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NATURE, IDENTITY, AND PASTORALISM: CHANGING LANDSCAPES AND SHIFTING
PARADIGMS IN THE MONGOLIAN TAIGA

JESSICA VINSON

68 Pages

The traditional environment of pastoralism is under assault from land degradation, rangeland conservation, and development paradigms that alter the everyday lives of Tsataan Dukha reindeer herders in the Mongolian taiga. This thesis seeks to analyze the ways in which seminomadic pastoral identity is shaped through experiences of or relationships with particular nonhuman places and beings, and how the Tsataan Dukha renegotiate their individual and collective identities with changing local landscapes that exert considerable pressures upon the social, political, and economic organization of Dukha life. Senses of place and of space are intimately tied to a sense of self, so disruption in environmental and social organization alters traditional lifestyles and cultural forms for the Dukha. I argue that changes to natural landscapes, modernization pressures, and restricted access to ancestral pasturelands alter perceptions of collective and individual identity for Tsataan Dukha reindeer herders in northern Mongolia. By exploring place attachment, place identity, and an analysis of Tsataan Dukha visibility, this research seeks to ethnographically anchor the complex specifics of local and global socioeconomic and environmental frictions in the lives of those being affected by rapid transformations of natural landscapes. This research also examines how the Dukha may operate beyond the liminal constraints of their current conditions by maintaining traditional landscapes

and identities while simultaneously adapting to development paradigms, modernization initiatives, and changing natural environments in the Mongolian taiga.

KEYWORDS: reindeer husbandry, symbiotic pastoralism, environmental identity, liminality, human/animal relationships, visibility, place meaning, place attachment

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PARADIGMS IN THE MONGOLIAN TAIGA

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A Thesis Submitted in Partial
Fulfillment of the Requirements
for the Degree of

MASTER OF SCIENCE

Department of Sociology and Anthropology

ILLINOIS STATE UNIVERSITY

2019

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CHAPTER I: REINDEER HUSBANDRY IN THE MONGOLIAN TAIGA

Prologue

Gusts from the thawing river batter me as my horse stumbles across slippery limestone gorges and precarious riverbanks strewn with thick mud and fallen pines. It is an early summer morning and I am shivering in my thin coat that I swore would be suitable for the trip. My companions trot past whistling joyously and singing traditional Mongolian love songs that resound for miles across the “land of the eternal blue sky”. Braving the treacherous vertical inclines of the Sayan mountain range and trudging through murky bogs brings us up and out of the dense boreal forest filled with conifers and firs, and onto the vast, uninterrupted Taiga. After seven hours on horseback, my entire body is aching terribly, and I am trying to mask my discomfort when my Dukha guides spot their *urtz* (teepees) in the distance and gallop away without me. As I slowly approach the encampment of grey *urtz* and herds of grazing reindeer, I am delighted to see that small children have come to greet us, shouting “*bagshaa* (teacher)!” instead of the more impersonal “*gadaad khun* (foreigner)!” that I have become so accustomed to being called. My travel companions have already hitched their horses and are smoking Russian cigarettes and drinking warm reindeer milk when I enter the *urtz*, and I am welcomed by three generations of Dukha women who feed me freshly baked bread and pungent cheese curds. I have been graciously invited to spend time with the Dukha (Mongolian: *Tsaatan*) community of the Western Mongolian taiga, an indigenous community of approximately 200 people who practice traditional nomadic reindeer husbandry amidst escalating pressures of climate change, globalization, and forced land seizures by mining industries and forest conservation initiatives.

Introduction

From 2015-2017 I lived in Dalanzadgad, the provincial capital of Mongolia's southernmost province of South Gobi. I was a United States Peace Corps volunteer working for the Education and Culture Department, where I was tasked with overseeing twenty-one villages (Mongolian: *sums*) within the province and assisting Mongolian educators within their respective communities. I traveled around the country attending conferences on teaching methodologies geared toward Teaching English as a Second Language (ESL) and Teaching English as a Foreign Language (TEFL). Most of the educators in my community had been trained in the Russian rote learning methodologies of the Soviet era and it was from the Ministry of Education in Ulaanbaatar that we received our direction to promote student-centered learning techniques. I lived in a Mongolian yurt (Mongolian: *ger*) with a Mongolian family who adopted me as one of their own, and I lived on a modest stipend that paralleled an average English teacher's income in Dalanzadgad, South Gobi. I spent the majority of my time in the south of Mongolia, where tourism is rapidly growing and capital flowing in from the copper mining industry fuels the economy. South Gobi province is now pervaded with tourists during summer months due to an influx of capital from Australian copper mining industries, national parks and nature preservations, and its considerable ease of access from Mongolia's capital, Ulaanbaatar – only ten hours by charter bus on a single paved highway through the Gobi Desert.

