm humans. When such things take place, it is seen as the fault of the human, not the eagle. When I trapped my first eagle I was given this warning: "Lauren, be careful. An eagle can stop a wolf. A wolf can stop a horse. A horse can stop a human. Therefore, an eagle can stop a human. Have respect." This is diametrically opposed to how many, many other cultures perceive predators that could transgress on humans. In the western world, golden eagles were shot by the tens of thousands for their perceived destruction to livestock. The United States government offered bounties on eagles shot at the insistence of ranchers. This carried on well until the 1970s when both bald and golden eagles were facing extinction in the United States. (Bodio 2014)

In light of this, one can see the ingenuity in the Kazakh tradition of hunting with eagles. They recognized the predatory ability of the animal, utilized it for practical purposes, and incorporated it into their culture. It takes a lot of foresight and intention to tame and socialize a wild-born animal. Why have the Kazakhs chosen to revere the golden eagle, while settlers in America choose to revile it?

To further this point, it is interesting that human behaviors that are undesirable are often labeled as animalistic in the west (i.e. to 'behave as a dog' or be 'greedy as a pig'). Yet, in Kazakh culture, men and women are named for raptors and other animals in hopes that they will express their best attributes. Men named *berkut*, for example, are hoped to be brave in life, like the best eagles. I met Kazakhs named for deer, for falcons, for horses and for owls.

The special space in which the eagle occupies is made even more clear when one considers the other apex predators of the region. There is no allowance given to the wolf. It is pursued at every opportunity. It is trapped, poisoned, and shot with abandon. I saw several jeeps with dead wolves tied to the hood of the car and enthusiastically driven around villages, horns blaring. I was shocked once, when taking a taxi across a remote area, at the hunt that ensued when a wolf was spotted. The driver pulled out a rifle and tore across the steppe in an effort to get a shot at the animal, us crammed passengers slung into the side of the vehicle at each violent turn. That wolf did make its escape, but wolves in general are thought of as endlessly regenerative, and the idea that they could be killed in too great a number was met with bewilderment. In truth, despite the vigor with which they are hunted by Kazakhs and other Turkic peoples, Central Asia boasts one of the biggest wolf populations in the world (Bodio 2004).

The snow leopard seems to inhabit a space between the eagle and wolf. It was once hunted with enthusiasm, and those days are looked upon fondly, but now the consensus seems to be that it should be left to its own devices. Of course, the World Wildlife Fund has had a major presence in Mongolia concerning snow

leopard conservation, and with stiff penalties for poachers, this is the position my informants told me they held. Perhaps in practice it is different, but I suspect with the difficulty one would have in concealing a leopard kill from neighbors and authorities, that hunting by herders is exceptionally rare. The one justification I heard was if a snow leopard was clearly and repeatedly killing livestock – then hunting the leopard was seen as necessary. To summarize, It is never acceptable to deliberately kill an eagle for any reason. It is always acceptable to kill a wolf for any reason. And it is only acceptable to kill a snow leopard if a particular individual has transgressed against a human. These are the three apex predators with a presence in the lives of Kazakh herders, all capable of killing livestock, and yet they are treated quite differently.

A new knowledge emerges when species meet and interact. Perhaps Kazakhs look so favorably upon eagles *because* of the intense and personal interactions embodied in partnerships with eagles. Were there a way to truly see the lives of wolves and snow leopards, rather than merely the aftermath of their transgressions, perhaps perceptions would be different. *Berkutchi* bring their eagles into the sphere of humanity. They love them, they protect them, they provide for them. The eagle takes its Kazakh into the sphere of animality. The eagle flies, the eagle kills, the eagle eats. It is predation and satiation at its most fundamental level. This temporary union between man and eagle speaks to the adaptability of living things and, for me at least, brings hope. We humans are a part of nature and the wild.



## Kazakh Animality

*“We need another and a wiser and perhaps a more mystical concept of animals. Remote from universal nature, and living by complicated artifice, man in civilization surveys the creature through the glass of his knowledge and sees thereby a feather magnified and the whole image in distortion. We patronize them for their incompleteness, for their tragic fate of having taken form so far below ourselves. And therein we err, and greatly err. For the animal shall not be measured by man. In a world older and more complete than ours they move finished and complete, gifted with extensions of the senses we have lost or never attained, living by voices we shall never hear. They are not brethren, they are not underlings; they are other nations caught with ourselves in the net of life and time, fellow prisoners of the splendour and travail of the earth.” -Henry Beston*

These words by naturalist Henry Beston greatly echo the sentiment I found among the nomadic Kazakh pastoralists of the Altai. The strong impression that I received from my informants was never that a species was inferior to humanity, but each was its parallel to humanity. The phrase ‘other nations’ in particular is in line with the worldview I experienced. Each species of free-living animal does have its own communities, and its own politics. They have concerns with each other and sometimes step outside their usual purview to have concerns with humans (as I experienced once when a pair of ravens cawing on a home was interpreted to portend disaster). Humans can interact with these separate nations, but they must learn the skills and language necessary to ‘speak’ with them. Not everyone can

earn trust from an eagle, or stalk a deer, or manage a free-living horse herd, but the knowledge exists within the Kazakh community for everyone to learn.

As discussed in Chapter 2 in great detail, learning the language of eagles requires effectively apprenticing oneself to an eagle. A *berkutchi* who has mastered his craft can guide you in the techniques of eagle partnership, but the eagle herself is the true teacher, and test, to a student *berkutchi*. This is because Kazakhs perceive all eagles as individuals, and all are believed to communicate slightly differently with their *berkutchi*, and therefore require slightly different interaction to reach their full potential. It is believed that nearly all female golden eagles are capable of becoming great hunting partners, but only a few Kazakh men are capable of convincing them to be so. Apprenticeship is always an important theme in eaglehunting. The *berkutchi* is going through great lengths to learn to communicate effectively with his eagle, and the eagle herself must learn to interpret the behavior of her human partner. How she interprets it depends on the eaglehunter. There are no shortcuts to having a successful hunting eagle. When I asked my informants what qualities the best falconers shared, the answers were always variants on the same theme: patience, consistency, dedication and understanding.

It has been established that apprenticeship is at once personal, hands-on, and experiential. (Coy 1989: 1) Fundamentally, apprenticeships are associated with specializations that contain some element that cannot be communicated, but can only be experienced. And further, that apprenticeship knows no cultural or historical boundaries and that, wherever it is found, is a variety of human

relationship. (Coy 1989: xiv) I would argue that apprenticeship knows no species boundaries and that apprenticeship, wherever it is found, is a variety of human, animal, or human-animal relationship.

Most striking to me about the reciprocal, experiential relationship between human and eagle is the embodied knowledge that comes from it. There are many skills that eagle and *berkutchi* come to share. I would argue that, over time, an *berkutchi's* understanding of and relationship with his eagle can improve to the point where it is a surrogate for one's own senses. Kukan, my mentor, a nomadic herder and patriarch at 59 years old, had terrible eyesight. He struggled with both near-sightedness and far-sightedness. I am unable to put a precise value on his eyesight, but he vocalized his difficulty with vision at his current age and I witnessed him struggle to read written words as well as see objects at a distance. He had no corrective glasses, and according to him, no means to acquire them. Despite this, in the field with his eagle, you would not have known.

Through reading the nuanced reactions of his eagle when on the glove, he was able to deduce what unseen animals were on the steppe, and through being able to anticipate her behavior when on the wing, he was able to retrieve her from an unknown distance. When one considers that, in the United States and Europe, falconers rely on radio transmitters to track their birds if lost, carry around state of the art binoculars to scan the sky, and are able to cover ground fast in capable cars on gridded roads – it is nothing short of astounding what Kukan was able to do. The winter landscape in the Mongolian Altai is a palate of whites, grays and browns. The snow covers all save for the highest mountain slopes and protruding

rocks. All the players in the hunt can be difficult to see at times. An eagle that has landed on the ground can be indistinguishable from a rock or shadow. Foxes, while colored like a warm flame against the snow, are often so stealthy as to avoid detection altogether. Wildcats and hares have superb camouflage and are rarely seen if not flushed at the hunter's feet. Groups of free-living horses are scattered throughout the landscape and can confuse one looking for a group of riders. However, an eagle, with eyesight and motion detection far better than our own sees all. And they react to all that they see. The dedicated *berkutchi* can read the subtle cues an eagle gives and, combining that information with his own experience, can quickly deduce a situation and take the appropriate action.

What follows are three examples to illustrate this further – some from early on in my apprenticeship when I struggled, and some from later on, when I began to become literate in eagle expression.

Field note excerpt:

*I was waiting with Kukan on a mountaintop. Both of our eagles were unhooded and surveying the landscape below. The scareboy began riding across the valley, whooping and making noises to scare any hiding foxes into the open. I was tense, ready for the first sign of movement. In Kazakh 'jaber' is the word used to mean 'release the eagle'. Jaber literally means 'to send'. Interestingly, the same word is used to express firing an arrow or mailing a letter. While we were waiting on the mountaintop, two cinereous vultures (*Aegypius monachus*) began circling overhead. These are among the world's largest vultures, certainly larger than eagles. I noticed my eagle watching*

*them. She was alternately staring into the landscape then eyeing these vultures. Kukan noted this and shouted "Jabernae! Jabernae!" which translates as "Do not send!" Just hearing the root word, and thinking Kukan must've seen a fox, I drew my gloved arm back and launched my eagle into the air. I could tell with her first few lazy wingbeats that she was not interested in chasing anything. Instead she started to circle in the air and follow the soaring vultures. I was immediately embarrassed. Kukan explained to me that sometimes eagles will follow vultures, thinking they may be led to carrion and an easy meal. Unfortunately, my eagle drifted father and farther until she was a speck on a distant hillside, which I quickly lost among a sea of specks.*

*Riding down the mountain and over to the far hillside took time. Lots of time. Enough that I became disorientated and, unsure of whether my eagle had moved again, had no idea which direction to turn to find her among the rock-strewn landscape. Kukan wisely pulled out a fox fur pelt (lure) and tied a long leather lead around it. He then galloped across the steppe with the pelt dragging behind his horse, vaguely in front of the direction the eagle was last seen. The pelt proved irresistible and my eagle appeared from nowhere and grabbed the lure. I quickly got her back on the fist. However, left to my own devices, I would have been searching for a long time. I didn't read her behavior when I launched her, and didn't anticipate how her reaction to a fox pelt could save me lots of toil.*