In the summer of 2017 before completing my two-year stint as a volunteer and preparing to return to America, I was given an opportunity to visit Khovsgol, Mongolia's most frequented tourist destination in the far north that boasts Mongolia's premier attraction: Lake Khovsgol National Park. I traveled to Khovsgol Province to participate in a Peace Corps funded education initiative for the Tsataan Dukha reindeer herders living outside of Tsaganuur village, located far

west of Lake Khovsgol and only accessible via horse or reindeer. Peace Corps volunteers from the education, health, and community and economic development sectors were invited by the Tsataan Dukha reindeer herders to conduct a sixth annual “Reindeer Camp” where a group of volunteers visit both the East and West Tsataan Dukha summer camps located in the Mongolian taiga.

I spent a week living with Dukha families on the rolling lichen fields of the taiga and spent most of that time teaching youth empowerment seminars and health classes to the Tsataan children. The Dukha elders were interested in exposing their children to the English language and welcomed our interactions with them by exploring cultural diversity seminars in Mongolian and assisting with daily routines associated with Dukha summer encampments (i.e. milking reindeer, herding/sorting herds, making dairy products, gathering reindeer dung). I was deeply impressed with the Dukha’s ability to successfully negotiate the extreme weather patterns associated with summer in the taiga, and the immense beauty of the place itself and its peoples. The Dukha were warm and friendly hosts, and they expressed their hospitality with endless supplies of sourdough bread and deliciously sour morsels of reindeer cheese curds.

As a Peace Corps volunteer, I didn't feel confident in my ability to conduct ethnographic research, and I didn't have a specific research question to investigate. So instead, I lived with the Dukha and participated in as many chores and games with the children that I could. I became increasingly interested in their way of life, how they interacted with tourists that would show up on the horizon with no warning – often without a translator asking for a place to stay for a few days. I became interested in how they expressed discontent with the creation of national parks on their ancestral lands, forcing them to relocate their herds and alter their seasonal migration patterns. I noticed parallels with nomadic herders in the Gobi, who were being forced to relocate their herds and change their seasonal migration patterns due to similar frictions with mining and conservation

initiatives sponsored both by foreign and domestic campaigns. I discussed education with the children who were on summer holiday, all of which attend primary and secondary school in Tsaganuur village while their families often remain in the forest with their animals. Ultimately, I became interested in the Dukha connection to the land and to their reindeer, a seemingly symbiotic relationship between human, deer, and the natural spaces in which they reside.

During the summer of 2018, I returned to Mongolia as part of the American Center for Mongolian Studies' Northern Mongolia Adventure and Discovery in Science (NOMAD Science) research initiative. The trip consisted of trekking via horse from Tsagaanuur village to the Dukha summer camps in the western Taiga – the same location I had traveled to the previous summer. We surveyed melting ice patches high in the rolling valleys and peaks of the taiga and slept in tents within the perimeters of Dukha summer camps with three Dukha horsemen as our intrepid guides. I arrived with a framework for my research that focused on notions of change and adaptation within the Mongolian taiga.

Methods

This thesis seeks to answer three primary questions. Since the traditional environment of pastoralism is under assault from land degradation, rangeland conservation, and development paradigms that alter the everyday lives of reindeer herders in the Mongolian taiga, how do such structures limit the agency of the Dukha? What is the importance of place for creating and sustaining a sense of self for the Dukha? How do contemporary reindeer herders renegotiate their individual and collective identities with changing local landscapes that exert considerable pressures upon the social, political, and economic organization of Dukha life?

Through research and studies of indigenous peoples with an ecological framework, I sought to learn more about the intimate interactions between humans and their environments and to show

how that knowledge may be applied to sustainable initiatives for maintaining traditional pastoral practices in Northern Mongolia.

During my 2018 fieldwork with the Tsataan Dukha, I conducted semi-structured interviews with members of the western Dukha summer encampment and utilized participant observation and descriptive observation techniques. To understand aspects of Tsataan Dukha political visibility I analyzed data from the International Reindeer Association, which provides legal assistance and financial and cultural resources to reindeer herders globally. In this thesis, I will draw on issues of interdependence, environmental identity, liminality, place identity and place attachment, extended inclusion of nature in self, and human-animal relationships to draw conclusions about change and adaptation in the taiga for Tsataan Dukha reindeer herders.

The resulting research seeks to explore the ways in which identity is shaped through experiences of or relationships with particular nonhuman places and beings, and how the Tsataan Dukha renegotiate their individual and collective identities with changing local landscapes that exert considerable pressures upon the social, political, and economic organization of Dukha life. Senses of place and of space are intimately tied to a sense of self, so disruption in environmental and social organization alters traditional lifestyles and cultural forms for the Dukha. I argue that changes to natural landscapes, modernization pressures, and restricted access to ancestral pasturelands alter perceptions of collective and individual identity for Tsataan Dukha reindeer herders in northern Mongolia. By exploring place attachment and place identity in the framework of changing climatic and socioeconomic paradigms, this research seeks to ethnographically anchor the complex specifics of local and global socioeconomic and environmental frictions in the lives of those being affected by rapid transformations of natural landscapes.

By using comparative analysis of reindeer herders in Scandinavia, Siberia and northern Eurasia, this research further shows how the majority of funding, professional, and political support is currently reserved for reindeer herders in the circumpolar north. The better-known Sami in Norway, Sweden, Finland and Russia reveal the benefits of international recognition.

Comparing the Sami and Dukha sociopolitical and economic contexts shows that northern reindeer herding groups have high visibility because of political representation and location within the circumpolar north. Essentially you cannot see the Tsataan Dukha, and it is difficult and costly to get to them, but they exist: an economy of the invisible. This research also examines how the Dukha may operate beyond the liminal constraints of their current conditions by maintaining traditional landscapes and identities while simultaneously adapting to development paradigms, modernization initiatives, and changing natural environments in the Mongolian taiga.

Dukha Past and Present

The Tsataan Dukha are a group of Tuvan-lineage reindeer herders who have resided in northern Mongolia's Khovsgol Province since the borders between Russia and Mongolia were officially closed in 1947 at the start of the Cold War (Purev and Plumley, 2003). The Tsataan, or ethnic *Dukha* people, originated from the Sayan mountain region in Russia, Siberia, and Mongolia's northernmost province of Khovsgol, and they share their ancestral lineage with the Tozhu reindeer herders in the neighboring Russian Republic of Tuva.

During my fieldwork, Dukha elders discussed how their families left Tuva for Mongolia in 1947 to avoid having to surrender their reindeer to the Soviet state as part of the project of collectivization (Purev and Plumley, 2003). Many of my informants recalled illegally traversing the border to visit remaining relatives in Tuva to exchange support and supplies. For millennia,

Dukha reindeer herders had passed back and forth with their reindeer across the high-mountainous areas between Russia and Mongolia until the Soviet Union officially closed the border in 1947. The closure of the border meant the splitting of Dukha families and the incorporation of an ethnic Dukha into northern Mongolia, largely inhabited by Darkhad and Khalkh Mongols.

Collectivization and Soviet agricultural reforms decreed by the Soviet state greatly affected the livelihoods of the Dukha from the 1950s-1980s (Purev and Plumley, 2003). Young and working-age Dukha were called “down from the taiga” to work at fish factories in Tsaganuur (White Lake) village in an attempt to relocate the reindeer herders in a more accessible location so that they would contribute to Mongolia’s growing market economy. Older herders and pensioners were able to remain in the taiga to maintain small-scale subsistence reindeer breeding characterized by the processing of meats, hides, and panty (bone substance of mature reindeer antlers to be sold to Chinese and Southeast Asian markets) (Purev and Plumley, 2003). During the Soviet Era, the traditional landscape and hunting territories frequented by the Dukha were declared state property, and their rights to both land and game resources were co-opted by the state (Purev and Plumley, 2003). Dukha shamanistic and animistic practices were repressed under state law, and the Dukha faced pressures to assimilate to the Mongolian lifestyle, including education in the Mongolian language and further incorporation into herd and resource collectivization for state gain. Two generations of Dukha were distanced from their traditional cultural, spiritual, linguistic, and economic identity in the taiga, but many have since returned to their ancestral lands and are attempting to preserve the Tsataan way of life (Purev and Plumley, 2003).