*November 30<sup>th</sup>, 2009*

Field note excerpt

*I was waiting at the mountaintop, this time alone. It was just me and Kukan hunting, and Kukan hadn't brought his eagle that day. He kindly wanted to focus on getting my eagle successful solo fox catches. As Kukan rode into the valley, playing the role of scareboy, my eagle started to look behind me. She became very intent on something behind us. Suddenly she bated. ('Bate' is when an eagle attempts to fly from the fist towards something and you restrain them so they can't leave your gloved hand.) She kept her interested stare and bated twice more. Usually such a forceful series of bates denotes a fox, as that is generally what eagles are most enthusiastic about catching. But something wasn't quite right to me. I couldn't put my finger on it, but I was not at all sure that it was a fox behind me, and I didn't want to risk ruining a potential catch with a fox that might appear where Kukan was riding. Thankfully, I had done the right thing. Not two minutes later Kukan flushed a fox in the valley and my eagle powered down to catch it in fine style. As I was helping her subdue the fox, another rider appeared from the direction where she had been bating. He was a young trapper. Dangling from his hand was a dead fox that he had caught in a leg-hold trap. No wonder she had wanted to fly to him! She had perceived it as a fox lure and an easy meal. I was very grateful that I had recognized her reaction as a little off and decided not to release her. It could have badly surprised that rider and horse, and he would have been none too pleased with talon holes in his new fox pelt.*

*January 9<sup>th</sup> 2010*

Fieldnote excerpt:

*Yesterday we were crossing a very precarious path on horseback. These stocky Mongolian horses are amazingly sure-footed, confident creatures. I however, was not. The path was barely the width of two hooves, and dropped off precipitously to a gorge the walls of which were comprised of cascading, slippery shale rocks. I couldn't look down without feeling pangs of vertigo, and felt unlikely beads of sweat on my forehead in the freezing air. My concentration was not on my eagle, whom I had unhooded in the off chance that a fox might appear, as we had a great (though harrowing) vantage point. In an instant, when I had my eyes closed to ward off the vertigo, I felt the eagle suddenly start on my glove. It's a very difficult feeling to articulate. In a nanosecond, my eagle's entire body shuttered in excitement, which reverberated through the thick felt and leather glove. It isn't perceptible to those who aren't attuned to it, but that tiny movement's meaning is unmistakable. FOX.*

*Nothing under the sun so quickly excites an eagle as the flash of a fleeing fox. As she hadn't attempted to fly, I knew it had only appeared for a second. But it was likely to appear again. I relaxed my grip on her jesses, deciding I would let her fly when she was ready. Within a few seconds she bolted. What ensued was one of the most beautiful flights I've ever seen. She powered out in level flight above the valley where the fox was running, and then just as she came overhead – she folded. She tucked her wings back completely and, tear-drop shaped, dropped like a stone several hundred feet onto the fox. However the fox was eagle-wise, he spun around at the last possible second and left the eagle with nothing to grab save talonfulls of snow. When Kukan*

*and I met at the spot where she had missed (after I white-knuckled it down the narrow path) we couldn't help but grin and gesticulate wildly in the air. Each of us used one hand to recreate the eagle's flight path, and the other to show the fox's path – and were illustrating to each other just how fast she stooped and how quickly the fox reacted. Even though she had missed, we were as jubilant as if it had been a catch, so exciting was the flight we had witnessed. It was only because I had learned to recognize what an eagle's excitement feels like that I was able to slip her on a fox unseen. Otherwise, I would have been too preoccupied with my horse to release her.*

*February 1<sup>st</sup> 2010*

## Companions and Nature-Cultures

Donna Haraway (2003:10) blurs the lines between domestic and wild even more. She avoids the term “domestic animal” and instead refers to “companion species”. Is an eagle a companion? In a way, yes. It is one that is capable of living with you happily, but could leave you at any time and return to its free-living state. The acts of caring for and flying an eagle are an enjoyable experience for some people – is that all it takes for an animal to be a companion animal? An eagle can't provide affection in the way that a dog can. But does that make it any less of a companion? It accompanies humans in one of the most inhospitable environments and cooperates with them. Haraway further discusses the relationship between companion species, specifically dogs and humans, as a co-evolutionary process, stating that it is not just humans who chose to domesticate, but the animals



themselves were agents in the process (2003:15). She writes that companion species mutually adapt. On an individual level, over the course of a single lifetime, I would say this holds true between eagle and *berkutchi*. In a way, this is part of the layers of apprenticeship and learning between humans and eagles. 'Trans-species pidgin' is this mutual adaptation at work.

Haraway makes a strong point that these degrees of time, nature and culture blur infinitely. "Biology is relentlessly historical, all the way down. There is no border where evolution ends and history begins, where genes stop and environment takes up, where culture and nature submits, or vice versa. Instead, there are turtles upon turtles of naturecultures all the way down. (2004: 2)" Its true, there are no hard and fast lines. The way in which family lineages are displayed through branding on horses among herders in Mongolia, noted by Caroline Humphry, is a prime example of culture's inextricable ties with nature. She recognized that genealogy could be interpreted through branding marks on horses. Older brothers would use a symbol that varied slightly from the family's symbol, while the youngest brother would adopt the same symbol as his father. A passing rider on the steppe could identify family lineages merely by observing the semi-feral horses that inhabit it.

That is nature wrapped up in culture and spread over centuries (Humphrey 1999). While many definitions of what domestication means have been discussed, it is worth recognizing that the act of domestication leaves an indelible mark on the culture of the human society that allowed to occur. "In order to be domesticated, animals...have to be absorbed into the culture of the human owners, and in this sense the process of taming a wild animal, whether a wolf or wild goat, can be seen as changing the culture. Culture can be defined as a way of life imposed over

successive generations on a society of humans or animals by its elders. Where the society includes both humans and animals, then the humans act as the elders...A domestic animal is a cultural artifact of human society, but it also has its own culture, which can develop, say in a cow, either as part of the society of nomadic pastoralists or as a unit in a factory farm. Domestic animals live in many of the same diverse cultures as humans and their learned behavior has to be responsive to a great range of different ways of life.” (Clutton-Brock 1987) How have eagles, over the hundreds of generations that they’ve interacted with humans of the Altai, changed the pastoralist culture there? Through living in close proximity to *berkutchi*, eagles have given Kazakh hunters a means to acquire fox pelts, a new method of communication, a window into eagle culture, they’ve inspired dombra songs and riding long-songs, provided a method for men to prove themselves and cultivated a rich body of ethno-ornithological knowledge.

There is also the question of what degree bringing eagles into the home has influenced Kazakh culture, or whether it was Kazakh culture itself that brought forth this unusual partnership. After all, golden eagles are circumpolar – they are found across North America, Europe and Russia. Indigenous peoples in North America and Russia never learned to hunt in partnership with eagles. Even when falconry was quite a popular aristocratic tradition across Europe in the Medieval Period, eagles were never utilized. Similar to how eagles were seen as enemies and transgressors to early settlers and ranchers in North America, in Europe, they were seen as enemies of the falcons and hawks that falconers preferred to fly. As Haraway artfully articulated, history and culture are so wrapped up in nature that influences and influencers are likely impossible to

disentangle. What we do know, is that through domestication, taming, and learning to communicate with the wild, Kazakh pastoralists have created relationships hitherto unknown and have thrived in the Altai.

## Chapter 5

### Landscape, Seasonality, and Nomadism

*“A person with a clear heart and an open mind can experience the wilderness anywhere on earth. It is a quality of one’s own consciousness. The planet is a wild place and always will be.”*

– Gary Snyder

#### The Importance of Landscape

Any discussion on lives of Kazakh pastoralists cannot be divorced from the landscape in which they call home, nor can the cyclical movement that is central to their lives, and the seasons which dictate such movement, be ignored. I am in agreement with Anna Tsing’s definition of landscape as the “configuration of humans and nonhumans across a terrain” (Tsing 2012: 173) and prefer this word over ‘environment’ because, as Graham Harvey states, “‘Environment’ too often implies a human-centered vision of resources to be exploited, with our without respect.” (Harvey 2006: 12) I found that, among my Kazakh-speaking informants, the Russian word for ‘environment’ (*sreda*) was directly used when talking about mining activities or national parks, things where resources were directly concerned, and realized the word inadequate to convey all the complex notions of nature and the landscape as home. Fijn corroborates this with her Mongolian pastoralist informants, whose direct translation of ‘environment’ has recently been adopted, likely from Russian. (Fijn 2011: 56)

Instead, the Kazakh word for nature, *baynur*, most accurately conveys this notion of landscape. *Baynur*, Kukan explained to me, includes “the mountains, the steppe, the rivers, the eagles, the argali, the snow leopards, the hares, and all the spirits, both benign and evil.” *Baynur* is, simply put, the land and all its inhabitants, both seen and unseen. This word is similar to the Mongolian word for nature, *baigal*, which it must be noted, is not distinct from culture. The notions of nature and culture are not distinctly dichotomous among Kazakhs and Mongolians, and as Fijn explains, “In terms of the Mongolian conception of the world, nature and culture do not correspond in the same way as the Western binary of nature versus culture.” (Fijn 2011: 42) When discussing landscape and *baynur*, the culture of the human, animal and spirit world is intermingled within it. Landscapes are further comprised of and inseparable from the actions of their inhabitants “...In a landscape, each component enfolds within its essence the totality of its relations with each and every other” (Ingold 2000: 191) Piers Vitebsky writes about Every notion of *Bayanay*, which again speaks to the inadequacy of ‘environment’ when delving into the worldviews of pastoralist peoples. “I came to understand *Bayanay* as a vast field of shared consciousness which encompassed the landscape as setting, as well as the human and animal roles in the drama of stalking, killing and consuming.” (Vitebsky 2005: 268)

Among Kazakh pastoralists there is a deep knowledge of the land. I began to understand this when faced with the challenge of describing or referencing locations in Daluun to my informants. I realized that, growing up in the the United States, directions are inevitably given in terms of road names and commercial

landmarks. Here in Daluun, my descriptors of locations were too poor to be understood. To my informants, every feature of the landscape had a name and a history. Further beyond the particular name for a mountain or swath of steppeland, a family that had grazed an area for generations would inevitably become part of its name. For example, Kukan's autumn grazing place was referred to as the "golden steppe of Alkai". Alkai, now dead forty years, was Kukan's grandfather and 'golden steppe' referred to the high grasses that often grew in that particular valley. Many families have utilized the same steppe in summer and mountains in winter as far back as living memory can attest.

Similarly, communities of animals (argali, falcons, or snow leopards for example) are known to inhabit particular places. The movement patterns of both people and animals (both animals associated with people and free-living 'wild' animals) are indelible aspects of a landscape. The land is not land without its inhabitants – all of its inhabitants. Because collective memory has always placed the Kazakh in the Altai with his animals, to construct a landscape without humans, or a human without animals, is inconceivable. The humans, the animals, and the land are all intricately interrelated and inseparable.