During the democratic reforms of the 1990's and Mongolia's transition to market-economy the Dukha regained access to their lands and reindeer but were faced with new challenges. An intensification on the reliance on financial income, the elimination of the Dukha's governmental services and salaries, and the withdrawal of state veterinary services required many Dukha to barter, trade, or slaughter many of their reindeer resulting in a severe decrease in reindeer herds (Purev and Plumley, 2003). Although many Dukha returned to the Mongolian taiga to continue traditional reindeer herding lifestyles after the fall of the Soviet Union, even more remained in Tsaganuur village to pursue careers as merchants or as Mongolian livestock herders, herding cattle, goats, and sheep instead of reindeer.

According to Morgan Keay (2006), in recent decades many Dukha pastoral families have tended toward other pursuits leaving the reduced number of herders in the taiga in a position to face challenges never before encountered (3). At present, most Dukha now lead a settled life in Tsaganuur year-round and Dukha children attend primary and secondary schools within the village (Mongolian: *sum*). Many Dukha leave Tsaganuur village in pursuit of education, economic, or military opportunities in neighboring villages or in Mongolia's capital Ulaanbaatar. In some cases, women and children live in Tsagaanuur village during winter, spring, and fall while their husbands and fathers live in the forests to tend to their livestock and reindeer. Some families have adopted a sedentary lifestyle outside of Tsaganuur in Harmai, an outpost where Dukha families raise yaks, cows, goats, and horses and live in log houses (Mongolian: *baishin*). Many Dukha living in Harmai have relatives who practice reindeer husbandry, and during productive months men will leave their wives and children to assist with the seasonal herd migrations.

Approximately 200 Tsataan Dukha currently inhabit the taiga, an ecosystem characterized by larch trees, high moisture, and sub-arctic conditions, accessible only by horse or reindeer from Tsaganuur village, the administrative district by which they conduct all of their official affairs and most of their shopping (Keay 2006,1). The Tsataan Dukha practice traditional nomadic reindeer husbandry and move regularly within two camp areas, known as *Barone* (West) and *Zuun* (East) Taiga respectively. To the general Mongolian public, the Dukha are known as Tsataan (Mongolian: *Tcaatan*), or “reindeer herders” (Rasiulis 2016, 1), although they call themselves Dukha, referring to their language, or “*taiga khümüüs* (the people of the taiga),” referring to their ancestral homeland in the taiga (Kristensen 2015, 12). Not all Dukha people herd reindeer, and as some of my informants in the taiga identified themselves as differing ethnicities before marriage such as Darkhad or Khalkh Mongolian, the term “Tsataan Dukha” will be used to discuss people whose livelihoods derive primarily from reindeer husbandry (Rasiulis 2016, 1).

Scope of Work

In this paper, I seek to examine the challenges faced by a pastoral Mongolian community caught between the liminal constraints of a mobile past and a sedentary future, and to show how they operate within the confines of instability and uncertainty in the changing taiga (Williams 2002, 8). As in Dee Mack Williams’ (2002) ethnography of Inner Mongolian pastoralists, *Beyond Great Walls: Environment, Identity, and Development on the Chinese Grasslands of Inner Mongolia*, this study considers a range of governance and social justice issues, including how natural resources become publicly defined, negotiated, and used across a diverse body politic (13). This study also seeks to decipher how to reconcile differences between Mongolian government and Dukha perceptions of land management strategies and cultural conservation.

In the following pages I will present pertinent literature outlining facets of global reindeer husbandry and the institutions of official recognition whereby reindeer herders receive both support and political visibility, as well as an overview of the climatic and socioeconomic changes that affect reindeer herders both globally and within the Mongolian taiga. In chapter three, I will discuss the practices of both tundra and taiga reindeer husbandry, including location and herding practices as well as levels of political representation and visibility within both the well represented Sami communities and the less visible Tsataan Dukha. Chapter four presents issues of climate change and adaptation strategies, including current insecurities and threats to reindeer husbandry and issues concerning environmental preservation in the taiga. I utilize interviews with Tsataan Dukha herders to explain how symbiotic pastoralism shapes notions of identity in the taiga, and the significance of natural environments and local landscapes for the continuation of Dukha culture in Mongolia. Chapter five examines the socioeconomic changes and adaptive strategies utilized by the Tsataan Dukha in the face of structural limitations, a growing tourist industry, and restricted access to ancestral lands. I examine the importance of sacred spaces and places within the taiga, and the importance of mobility and agency for the Tsataan Dukha to access such lands with their reindeer to ensure the survival of both Tsataan herds and the Tsataan way of life.

CHAPTER II: LITERATURE REVIEW

According to *EALÁT Reindeer Herders Voice: Reindeer Herding, Traditional Knowledge and Adaptation to Climate Change and Loss of Grazing Lands*, reindeer husbandry is the primary livelihood for over twenty indigenous groups throughout the circumpolar north, and it is performed with remarkably similar organization wherever it is found (Oskal et al 2009, 5). Reindeer herding occurs in both taiga and tundra regions of the Arctic, and both environments require specific knowledge by reindeer herders to utilize the resources and land efficiently. In *Indigenous Reindeer Husbandry*, Naykanchina (2012) argues that reindeer pastoralism represents models in the sustainable exploitation and management of northern terrestrial ecosystems that is based on generations of experience that has been preserved and adapted by Arctic reindeer herders (7). Reindeer pastoralism represents a human-ecological ecosystem that is sensitive to change due in part to the variability of the arctic climate and the ability of indigenous Arctic peoples to adapt and acclimate to changing socioeconomic and political climates (8).

Reindeer husbandry and the people who practice it have been heavily documented and researched by anthropologists, environmentalists, political scientists, and members of national and international reindeer husbandry initiatives in circumpolar arctic regions. Using the lens of post-socialism Piers Vitebsky's (2005) *Reindeer People: Living with Animals and Spirits in Siberia* documents the lives of the Eveny reindeer herders in northeastern Siberia and their intense partnership with their animals. Vitebsky (2005) argues that without the standardizing influence of Soviet policy, different herding regions in Russia are experiencing diverging destinies with the withdrawal of veterinary and medical services and schools and hospitals, which were all once integrated through access via airplanes and helicopters during Soviet times. David Anderson's (2002) *Identity and Ecology in Arctic Siberia* is an ethnographic account of

the culture, life, and economy of the Evenki in Arctic Siberia following the fall of the Soviet Union (1). Anderson's (2002) scholarship describes the economic and environmental challenges of the Evenki by addressing questions of national identity and ecological theory in the Tamiyr peninsula of Siberia. Other scholars such as Benedikte Kristensen (2015) have studied the loss of meaning in post-socialist Mongolia by focusing on the Dukha, who she argues have increasingly turned toward their Shamanic traditions in an effort to reconstruct their identity (15). Vitebsky (2005) further asserts that southern herding communities in forest regions where reindeer were first domesticated are now endangered peoples, and that the heartland of the reindeer currently lies firmly in the far North (377).

Global Reindeer Husbandry

Currently, approximately 100,000 people practice reindeer husbandry, with about 2.5 million semi-domesticated reindeer distributed throughout Norway, Finland, Sweden, Russia, Greenland, Alaska, Mongolia, China, and Canada (Magga et al 2006). Wheeler (2000) posits that the settled and the nomadic Dukha of Mongolia total fewer than 500, with 30-32 households - approximately 180 people – living in the taiga as reindeer herders (6). Donahue asserts (2003) that the Dukha have “the most limited recognition as minority peoples” in Mongolia, and that they face such extreme marginalization that they are forced to rely on their own people and culture for support instead of direct domestic or international assistance or political recognition.