In describing the relationship between human foragers and mushrooms, Anna Tsing beautifully expands on this; how an assemblage of species can understand and utilize a landscape:

*"Familiar places are the beginning of appreciation for multi-species interactions...to find a useful plant, animal or fungus, foragers learned*

*familiar places and returned to them again and again...Through their familiar place, foragers learn not just about ecological relations in general, but also about the stochastic natural histories through which particular species and species associations happen to flourish in particular spots. The familiar places of foraging do not require territorial exclusivity; other beings – human and otherwise – learn them too....Furthermore, foragers nurture landscapes – with their multiple residents and visitors – rather than a single species. Familiar places engender forms of identification and companionship...”* (pg 142, Tsing, Mushrooms as Companion Species)

Although land in the Altai Mountains is not suitable for agriculture, Kazakhs will forage for wild onions. These are small onions (as nearly all wild species are compared with their cultivars), about the size of a walnut, and with a pungent, almost garlic-like taste. Kazakh cuisine doesn't typically utilize spices or sauces, and usually consists of boiled meat and some flour-based product. However, these onions have become a staple in the regional diet, and herders, hunters and travelers will always stop to dig one out from familiar places. As mentioned in a previous chapter, Kazakhs even identify with onions as Kukan once said to me, “We are wild people. Our onions are wild and our eagles are wild.”

Just as Kazakh pastoralists conceive of the landscape as including its animal inhabitants, so too do the animals conceive of the landscape as including its human inhabitants. Whereas in the United States or Europe, eagles and falcons have a strong ‘flight radius’, that is, they will not tolerate a human to approach within a mile or more of them (Watson 2011), I’ve not noticed this among birds of prey in

Mongolia. Many times when standing with my eagle at the mountaintop looking for foxes, I'd notice a saker falcon sitting on a cairn not ten yards away from us, displaying no indication of discomfort with the situation. A notable exception will be foxes and wolves – as they are so often pursued by hunters, these animals are intimately aware of the location of humans and go to great lengths to avoid them. Even this, however, demonstrates a kind of knowledge. Foxes have developed very ingenious methods of stealing food from humans at night while avoiding them during the day.

As humans have knowledge of the movements of animals, and animals have knowledge of the movements of humans, there are very few secrets in the Altai. Rarely can or men or animals travel undetected. Vitebsky writes of this awareness among Eveny hunters:

*“The awareness of who was where seemed almost paranormal, as informants and messages moved around the hushed forest like radio waves, unseen and unfelt until they reached a human receiver through whom they would take conscious form. Hunters were not issued with bush radios like brigades, but everywhere one went, there were signs: tent poles that had been stacked, supplies had been cached, twigs had been bent to say ‘I was here’...I have seen someone gaze at a panorama of forest and mountain stretching for 30 miles, and find a traveler within a day.” (Vitebsky 2005: 172)*



I came to realize that aspects of pastoralism encouraged the dissemination of information. Guests are always welcomed and encouraged, and so while hunting or herding with my informants, I would frequently find myself stopping by the home of a neighbor, friend or relative. The proper greeting among Kazakh men, analogous to 'How are you?' is literally translated as, 'Are your animals fat?'. By inquiring after the health of a herder's animals, conversation is invited on grazing conditions, weather, and recent wolf sightings. And rarely can there be a transgression on either the human or animal side without consequences. If a man steals some horses from another man's herd – it is noticed. If a wolf kills a sheep belonging to a family – it is noticed. Through shaming and compensation on the one hand, and an organized hunt on the other – these transgressions are righted. I was often surprised at the speed in which knowledge spread in a landscape that I initially, erroneously thought of as disparate and barren.

One night, when on a long trip to look for foxes, Kukan and I stayed in the home of one of his relatives. During the night, I heard scuffling noises outside and then, shortly thereafter, men hurriedly pulling on jackets, grabbing rifles, and running out of the door. In the morning, I learned that a wolf had killed one of the herder's sheep. It had escaped into the darkness when the men approached, leaving behind an uneaten sheep carcass. A plan was quickly formed for each man to ride in particular direction to note clues on the landscape and inquire with other herders as to the wolf movements they had previously noticed. Knowledge of the incident spread out over Daluun like tendrils, and what was not learned from word of mouth was deduced from the land. Another herder told me later, "My wife saw a wolf by our home at sunrise, which is unusual. They should only come at night. It

had blood on its jaws and I feared it had killed our livestock. But nothing was missing. I think it was a wolf fleeing from another home.” It is interesting to note that, should a wild eagle kill a lamb, they were left alone and the fault was seen with the herder, but no such allowance existed for wolves. Among the Eveny “Bear occasionally attacked a domestic reindeer, but they were not condemned for this as a species and their killing, even when justified, entailed anxiety. But when wolves did so, they were killed by shooting, trapping, or poisoning, without any concern whatever for their souls.” (Vitebsky 2005: 271)

Clothing is another way in which Kazakh pastoralists connect to the landscape and animals within it. All clothing is derived from animal products – winter clothing is lined with fox or wolf fur. For fall days, sheep or horse skin is utilized. Felt, camel felt in particular, is perfect for socks. When I suffered frostbite on my toes during winter, Kukan’s daughter Gulnezi chastised me for being careless and handed me a wad of raw camel wool to stuff down my socks. These products come from animals either herded or hunted. This description of Eveny hunters is quite apt, and similar to how Kazakhs might wear horsefur jackets while on horseback, “In winter they (reindeer and rider) seem even more united, clad in identical fur so that one is not sure where the human ends and the animal begins, like an antlered centaur.” (Vitebsky 2005: 95) This material culture extends beyond humans to eagles. Once the deep freezes come in December and January, Kazakhs will fashion *iyak cap* or ‘leg caps’ for their eagles. The purpose is twofold: to protect an eagle’s scaled feet against the extreme cold, and to protect their toes from damaging fox bites.

Though hunting with birds of prey exists in a multitude of cultures with a multitude

of species, never have I encountered such a piece of material culture as it relates to eagles.

I watched Kukan take an old boot and trace a pattern into the leather that resembled the four-toed silhouette of an eagle's foot. Meanwhile, Gulnezi carefully unraveled an old scarf and bundled the yard into a ball. Using a sewing machine, Gulnezi first stitched thread into the leather to help hold the pieces together, and then sewed the brightly colored yarn along the edges. Finally, she cut fine strips of leather to attach to the ends – these would fasten around each toe to hold the *iyak cap* in place. Not only did the Kazakhs wear garments fashioned from the skin and fur of their herd animals to traverse certain landscapes, but so too did eagles wear such items.



*Image 14 – yak Cap for an eagle, to protect against fox bites and the cold.*

When I initially started fieldwork in the Altai, I would distance myself from nature through clothing. I was bundling myself up in layer after awkward layer, to venture out into what I first perceived as a dangerous wilderness. I had expensive, high-tech outerwear – the sort stylish mountaineers wear. It didn't function well, not when riding horses nor when clambering through snow. The bright colors were out of place, and the longer I stayed the more I began to see how it caused conflict with the landscape instead of allowing me to comfortably move through it. The

clothing my informants wore was silent, perfect for riding horses (knees and all body parts remained covered) and kept the sand-like snow from entering.

I had a rather dramatic incident which caused me to abandon my western wear: I was thrown and dragged by my horse. During my first month in Mongolia, when cantering across the steppe, my horse fell into a deep hole that had been perfectly concealed by newly fallen snow. I was thrown over the horses' head, and most frighteningly, one foot remained wedged in the stirrup. Before I could register what to do, the horse panicked and took off galloping across the steppe and dragging me with him. I could feel his hooves glancing off the side of my head, and I feared for my life. The jagged rocks and thick ice on the ground tore open my clothes and shredded them. After a hundred yards, perhaps two, my foot popped loose and I fell to the ground. Although I was stunned, Kukan immediately reached me and, after frantically checking to make sure my body was still intact, hugged me – a rare physical gesture. That night, he insisted my clothes were the problem. “How could you ride a horse properly, like a Kazakh, without Kazakh clothing?” He took my overly-thick American boots, tossed them aside, and left my shredded gear in a heap. Digging through boxes of clothing, he found me a Kazakh *chapan*, the traditional ankle-length jacket lined with curly sheep wool, a fox-fur lined vest, and wolf-fur lined boots.

I luxuriated in the warmth and superiority of the local clothing. It was true, the simple act of wearing the clothing led me to feel more a part of the landscape and gave me a sense of belonging in the land. The previously mentioned feelings of Daluun as inhospitable, as a wilderness, began to dissipate. The more I lived with Kazakhs, the more I realized that wilderness doesn't really exist at all.

Does 'Wilderness' Exist?

An William Cronon has succinctly stated, "The time has come to rethink wilderness." (1995: 69) Fijn, during her own fieldwork experience, echoed my own sentiments: "What I had perceived in my mind as a wild, remote, and potentially dangerous environment soon became a landscape where I felt at home. My own perception of what was wild and what was domestic changed as my perspective of the landscape changed." (Fijn 2011: 57)

'Wilderness' in the western tradition, is that dangerous, inhospitable, 'otherness' of nature, something seen as pristine, in need of preservation, and necessarily devoid of human contact or intervention. This notion of wilderness is not one that I ever encountered among my Kazakh pastoralist informants. I would argue that it is the urban which is that strange, inhospitable 'other'. Urban life is not compatible with a herder's life. After all, game animals and grazing area can't be found within the confines of a concrete jungle. The only time I ever saw Kukan, a respected patriarch, as uncomfortable with his surroundings is when visited the town of Olgii to buy a new stove from the market for his family.

Why would a people who have lived an area for countless generations, who have relationships with all the animals within it, who have given every feature within it a name and recognize it as animate, view that place as 'wilderness'? In industrialized western nations, knowledge of the land has become far removed, "The dream of

an unworked natural landscape is very much the fantasy of people who have never themselves had to work the land to make a living...only people whose relation to the land was already alienated could hold up wilderness as a model for human life in nature, for the romantic ideology of wilderness leave precisely nowhere for human beings actually to make their living from the land.” (Cronon 1995: 75)

The only time I encountered the western idea of ‘wilderness’ when in Mongolia, is when I met staff from international wildlife organizations whose goal it was to cordon off certain areas from all human activity for the sake of snow leopards or gobi bear. Rather than shutting out pastoralists, their vast local knowledge of the landscape could be utilized to the advantage of such organizations and animal rescue efforts. My informants did not have a word to describe a place without people, without them. There is only *baynur*. “Mongolian herders do not perceive the landscape as a remote wilderness because it is their home and they are an inherent part of the ecosocial landscape.” (Fijn 2011: 57) Anderson calls this a ‘sentient ecology’ and Kohn an ‘ecology of selves’ when referring to Evenki and Runa, respectively. (Anderson 1986: 4) (Kohn 2007: 12) When Vitebsky asked his informant to draw a map of his camp, he describes how “Kesha dealt systematically with each kind of place, turning the physical landscape layer by layer into a complex human memoryscape.” (Vitebsky 2005: 318)

Just as, in the previous chapter, ‘wild’ and ‘domestic’ are a false dichotomy, so too is the thinking around ‘wilderness’: “This then, is the central paradox: wilderness embodies a dualistic vision in which the human is entirely outside the natural...we reproduce the dualism that sets humanity and nature at opposite poles. We

thereby leave ourselves little hope of discovering what an ethical, sustainable, honorable human place in nature might actually look like.” (Cronon 1995: 75)

### The Dead and the Fortunate – Aspects of Landscape

A powerful way in which ‘wilderness’ is negated, is through the way that Kazakhs are tied to their landscape through ancestors. What was most galling to my informants about my presence among them, was that I was alone. Apa, a grandmother of the extended family group, once looked at me and said with genuine concern in her voice, “Doesn’t your family love you? Why would they let you come here?” It wasn’t just shock at living somewhere where none of my family was present, it was the fact that I wasn’t living in the place of my ancestors. When one is making a life, it is always better to be done where your ancestors are buried. They can bring you fortune, and luck is more likely. “Here you are like an orphan” Apa said, adding “but I can be your grandmother.”

The needs of the dead are often considered. When Kukan, his cousin and I were passing by a grave site on our way to a wedding, we stopped to pay our respects to Kukan’s wife. There was a simple marker, with the symbol of Islam and her name, Akmaral. In front were notes of 5 and 10 *togrog* (the currency of Mongolia) held down by rocks, small empty vodka bottles, strips of fabric, broken toys and figurines – all gifts for her. Kukan and his cousin kneeled in front of the marker, I did the same. We cupped our hands at chest-height, and the cousin started singing in Arabic. He sang a prayer for the dead, for her. When it concluded we brought



our hands over our faces and said, “*Alu Akbar*” or “God is great” in Arabic. The animism and shamanism that took root in the area millennia before is now co-mingled with Islam – and important traditions evoke aspects of both. The Eveny are animists and many aspects of the way they treat the dead mirror Kazakhs:

*“Most graves were set near a path, because the dead enjoyed visits from the living...An extreme attachment to one place is suitable only for the dead: a living nomad must keep moving. When passing a grave, you should dismount and add something to the pile of coins, vodka bottles, cigarettes, bullets, reindeer saddles and snowscooter drive-belts that lie for years under the windless sky.” (Vitebsky 2005: 322).*

Although my informants strived to read the Quran and pray towards Mecca, these were still swept up in the complexity of spirits in the landscape, and the morality imbued within it. Again, Vitebsky:

*“Because creatures, places and objects have some kind of consciousness, they can also have intention. An animal may cooperate with humans or be recalcitrant; a gun may choose to shoot well or badly for you; mountains and rivers may nourish or kill you. Spirits are the causes of some of the most significant events in your life, and you should strive to be aware of the moods of your surroundings and adjust your behavior accordingly, in order to achieve your aims and avoid disaster.” (Vitebsky 2005: 260)*

Though one may ask God/Allah directly for guidance, one could also ask the spirit world. At dinner during winter, we would primarily eat mutton. There would often be shoulder blades amid the pile of boiled meat. On many occasions I watched a man choose the shoulder blade and use his knife to scrape every scrap of meat from it – which was eaten. When the bone was perfectly clean he would hold the blade against the edge, close his eyes and mumble some quiet words. Then he would push the blade into the bone and wait for it to shatter the open plane. By reading the way the cracks emanated through the bone, one could read an answer to a question asked. Often, the others that were having dinner would lean in and offer their perspective on reading the bone. I couldn't deduce any systematic method for deciphering cracks, especially as the askers were often secretive about what precisely they had asked, but as Chukan said to me, "You must cook the bone and eat the meat on it, or it won't work." Vitebsky also describes how a shoulder blade bone, cleaned of meat, may give guidance. When placed in embers, the cracks that appear on the wide surface can be read, "The analogy between the design of the bone and the map of the landscape was becoming clearer. It was based on a connection between the animal that provided the bone and the animal being sought. Information about wild animals came via the body of one of Bayanay's creatures, while information about domestic reindeer came from a member of the same herd." (Vitebsky 2005: 267) I only witnessed this done with goats, sheep and occasionally a cow. We never examined the shoulder blades of foxes or other animals that we hunted.

The Domestic Sphere and Cyclical time

Movement is what makes life possible for Kazakh pastoralists. Most essential to the care of herd animals is the ability to provide them with adequate grazing. This changes seasonally. In the autumn, the steppe yields the most grasses, in the winter protected mountainsides do, in the spring and summer, high-altitude valleys that are nourished by glacial melt are the most productive. Though a nomadic family might move three or four times a year, the domestic sphere is most important unit and doesn't change with the seasons. The domestic sphere or encampment, which Humphrey refers to as a "residential group" (Humphrey 1999) and is made up of an extended family group. In the encampment which I stayed, there were six homes, each headed by a man. Among the older men who headed families were Kukan, his cousin Chukan, and his great uncle Beite. Kukan's son Conqui, Jaiken, and Chukan's son Banka were the younger men who had homes in the encampment. Typically, the youngest son stays in the encampment with his father, while the older sons move to other locations. All told, there were roughly 30 people who lived in our camp. The goats, sheep and horses of each household were pooled together into one large *kora* or corral at night. Each of the three younger men would be responsible for herding on different days of the week, and they would sometimes delegate their own sons to do the herding duties. While the older men didn't actually herd the animals, they selected which animals were to be culled, as well as the precise timing and location of moving the encampment.

Seasonality so central to herders that "Herders are more attuned to a cyclical rather than a linear conception of time." (Fijn 2011: 176) When I interviewed my informants, rarely would they refer to life events in terms of year or years gone by

– but they never failed to mention the time of year it was. Kukan once described naming a nephew, “In autumn we had some weak animals so I took them to a place that had very good grazing and slept on the ground at night with them. Autumn has the best weather to sleep outside. A friend visited and said that my nephew had had a son and wanted me to name him. I said, ‘How many eagles have you seen on the way here?’ ‘I don’t know, a couple?’ ‘Well name him couple eagle.’ He did and after two weeks the animals were fat and strong and I came home with them.” At first I had assumed this had just occurred the previous autumn, but I soon realized it had happened an autumn thirty years past. Only young men would be sent out to herd alone for two weeks at a time.

A family, or a residential group, extends beyond themselves into the landscape. Aside from the five or six yurts or adobe shelters, there is the corral, and the range of the herd animals. The sheep and goats generally stay the closest, and the horses the farthest – but they all return at some point. Fijn draws on Ingold’s comparison (2000) (itself taken from Richard Dawkins 1982) of an igloo with a beaver dam, whereas both are an ‘extended phenotype’ where genetic effects exist beyond the boundary of the organism. She says, “The Mongolian ger is an extended phenotype of the family that inhabits it, just as the beaver’s lodge is an extension of the beaver itself.” (Fijn 2011: 60) Similar to the way in which a beaver dam can have far-reaching affects to the landscape, so can a yurt and the act of herding. See Figure 1 for a depiction of the annual movements of my informants.

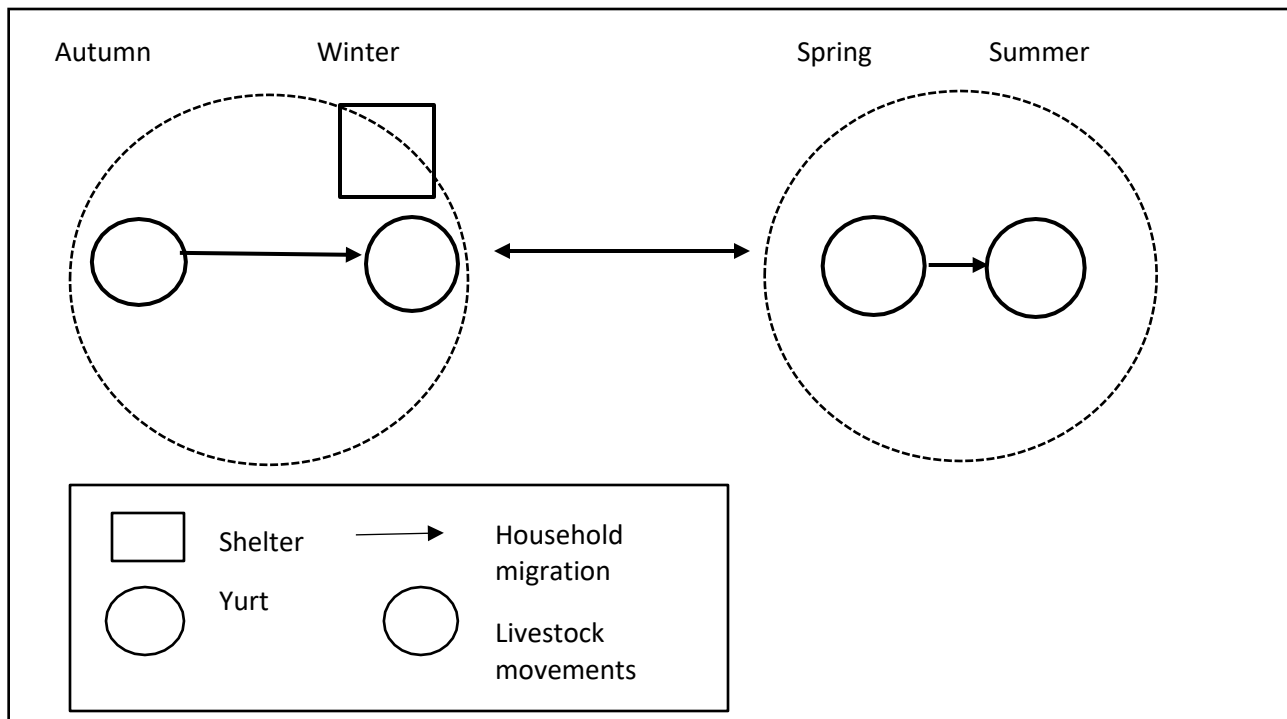


FIGURE 1 – Migratory movements between seasonal pastures and location of encampment (adapted from Fijn 2011:184)

In the following sections, my aim is to examine each season, primarily through the eyes of a *berkutchi*. Though women play a huge role in keeping the home and milking the livestock, they stay close to the home. They don't herd, rarely ride horses, and generally only venture around the immediate vicinity of the encampment and occasionally travel to the closest village. With my *berkutchi* informants we were constantly on the move – riding horses, sometimes great distances, to different clusters of mountains and relatives in our search for foxes. I took this for granted and it was with some shock that I realized how different women's lives can be. Among the Eveny, Vitebsky came to a similar conclusion: "The men's daily narratives are full of far-flung place names, and I had been so preoccupied with tracing and mapping these places that it did not occur to me that

the women may not have seen them for years. Most women I have observed never moved further than a mile or two from camp in quest of wood, berries and mushrooms.” (Vitebsky 2005: 339)

Just as the act of herding dictates certain movements and actions in each season, so does hunting with an eagle. *Berkutchi* are highly attuned to the seasons in their own unique way, which I will detail.

### The Autumnal Search for Eagles

For *berkutchi*, autumn is the beginning of things. Though I have mentioned trapping in Chapter 2, here I shall go into greater detail as to how the act of finding an eagle speaks to seasonality and landscape. During autumn, the family is living on the steppe, in a rich autumnal grassland that provides plenty of nutrition for the animal herds. The calves, lambs and kids born the previous spring and now stronger and developing the size and independence to sustain them through the upcoming harsh winter. Eagles hatched that spring have now fledged, dispersed to new territories, and are acquiring the hunting skills necessary to survive winter. There are still marmots and small mammals living on the steppe – an important food source for young eagles – foraging before they retreat into hibernation. In addition to resident eagles, there are also eagles arriving to the area on migration. They were born, or have lived the few springs and summers of their lives, in Russia, and are now en route to their own winter places in China. These migratory eagles are prized by the *berkutchi* of Daluun as the most capable hunters.

Autumn is when a *berkutchi* acquires his new hunting partner, and October is the window. October is the height of migration, and a time when the mechanics of trapping are still feasible. An eagle trap requires bait – usually a dead hare – and if one waits until November and the snows – this bait is too quickly frozen and covered in inches of snowfall. October is ideal to trap because of the high numbers of young eagles in the area and the mild weather for trap set-up, but also because the eagle’s predatory drive has been heightened (making them more likely to come into a trap) with the promise of winter and the coming hibernation of easy prey like marmots.

Typically the first week of October, the *berkutchi* gathers up his traps and sets off. The accomplished and dedicated *berkutchi* are usually the patriarchs of the family like Kukan – men who have the social status and ability to leave the family for days at a time to pursue the practice. Younger men have obligations to take care of the livestock, boys must go to school and help with the other children, and women and girls have pressing domestic responsibilities. If a young man wants to trap an eagle, he most likely would recruit an older relative to help him and only spend a few days away from his family trapping. After he left the older man would continue to trap, and if successful, would gift the eagle to the younger man in exchange for some form of compensation. There are also men who become “trapping specialists” who, through a combination of skill and enjoyment, pursue trapping more enthusiastically than even hunting. They then sell the eagles they’ve caught to other *berkutchi* who may not have the time or means, or are willing, to trap on their own. I met a man like this named Ungarn in Daluun. He told me, “Not

everybody has the skill to trap eagles. I trap many each year. The best I keep for myself and the rest I sell to other *berkutchi*.”

My own trapping group included myself, Kukan, one of his elder sons, Jakyn (in his thirties) and a relative, Serkbo (of a similar age and social status to Kukan). Jakyn had never flown his own eagle, as he said he did not have the time, but he often went out hunting and would sometimes feed or borrow his father’s eagle. Serkbo was his family’s patriarch and had been a *berkutchi* his entire life. We were very conscious of the “October window”, and having set off mid-month, had but two weeks to secure an eagle before real winter set in.

This was the most physically demanding experience I had in Mongolia. It took fourteen long, exhaustive days to obtain my eagle. Not just any eagle will do, either. The vast majority of *berkutchi* will only fly female golden eagles, as they are a third larger than the males, and their extra bulk is useful for subduing foxes which may weigh three times their body weight. Also, fully mature eagles are not seen as suitable. At the fourth or fifth year of an eagle’s life they reach sexual maturity. This is characterized by the uniformly dark plumage. A first year eagle has much white coloration in its feathers which gradually recedes as it ages until its feathers are entirely brown and black. Indeed, this is denoted by the mature eagle’s name of *tas* or “stone”. This means that we are searching for relatively few members of an already small population – young female golden eagles in their first, second or third year.



The traps are called “jealousy traps” and consist of either a fine net or padded leg-hold traps. Our first task was to find and shoot hares to use as bait for these traps. The preferred method for this is hill climbing on foot and carrying old Soviet .22 rifles. These rifles were stamped with the mark “Made in the USSR” and fitted with iron sights. The bullets, very expensive to buy in town, were a precious commodity to the Kazakh herders. It took a very skilled marksman to use this weapon. Before we went out searching for hares, Kukan said “Every eagle hunter must be able to shoot a rifle. You need practice.” He placed a horse’s humerus about 50 yards distant and carved a small notch in its center with his knife – a spot to aim for. He showed me how to lie prone with the rifle, steady it, and aim. I was nervous but tried to slow my breathing as he had instructed. Several onlookers had gathered, and when I squeezed the trigger, everyone immediately rushed towards the horse bone target. To my surprise, I was within an inch or two of the carved notch. Kukan laughed and shook my hand, but sadly, that was a feat I never managed to repeat. That is the first step in trapping an eagle, killing a hare. Jakyn trekked out on his own the next morning and came back with two dead hares in hand. For the trap itself we were going to use modified leg-holds rather than the fine net. These are iron leg holds that are made for catching foxes and wolves, cheap and readily available. I watched Kukan carefully wrap several in multiple layers of thick felt. He then snapped them on his finger to test that they provided a sufficiently soft grasp to avoid injuring an eagle, though still strong enough to hold her immobile. The final piece of the trap was another bird to incite the “jealousy”. This could be a crow or a raven, or even another eagle. When this bird is tethered near the dead hare, an eagle passing by will note the large meal this bird has and be driven to steal it – typically an easy way for an eagle to get a meal in the wild. For this we

had a *sahsa* or a male golden eagle. “Because *sasha* is smaller than the female, she will not hesitate to take the hare from him” Kukan explained.

Setting off, Jakyn wrapped up the hooded *sasha* in a long piece of fabric, slung it around his back with an old horse lead, and hopped on his Chinese motorbike. He would meet us at our first trapping place. Kukan, Serkbo and I carried the leg hold traps and would ride there on horseback. We had heard that relatives living 50 km away in a place called “the cold place” had recently seen several younger female eagles. Once the trapping area is reached, we stopped to confirm the precise locations of the sightings with herders. The ideal trapping site is halfway up a prominent mountainside, one that overlooks a large valley and smaller mountains. Eagles gravitate towards the highest perches for hunting, and you want to mimic that in your trap location. We set up the hare, tied the *sasha* nearby, and buried the leg hold traps, securing them with wire to a large boulder so a snared eagle couldn’t drag them. To cover the tops of the leg holds we crumbled dried horse dung. It was the same color as earth, but of almost no weight so as to not spring the trap. To watch the trap, we retreated a half mile to an abandoned adobe home. There we could easily sit behind its crumbled walls and peer above with binoculars. Binoculars were often old pairs that had been cut in half with a piece of fabric tied around to make carrying easier. They did not afford much clear magnification, but I was impressed at how well my informants could differentiate subtle differences in the landscape with them.

Our days were long. We spent daylight hours watching the trap, and at night we would return to nearby relative's homes. When a few days passed and no eagles had been sighted, we moved on.

We travelled another 50km even deeper into "the cold place". This next encampment was struggling to get enough food from their livestock. It speaks to the status of guests and the social pressure to provide for them that they hosted our trapping group for several days. After we set the traps and established our blind, there was a certain tension in the air. Dinner was scraps of mutton, which was then reboiled for breakfast and again for lunch. We began to pass the time playing games of *cumolach*. *Cumolach* is akin to fortune telling. It is done with a specified number of stones (we often used the pellet-shaped dung of goats) that are randomly separated and then organized in a specific manner. The way the stones end up grouped can be read to determine the answer to a question. In this encampment there was a "cumolach-maker". When I asked her, "Will I trap an eagle?" She carefully laid out her special stones (usually kept in a shawl in a drawer) and pondered over their position. Finally she said, "You will return home with both your saddlebags full." One of my saddlebags was filled with trapping equipment and the other was empty. It was her way of saying I would gain something on this trip, and not go home empty handed.

Time was beginning to become a factor. After ten days without success, Jakyn and Serkbo would soon have to return home to help their families move to their winter place. It was a huge undertaking for a family to move all belongings and animals dozens of kilometers into the mountains. We decided to move our traps to a final

location, but remain within the same encampment. During the night it snowed several inches, and we brought in the dead hares to thaw them and *sasha* to give him some respite from the exposed mountainside.

The days were long and cold, either consisting of extensive riding or extensive sitting. On the thirteenth day, a passing herder stopped by to tell us that, not far down the valley, an old *berkutchi* had just trapped a fine eagle. Maybe we should try to buy this eagle for me? I dug into my pockets and told them I had 80,000 togrog for an eagle. This is about \$50. It wasn't much, but it might be enough. Jakyn, Kukan and Serkbo decided to ride to this man's house that night. I wanted to come to evaluate the eagle, but they insisted I stay. If he knew I was a foreigner, he might not want to sell the eagle, or demand a much higher price, they told me. If Kukan said he wanted the eagle for himself, it would likely go much smoother. They were gone all night. I spent the next morning watching the horizon for their return. I was waiting for a cloud of dust in the distance to signal the coming of a rider and a message about the eagle.

Finally, that afternoon they returned. A trio of horses were rushing towards our house. They burst into the home, with Kukan carrying a stunning *turnik* (a second year female golden eagle). She was wrapped up in a blanket, untrained, and wild-eyed. Kukan placed her in my arms, and I immediately felt a rush of euphoria. Here she was, my hunting companion for the year. The fortune teller was right. I may not have trapped an eagle myself as I had envisioned, but I did not go home empty-handed.

That was the fourteenth day, and the final day the men could have afforded to help me. Jaykn took the anklets and jesses, the leather equipment, off of the *sasha* and released him back to the mountains. We no longer needed a *sasha*. We stuffed our saddlebags full, I carried my *turnik*, and immediately made for home. It snowed on the way – clearly winter was here and it was time to move the family to the winter place.

Months later, I interviewed an old man, Baideryk, who had long been a *berkutchi* but had stopped after he turned seventy as it was too painful for him to ride on horseback. I asked him, “What eagle has been your favorite and why?” Baideryk began, “When I was in my twenties, I wanted to trap a *kiran* (an especially brave eagle). I had a *sasha* and I tried for three weeks to trap a female, but was not successful. I had to return home to be a good herder for my family. I decided to just try to fly *sasha* anyway. The other *berkutchi* told me I was crazy, that a *sasha* could never catch foxes. But I tell you, I caught twenty foxes with *sasha*. Twenty! It was the most fun I had with an eagle. He was so aerial. Everyone was surprised, so he was my favorite.”

### The Winter Place, the Cull, and Distribution

“Autumn was also the season when human control must reach beyond facilitating the animals’ migration into directions their genetic continuity through the selective removal of antlers, the crushing of the blood supply to the testicles, and the slaughter of weak animals.” (Vitebsky 2005: 136) Although the Eveny operate on a

slightly earlier schedule than Kazakh pastoralists, nonetheless the first task of winter concerns this genetic continuity of herd animals. It was the last day of October when Kukan and I returned to the autumn place with the new eagle in tow. Over the next few days we were to move 20 km into the mountains to the winter place. For the move, the yurts are deconstructed and placed on camel back. One Bactrian camel can carry one yurt comfortably. While the men work to drive the herd to the new location, the women work to fill a borrowed car to the brim with all the other belongings and drive them to the winter place. The winter encampment consisted of five adobe homes tucked into a sheltered mountainside, and encircling a large compartmentalized corral where the sheep, goats and young animals spend nights.

Once the families have settled in the winter encampment, larder must be filled. All the livestock they will need to sustain them through the winter must be slaughtered in November. For my family, it included some 15 goats and sheep, and a horse. The job of choosing which animals to slaughter is highly important and left to the patriarchs. These men carefully sift through the animals in the corral, typically selecting females that are not reproducing well, males not suited to be good sires, or animals thought unlikely to survive the winter. A prayer is said for each animal before it is killed according to Islam – the throat cut while facing Mecca. The animal is first skinned, and the skin laid out to prevent the meat from contacting the ground. The meat and organs are parceled out while resting on the skin. Skinning and cutting the meat is the masculine task, while the women handle the internal organs. Nothing is wasted. If not saved for eating, organs are cleaned

out and their casing used as containers of various sorts. Fur is singed off the head and feet before those items are placed in the larder for special occasions.

Every family slaughters one horse each year. Jambyl, Kukan's son, drove the horse herd into the corral, and Kukan selected a colt for slaughter. "I choose a horse that is not good for riding and not good for breeding." Kukan explained. The black-coated colt was hobbled while other horses were released back to the steppe. The colt was forced the ground by two men and half a large barrel (cut lengthwise to catch the blood) was placed under the horse's throat. We all stood by and said a prayer, this one longer and more reverent than the simple prayers for the goats and sheep. Then using a very large knife Kukan cut the horse's throat. Blood filled the barrel - it was as if one had taken a gallon jug of water and turned it upside-down. After fifteen or twenty seconds, the horse was dead, and with that the mood changed from somber and reverent to jovial. Everyone in our encampment worked on the horse. The first task was to skin it, the second to separate the choicest cuts of meat, and the last task was for the women to work on cleaning the internal organs. The women in particular were chatting animatedly as they cleaned out the intestinal casing to make *kaz*, a kind of sausage and the national dish of Kazakhstan. Interestingly, I was asked to help skin the horse, a male task. Hour by hour, piece by piece, the horse began to disappear. That afternoon, we fried up a cut of the horse's haunch. Candies and biscuits were laid out, and a toast of vodka given - it was a time to be happy and eat, to be thankful for the bounty that will provide nourishment to the family through the winter. For this meal, the men and women sat in separate groups. Again, I was asked to sit with the men. I asked Kukan about this. "You are a hunter. You hunt with us. So you should eat with us."

Fijn summarizes these events with her Mongolian informants well:

*“Herders cull their herds at the end of each autumn. By this time of year the temperatures have dropped to below freezing. Each family chooses animals for slaughter that are less likely to survive through the winter because they have some form of weakness. After an animal is slaughtered, everyone within the encampment partakes in the bowl of innards, which requires immediate consumption. The rest of the meat from the animal is hung inside a storage hut to dry and to be consumed over the long winter. Any extra innards are distributed amongst neighboring herding families. Herders also slaughter and process animals to provide meat for extended family members who live away from the encampment during winter. Khazanov (1994) refers to this distribution of food amongst the other members of the community as “balanced reciprocity” which is an important principle of Mongolian exchange.” (Fijn 2011: 197)*

Regarding her point about balanced reciprocity, I noticed this less with processed animals and more with live herd animals. In late winter, a terrible blizzard hit our area. For several days, visibility was almost null as feet of snow accumulated. A neighboring encampment lost nearly half of their herd animals in the blizzard. The herder, disoriented in the weather, became separated from his herd. He didn't find them until the storm had abated days later, and half the animals were dead. The families in my encampment gathered to select some twenty animals to gift to the neighboring encampment. It is understood that, should the same misfortune befall



us, they would act similarly to help us rebuild our herd. This is the only form of insurance on the steppe.

Nomadism manifests itself in the life of a *berkutchi* in winter; he must travel far and often to hunt. In the early winter, most hunting is done within a few hour ride of the home. However, once a few are caught, *berkutchi* must look elsewhere. The landscape cannot support many predators, and once they are gone it takes a while for new foxes to come in and claim new territories. By December, after my eagle was trained and took her first few foxes, we had to travel. We travelled in all directions. We would visit fellow *berkutchi* or relatives. We'd ask around to see who had seen foxes, particularly any dark foxes. Several times we set off in search of *kara turkuh* or "black foxes" as they are the most prestigious fox one can catch with an eagle – a pelt will fetch several times the price of a red pelt. A coat made from a black fox would be the envy of all. "I once caught the blackest fox." Kukan extolled one night after hunting. "It was so beautiful I traded a cow for it!" The others laughed and seemed to look at Kukan with a kind of awe.

Typically we would set off from home intending to spend 2-4 days hunting in another place. It would usually take a day's ride to get there, and meant that the horses required the following day for rest. The horses work the hardest in these hunting endeavors, and are the limiting factor in the number of days that eagles can be flown. Including travel time, rest, and hunting time, it was about a ten day cycle. Every ten days or so, we would head to a new place to hunt. This allowed us to explore vastly different landscapes for hunting. Some mountains were high and treacherous, sometimes we hunted small hills, or once even a gorge that cut

through the steppe. Each required different techniques to navigate and place the eagle at an advantage. Fellow *berkutchi* were invaluable to have along; they pointed out how best to approach a new mountain. Many young men additionally volunteered to be 'scareboys' (one who strives to flush the fox) for us. While they are a benefit to us in finding foxes, we are also beneficial to them. Young men are rarely able to participate in an eagle's hunt and, further still, if successful, *berkutchi* are obligated to give the scareboy who flushed the fox its pelt. I can think of many young men and boys who were beaming ear to ear when we caught a fox and gifted the carcass to them.

The first fox Alema caught benefitted a young boy. Riding through a new area, a young boy of 12 or 13 started following us on foot. The snow was high, and he had been asked to help herd that day. He left his duties and ran to catch up to us. We chatted to him and Kukan suggested that, without a horse, he go back to his herd. I was surprised to see how swift and nimble he was through all the snow and rock as we proceeded at our normal clip on horseback. The boy insisted the he knew where some foxes were, and indicated the place we had intended to hunt. Kukan acquiesced and said, "OK if you can keep up!" He did, and further, shortly thereafter he found and flushed the fox that my eagle caught. After I fed the eagle, I handed him the fox carcass he smiled bigger than I'd ever seen. He slung it over his shoulder and walked home while we continued on. A year later I would visit his house in the summer – the fox pelt was proudly hanging in the center of the yurt. Winter is a series of hunting cycles whereby you travel to find the foxes, pursue them for a few days, then return home. You rest then set off again, both eagle and *berkutchi* stronger and wiser, as are the foxes that you are pursuing. Towards the

end of the hunting season, near late January, the foxes return to the area immediately near your home. New foxes have moved in and established territories in the areas that you first caught foxes from in the beginning of the season.

Therefore, the beginning and the end of the hunting season is spent at home.

One can't discuss the winter without a consideration of both the temperatures and the silence. In January and February, the temperatures routinely dipped to -40 degrees. This profound cold affects both the *berkutchi* and the eagles. At -40 I found it took great difficulty for me to muster the alertness that hunting requires, and I would get what I can only refer to as 'cold headaches'. My thoughts were sluggish and my head pounded painfully in the cold. From my exhalations the condensation on my face quickly froze and my eyelashes and hats would become weighted down with ice. I considered -40 my limit and interestingly, the eagles were the same. Frost would accumulate on their beaks and feathers, their feet would turn a bright shade of orange (rather than the usual yellow) and the eagles would tuck their head beneath a wing. Even if we saw a fox, they would refuse to fly it. Kukan wouldn't typically head out hunting if this profound cold hung in the air, but sometimes we were caught out when it dropped to that level. When it did, we would hurry home to bring the eagles inside and feed them a large portion of meat in warm water. "Cold motivates eagles to hunt to a point." Kukan said. "Past that point, they just want to save energy. This is when we must be careful they do not become too hungry or ill. When they become too cold, feed them well and let them sleep inside with you."

The other characteristic of deep winter hunting is silence. There are no birds singing, no insects calling, no industry or traffic. When you sit on the mountaintop with your eagle in January, the quiet is so profound that you can clearly hear yourself, your horse and your eagle's rhythmic breaths. It speaks to how saturated our daily lives are with sound that, to be without it, I can't help but find it an alien experience. Vitebsky puts words to this complex feeling, and one could easily substitute the word 'eagle' or 'reindeer' in the following sentence. "The depth of silence was beyond anything I had ever known, made all the sharper by the occasional snorting and scrunching of our reindeer on a darkened slope nearby, each one named, trained and bound to us by a loyalty that was ancient, but was easily lost" (Vitebsky 2005: 179)

Finally, tensions can arise at the end of winter due to transgressions regarding the already limited grazing. Just as the patriarchs take the selection of animals for slaughter very seriously, so too do they take judicious land use with utmost seriousness. I was quite surprised to see the result when Gulnezi, a girl in her early twenties, made an honest mistake.

*Fieldnote excerpt:*

*Gulnezi bursts in the home, crying. She is my age, and is very upset. Most of the men had gone into the city to cast votes in a local election (women are eligible to vote of course, but only the elderly ones went). It was up to the young adults and children to do the men's work for that afternoon. Gulnezi was to herd Kukan's sheep and goats for the day. I went with her in the morning, to get an idea for the mechanics of herding. It was extremely*

*difficult. I was very impressed with how, using only simple body movements and vocalizations, she was able to direct large and endlessly moving herds of livestock. We broke for lunch and I decided to stay at home and write while she finished her herding duties. It was evening when she burst in the home, full of tears. Chukan had arrived from the village twenty minutes prior and was furious to find that Gulnezi had been allowing her herd (Kukan's herd) to graze a particular mountainside. This mountainside, Chukan yelled at her, was reserved for him to graze after the other families left for their 'spring place'. Because Chukan stays longer at this 'winter place' before moving, he needs that mountainside to feed his animals during that time. Gulnezi began to explain but Chukan interrupted her to say, "You have no mother. And when your father is not here, you act like an idiot!" I felt terrible. Gulnezi's mother (Kukan's wife) is a very sensitive topic. She had died five years prior, suddenly and unexpectedly, at the age of 53. It was still a very raw wound for the entire family. Gulnezi is 25, and it is because her mother is gone, that she feels burdened to stay in the home and take on a lot of her mother's duties. If she left to pursue a job in the city, or even to get married, who would take care of her father and the younger children? She collapses in sobs in the home and I try to comfort her. How can I possibly relate to these dilemmas?*

*Gulnezi's older sister, Maidagul, slams the door open and demands to know what Chukan said. Maidagul is beside herself with anger – it was an honest mistake! Not much damage could be done in an afternoon of grazing! She decides to take revenge. Chukan has a vicious guard dog that nobody likes. He patrols the winter home and barks ruthlessly at anyone outside Chukan's*

*immediate family that strays to close. Once I made this mistake during a pre-dawn pee, and nearly died from terror. I wonder if this dog might actually hurt a child. Maidagul grabs a potato from a sack in the backroom and a sewing needle. She inserts the needle into the potato, walks out the door over the Chukan's home, and surreptitiously throws it to the dog, who promptly swallows it. I'm rather horrified – I didn't know what Maidagul was planning. I really didn't want to see an animal die in a painful way.*

*There really are strong feelings associated with land and how it is divided. The incident made me realize that, though it might appear to me that the five sheep and goat herds of these five families are grazed randomly, it is actually a very precise and planned manner. A lot of effort goes into making the meager grasses last throughout the winter, and any transgression is taken very seriously.*

*Addendum: months later, the dog was still fine. He never appeared to suffer any ill effects from the ingested needle! Those dogs must have cast iron stomachs.*

*January 8<sup>th</sup> 2013*

## Spring and Summer Places

Some families have a particular spring place and some don't. My family, Kukan's family, always moved from their winter place in late March right to the summer place. Summer places are high altitude. Whereas the autumn and winter places are usually close to one another, the summer place is very distant. They are far up in

the mountains where glacial melt provides access to lots of fresh, clean drinking water and well-watered grasses. A few animals may have given birth before the move, but all effort is made to minimize this. It is greatly preferred that the animals give birth in the spring/summer place. It is too cold and the ewes require too much care to survive easily if they are born in February or early March. The camels, often left on their own, are again used to bring the yurts to the spring/summer place. After the harshness of winter has passed the families prefer yurts to adobe shelters.

Summer is an idyllic time, especially for the elder hunter. Women are primarily tasked with milking the livestock and making dairy products while men break horses and shear the sheep.

*“Women tend to interact with female animals through the act of milking, and with young or sick animals that needed nurturing, whereas men tend to interact with male animals by catching the gelding with an uurga or collecting firewood with the oxen. Just as the herds align with quite specific gender roles, herd animals do too within the social structure of the herd. Milking is exclusively the task of women because women are thought to be more deft with their hands and attuned to the cow, whereas the men catch the horses and handle the oxen because these animals are big and powerful and require someone with strength to restrain them. If there is a shortage of labor, women (and to a lesser extent men) do engage in most tasks. The only tasks women do not engage in is the catching and breaking of horses, or in slaughtering an animal.” (Fijn: 2011 181-182)*

The *berkutchi* may spend their summer days fishing or racing horses. They travel to the homes of their peers to fish in new rivers or inspect the year's most promising race horses. There are many festivals across the villages, counties and provinces. They often travel to them to support their favored wrestler, archer or horseman. Just as they feel free to travel in pursuit of hunting, these men travel to participate in other 'manly pursuits'. In late summer, marmot hunting is popular. Although few Kazakhs eat marmot themselves (unlike Mongols) they will readily hunt them to feed them to molting eagles. As the meat is very oily and fatty, it is seen as part of a healthy diet for an eagle that is resting and growing new feathers in the summer. *Berkutchi* do not interact with their eagles much in the summer. The eagles are tethered in the grass near to a stream and largely left to their own devices. The main concern is a healthy molt and a healthy diet. If a *berkutchi* intends to release an eagle to trap a new one in the autumn, the summer is the time to do it. This is when the eagle is very fat and healthy, and there is much easy prey moving about the steppe – the likelihood of them surviving and perhaps finding a mate is high. Considering the reverence that many native North American peoples and native Siberian peoples pay towards eagle feathers, it is surprising that these molted feathers are almost never saved and have virtually no significance among the Kazakhs.

In these high altitude summer places, there are sometimes nesting golden eagles. The Kazakhs watch these nests carefully. They note what food the parents are bringing to the nest, and how many young successfully fledge. Though there is little interest in taking an eaglet from the nest, the habits and movements of the



fledged young are watched to potentially be trapped the in the autumn. Sometimes the nesting adults are prior falconry birds. These are eagles that were hunted with by a *berkutchi* for a few years and then released with some identifying characteristic (a white rag tied on its back, leg or feather for example). As mentioned in previous chapters, many times *berkutchi* told me they greatly enjoyed watching their former hunting companions carry on their lives in the Altai. One way that Kazakhs maintain a relationship with a free-living horse herd is through salt. It is an essential mineral that horses require and, if they know of a salt lick, the herd will periodically return to it. At the summer encampment, a block of salt was kept for the horses. I was quite surprised the first time the herd appeared and quickly wrote a field note:

*Fieldnote excerpt:*

*I just saw something amazing! I knew Jambyl put out some basins filled with salt early this morning. I was lounging in the grass late in the morning, about 10am. A cloud of dust appeared in the distance, coming from between two mountains. What was it? Individual figures appeared as they came closer. Horses! Horses running at full tilt right towards us! Big, small, powerful, lithe, spotted, dark, light, all kinds galloping toward our collection of yurts. They slowed down when about 100 meters out, and loped to the basins. All the animals crowded around to lick the salt. Jambyl and a few other men approached carefully (the horses were skittish) and appeared to count them. After twenty minutes, the lead horse (not sure if the stallion or head mare) turned tail and galloped away, back to the same space between the*

*mountains. The other horses lifted their heads and followed suit – a line of animals running away.*

*What an ingenious way to keep tabs on your horse herd in the summer - through the provision of salt. These horses were, by all appearances, very “wild”. Though the horses must traverse a great amount of the landscape through the seasons (relatively few animals in a herd are ever ridden), what fascinating means of cooperation Kazakhs have devised! It strikes me as a bargain for freedom. The horse herd can travel anywhere, but ultimately, some of its needs must be met through the Kazakhs.*

*August 12<sup>th</sup> 2010*

### The Inadequacy of Dualism

Cronon argues that we must abandon this dualism that “sees the tree in the garden as artificial – completely fallen and unnatural – and the tree in the wilderness as natural – completely pristine and wild. Both trees in some ultimate sense are wild; both in a practical sense now depend on our management and care. We are responsible for both, even though we can claim credit for neither. Our challenge is to stop thinking of such things according to set of bipolar moral scales in which the human and the nonhuman, the unnatural and the natural, the fallen and the unfallen, serve as our conceptual map for understanding and valuing the world. Instead, we need to embrace the full continuum of a natural landscape that is also cultural, in which the city, the suburb, the pastoral, and the wild each

has its proper place.” (Cronon 1995: 79) Few aspects of Kazakh life have stark dualism – most everything is a negotiation with place, beings and spirits. Nothing is permanent. The next cycle of seasons will come and replace the previous. When baynur, or bayanay to the Eveny, “wove the animals and humans on the landscape into a moral ecosystem” (Vitebsky 2005: 272) they were not meant to be unwoven. With growing global environmental crises, such as climate change, and species facing habitat loss and extinction, the west would do well to look towards peoples like the Kazakhs and the Eveny. The task of making a home in nature is what Wendell Berry has called, “The unfinished lifework of our species. The only thing we have to preserve nature with is culture; the only thing we have to preserve wildness with is domesticity.”

## Conclusion

As we currently understand human-animal relationships, where does hunting with eagles fit in? Do *berkutchi* call for a change in the theory? I have striven to incorporate phenomenological, intersubjective, and perspectivist framework into understanding these relationships and their ethno-ornithological underpinnings.

To reiterate, ethno-ornithology explores how people of various times and places seek to understand the lives of birds around them. It seeks to explain what birds mean for us humans, and how the intimate and multi-generational connections humans have with birds can inform an understanding of a local landscape and an understanding of the lives of birds. (Tidemann and Gosler 2010)

Birds are fantastically embedded in all aspects of our humanity; in language, music, art and dance; birds help us discover what it means to be human. Hunting in partnership with eagles is a unique and compelling example of ethno-ornithology, perhaps *the* example of reciprocal behavior between humans and birds.

In addressing ethno-ornithology, I have aimed to step across disciplinary boundaries into biology. There is important ecology implicit in hunting with eagles. The wild eagle population must be healthy, as must the wild fox population, or else the tradition couldn't exist (Simakov 1989). Sustainability is its fundamental tenant. This particular population of golden eagles, the Central Asian population, has not been studied by ornithologists. However, as I have experienced, these Kazakh herding communities have intimate knowledge of the eagles; they know where the

eyries are, they know when the eagles migrate and where, they know what wild eagles are hunting – they know because they have to. Being a naturalist is part of being a successful *berkutchi*. In Kazakh society, men in the countryside, whether falconers or not, are expected to have this knowledge of the eagles. Thus, there is immense potential to utilize this local knowledge to aid ornithological projects in the area and understand alternative ways in which humans classify the natural world (Levi-Strauss 1966).

This expansive local knowledge could be used in the future as a springboard for a full fledged endeavor to document the bird life of the Altai mountains. In this harsh and unforgiving mountain landscape, the way in which the Kazakh pastoralists perceive and interact with wild birds, utilizing the prey drive of golden eagles in a mutually beneficial relationship, demonstrates how endlessly adaptable humanity is. Ethno-ornithology is one way to build a bridge across the gap between science and culture (Tidemann and Gosler 2010). I envision this ethnography aiding in that endeavor.

How Kazakhs have come to understand the lives of the eagles around them is a compelling question, and a worthy addition to any ornithological knowledge from the scientific community on golden eagles. As a biologist, I believe that utilizing biology to inform our understanding of anthropology can only help. Both these perspectives go hand in hand. Looking through both lenses gives us the most complete picture.

Using Haraway, King, and Fijn my assertion has been that, to borrow a phrase from Temple Grandin, animals make us human. Looking at animals is a very reflexive action, and can be very revealing. Hunting with eagles, an act rooted in something as simple and ancient as hunting, is a cultural spring that flows to folklore, language, music, dance, and art. It is important to acknowledging the other side of the coin: zoopomorphism. Our interactions deserve to be viewed from the perspective on the animal as well. This is the notion that, just as we often attempt to understand animals by projecting human characteristics onto them, animals can attempt to understand us by projecting their own animal characteristics onto us. It is part of their agency, and part of their engagement in intersubjective communication with us.

Finally, at its most fundamental level, this thesis has aimed to challenge human exceptionalism. The assumptions embedded in human exceptionalism represent a small world and one-dimensional thinking. There are countless communities of animals with complex lives and unique perceptions that inhabit our world – it behooves us to learn from them, and ultimately our lives are enriched from our observations, interspecies interactions, and especially the communication and partnership that results. In the tradition of hunting with eagles, eagles are both a mirror to better understand ourselves, and an unparalleled window into the wild.

## Bibliography

Adams, B. 2014. *Once the Wild is Gone*. Aeon.

Ackerman, J. 2016. *The Genius of Birds*. New York. Penguin Press.

Anderson, M. 1986. From Predator to Pet: Social Relationships of the Saami Reindeer-Herding Dog. In *Central Issues in Anthropology*. 6(2) 3-11.

Avery, M. 2003. *The Tea Road: China and Russia Meet Across the Steppe*. Beijing: China Intercontinental Press.

Bekoff, M. 2009. *Wild Justice*. Chicago. University of Chicago Press.

Begiganyan, E. 2004. Competition in the Countries of Central Asia in the Name of Cultural Influence. In *Toronto studies in Central and Inner Asia vol 6: Cultural Interaction and Conflict in Central and Inner Asia* (eds.) M. Gervers, U. Bulag and G. Long. Toronto: University of Toronto Press.

Berger L.R., Clark R.J. 1995. Eagle involvement in accumulation of the Taung child fauna. In *Journal of Human Evolution*. 29: 275-299.

Berger L.R., W.S. McGraw. 2007. Further evidence for eagle predation of, and feeding damage on, the Taung child. In *South African Journal of Science*. 103, 496-498.

Bille, F., Delaplace, G., and Humphrey, C. 2012. *Frontier Encounters: Knowledge and Practice at the Russian, Chinese and Mongolian Border*. Cambridge: Open Book Publishers.

Bodio, S. 2014. *An Eternity of Eagles: The Human History of the Most Fascinating*

- Bird the World*. Guilford: Lyons Press.
- Bodio, S. 2004. *Eagle Dreams*. Atlanta: Skyhorse Publishing.
- Bokonyi, S. 1989. Definitions of Animal Domestication. In *The Walking Larder*.  
(eds) Clutton-Brock, J.
- Bonta, M *et al.* 2017. Intentional Fire-Spreading by “Firehawk” Raptors in  
Northern Australia. In *Journal of Ethnobiology* 37(4).
- Broz, L. 2007. Pastoral Perspectivism: A View From the Altai. In *Inner Asia*. 9(2)
- Bunn, S. 2010. Animal Knowledge: Thinking Through Deer and Sheep in Kyrgyzstan.  
In *Animals and Science: from colonial encounters to the biotech industry*  
(eds.) M Bolton & C Degnen, 105-125. Cambridge: Cambridge Scholars  
Publishing.
- Bunn, S. 2004. The Relationship between Land and People in Kyrgyzstan. In  
*Toronto studies in Central and Inner Asia vol 6: Cultural Interaction and*  
*Conflict in Central and Inner Asia* (eds.) M. Gervers, U. Bulag and G. Long.  
Toronto: University of Toronto Press.
- Bunn, S. 2008. Kut and Dzhut: Food and Famine in Central Asia. In *Toronto Studies*  
*in Central and Inner Asia Vol 9: The Exploitation of the Landscape of Central*  
*and Inner Asia* (eds.) M. Gervers, U. Bulag. Toronto: University of Toronto  
Press.
- Butcher, S. 2014. The Earth is There to Catch us When We Fall. In *Texas Monthly*.
- Cartmill, M. 1996. *A view to a Death in the Morning: Hunting and Nature through*  
*History*. Cambridge: Oxford University Press.
- Cassidy (eds). 2007. *Where the Wild Things are Now*. Oxford: Berg.



- Cherkassov, A. 2012. *Notes of an East Siberian Hunter*. Boomington: AuthorHouse.
- Clutton-brock, J. 1987. *A Natural History of Domesticated Mammals*.  
Cambridge: Cambridge University Press.
- Coy, M (eds). 1989. *Apprenticeship: From Theory to Method and Back Again*. New  
York: State University of New York Press.
- Cronon, W. 2013. *Uncommon Ground: Rethinking the Human Place in Nature*.  
Atlanta: W.W. Norton and Company.
- Davies, N and Krebs, J. 2012. *Introduction to Behavioral Ecology*. Chicago: Wiley-  
Blackwell Press.
- Despret, V. 2004. The Body we Care For. In *Figures of Anthro-po-genesis*. 110-115.
- Diener, A. 2009. *One Homeland or Two: The Nationalization and  
Transnationalization of Mongolia's Kazakhs*. Washington D.C.: Woodrow  
Wilson Center Press.
- Douglas, M. 1957 Animal in Lele Religious Symbolism. Africa. In *Journal of the  
International African Institute* 27(1) 46-58.
- Ducos, P. 1989 Defining Domestication: A clarification. In *The Walking Larder:  
Patterns of domestication, pastoralism and predation*, edited by J. Clutton-  
Brock, 28-30. London. Unwin Hyman.
- Ermolov, L. 1989. Principal Tendencies in the Development of Hunting in Ancient and  
Traditional Nomadic Societies (eds) Seaman, G. 105-108. Ethnographics Press.
- Evans-Pritchard, E. 1940. *The Nuer*. Oxford: Oxford University Press.

- Fehrenbach, T. 2003. *Comanches the History of a People*. New York: Anchor Books.
- Fijn, N. 2011. *Living with Herds: Human-Animal Coexistence in Mongolia*. New York: Cambridge University Press.
- Freeman, M. 1998. *Inuit, whaling and sustainability*. Oxford: Altamira Press.
- Fuentes, A. 2007. Monkey and Human Interconnections: The wild, the captive and the in-between. In *Where the Wild Things Are Now*. Oxford: Berg. 123-146.
- Gasset, O. 1995. *Meditations on Hunting*. Belgrade. Wilderness Adventures Press.
- Godfrey-Smith, P. 2016. *Other Minds*. London. William Collins.
- Goldman, J. 2010. Man's new best friend? A forgotten Russian experiment in fox domestication. In *Scientific American*.
- Goodall, Jane. 2009. *Hope for Animals and Their World*. New York: Penguin.
- Grandin, T. 2009. *Animals Make Us Human*. Orlando: Houghton Mifflin.
- Hage, P. and Miller, W. 1976. 'Eagle' = 'Bird': A Note on the Structure and Evolution of Shoshoni Ethnoornithological Nomenclature. In *American Ethnologist*. 3(3) 481-488.
- Haraway, D. 2003. *The Companion Species Manifesto*. Chicago: University of Chicago Press.
- Haraway, D. 2007. *When Species Meet*. Minneapolis: University of Minnesota Press.
- Harvey, G. 2006. *Animism: Respecting the Living World*. New York: Columbia University Press.

- Humphrey, C. 1974. Horse Brands of the Mongolians: A System of Signs in a Nomadic Culture. In *American Ethnologist*. 1(3): 471-488.
- Humphrey, C. 1999. *The End of Nomadism? Society, State, and the Environment in Inner Asia*. Durham: Duke University Press.
- Hurn, S. 2012. *Humans and Other Animals: Cross-Cultural Perspectives on Human-Animal Interactions*. Los Angeles: Pluto Press.
- Ingold, T. 1987. *The Appropriation of Nature*. Iowa Press: Iowa City.
- Ingold, T. 1988. *Hunters, Pastoralists and Ranchers*. Cambridge: Cambridge University Press.
- Ingold, T (eds). 1994. *What is an Animal?* London: Routledge.
- Ingold, T. 2000 *Perception of the Environment*. New York: Routledge.
- King, B. 2011. Humans and Other Animals A Voice from Anthropology. Broadcast on National Public Radio. Accessed 12/3/17 at <https://www.npr.org/sections/13.7/2011/09/15/140461011/humans-and-other-animals-a-voice-from-anthropology>
- Kohn, E. 2007. How Dogs Dream: Amazonian natures and the politics of transspecies engagement. In *American Ethnologist*. 34(1).
- Krulwich, R. 2014. Polar Bear Flip-Flop. Broadcast on National Public Radio. Accessed 2/1/18 at <https://www.npr.org/sections/krulwich/2014/03/01/283993033/polar-bear-flip-flop-people-hated-then-loved-these-photos-what-changed>
- Lawrence, E. 1982. *Rodeo : An Anthropologist Looks at the Wild and the Tame*. Chicago: University of Chicago Press.

- Levi-Strauss, C. 1966. The Logic of Totemic Classification. In *Savage Minds*. 44-55.
- Liebenberg, L. 2013. *Origin of Science*. Cape Town: New Africa Books.
- Loft, J. 1967. *A Merlin for Me*. London.
- Lott, D and Hart, B. 1977. Aggressive Domination of Cattle by Fulani Herdsmen and Its Relation to Aggression in Fulani Culture and Personality. In *Ethos*. 5(2). 174-186.
- Lowe, C. 2010. Viral Clouds: Becoming H5N1 in Indonesia. In '*Multi-Species Ethnography*': a Special Issue of *Cultural Anthropology*. 25 (4). 625-649.
- Morin, E and Laroulandie, V. 2012 Presumed Symbolic Use of Diurnal Raptors by Neanderthals. In *PLoS One*. 2012.
- Olcott, M. 1986. *The Kazakhs*. Stanford: Hoover Institution Press.
- Peterson, R. 1998. *The Field Guide to Birds of North America*. New York: Houghton Mifflin.
- Portisch, A. 2010. The Craft of Skilful Learning: Kazakh Women's Everyday Craft Practices In Western Mongolia. In the *Journal of the Royal Anthropological Institute*. S62-S79.
- Shakhanova, N. 1989. The System of Nourishment Among the Eurasian Nomads: The Kazakh Example. (eds) Seaman, G. 24-35. Ethnographics Press.
- Shayakhmetov, M. 2007. *The Silent Steppe: The Story of a Kazakh Nomad Under Stalin*. New York: Overlook Press.
- Simakov, G. 1989. Cult of the Raptor. In *Ecology and Empire: Nomads in the*

- Cultural Evolution of the Old World* (eds) Seaman, G. 24-35. Ethnographics Press.
- Smith, J. 2014. Great Extinction. In *The Chronicle of Higher Education*.
- Smuts, B. 2001. Encounters with Animal Minds. In *Journal of Consciousness Studies*, 8(5-7) 2001, 293-309.
- Song, H. 2010. *Pigeon Trouble: Bestiary Biopolitics in a Deindustrialized America*. Philadelphia: University of Pennsylvania.
- Stolzenburg, W. 2008 *Where the Wild Things Were: Life, Death, and Ecological Wreckage in a Land of Vanishing Predators*. New York: Bloomsbury.
- Tennyson, A. 1850. *In Memoriam*. Cambridge. Cambridge University Press.
- Tsing, A. 2012. Unruly Edges: Mushrooms as Companion Species. In *Environmental Humanities* 1, 141-154.
- Vainshtein, S. 1981. *Nomads of South Siberia: The Pastoral Economies of Tuva*. Cambridge: Cambridge University Press.
- Vitebsky, P. 2005. *The Reindeer People: Living with Animals and Spirits in Siberia*. New York: Houghton Mifflin Company.
- Watson, Jeff. 2011. *The Golden Eagle*. London: Poyser Press.
- Willerslev, R *et al.* 2014. Sacrifice as the Ideal Hunt: A cosmological explanation for the origin of reindeer domestication. In *Journal of the Royal Anthropological Institute*. 1-23.
- Willerslev, R. 2007. *Soul Hunters: Hunting, Animism, and Personhood Among the Siberian Yukaghirs*. Berkley: University of California Press.

Wittig, S. 1975. *Structuralism: an Interdisciplinary Study*. Eugene. Pickwick Publications.