Comparatively, approximately 50,000 members of Sami ethnic identity are distributed throughout the traditional ancestral lands of the Sami, called the *Sapmi*, in Norway, Sweden, Finland, and Russia (Magga et al 2006). The Sapmi lands are distributed across 241,309 km² of land, while the Dukha migrate over an area of 20,000 km². In both areas, the movement of the

herds and herders is determined by the seasonal availability of resources, weather, and threats of predation (Johnsen et al 2012).

The disparity in demographic numbers and geographic area between the Dukha and Sami is indicative of the amount of funding and support that each group receives by their respective governments, as well as level of attention from international NGOs and reindeer husbandry organizations. The Dukha population is small, resulting in little to no political representation and power, while the Sami are distributed across four nations and are supported heavily by their respective nations' national policy.

Institutions of Official Recognition

The first worldwide reindeer herders' conference was held in 1993 in Tromsø, Norway, with participants from 15 different reindeer herding groups (Anar 2001). This conference led to the formation of the Association of World Reindeer Herders (WRH), which was formally established in 1997 at the 2nd World Reindeer Herders Congress. According to President of the Association Johan Mathis Turis during that time, "the most important task of this congress is to promote reindeer herders' own views on the future of reindeer husbandry and [the] preservation of nature in the reindeer herding areas" (Anar 2001, 2).

Associations supporting the preservation of reindeer herding populations and cultures in the circumpolar north include the UA Arctic EALÁT Institute, the Association of World Reindeer Herders, the International Center for Reindeer Husbandry, and the United Nations Environment Program (Naykanchina 2012). These programs produce annual reports on current environmental and political trends affecting reindeer herders globally, and the research findings contribute to funding and subsidies received by the reindeer peoples themselves. These environmental and socioeconomic reports document the impacts of land-use change and climate

change on indigenous reindeer herders land management, and they generally include individual case studies heavily focused on northern tundra reindeer herding cultures such as the Sami, the Evenki, and the Nenets (Naykanchina 2012).

Major institutions responsible for supporting reindeer husbandry and indigenous reindeer herding populations include the International Centre for Reindeer Husbandry (ICR), the Association of World Reindeer Herders (WRH), the Sami University College, the Arctic Council, the University of the Arctic, and the Research Council of Norway. The International Centre for Reindeer Husbandry operates in accordance with the Association of World Reindeer Herders, and their partners and collaborators include the Arctic Council, ENI Norge, International Polar Year Norway, the Nordic Council of Ministers (NORDEN), the Research Council of Norway, and the University of the Arctic. These institutions work together to bring the voice of reindeer herders to intergovernmental forums and discussions, and to provide a knowledge base for the exchange and development of information between indigenous reindeer peoples, national authorities, and academic communities at the national and international levels (ICR 2017).

The International Centre for Reindeer Husbandry (ICR) has an international board with members from Russia, Norway, Sweden and Finland (but none from Mongolia), and “enjoys wide professional and political support internationally” (ICR 2017). The purpose of the ICR is to contribute to maintaining and developing sustainable reindeer husbandry in the north, to strengthen the cooperation between reindeer herding peoples, to document and preserve traditional knowledge of reindeer herders, and to communicate knowledge about circumpolar reindeer husbandry to reindeer herders, national authorities, research, education and knowledge institutions, and organizations and industrial interests (ICR 2017).

The ICR hosts the Secretariat of Association of World Reindeer Herders (WRH), an organization responsible for representing the world's reindeer herding peoples by promoting professional, commercial, and cultural contact between the international network of reindeer herding groups and promoting knowledge by disseminating information about reindeer husbandry globally. The ICR and the WRH agree that the most pressing current challenges facing reindeer husbandry and the people who practice it include socioeconomic pressures, climate change, and loss of pastures (Johnsen et al 2012 UNEP Changing Taiga).

Climate Change Across the Arctic

The tundra-taiga ecotone is the world's largest, stretching over 13,400 kilometers (Moran 2008, 126). Throughout the many climatic fluctuations of the past 150,000 years, tundra-taiga ecosystems have suffered repeated losses of diversity as a result of permafrost depletion, increases in vegetation, and reduction in soil carbon, making the ecosystem particularly vulnerable to contemporary rapid global warming (Moran 2008, 124).

Climate change is evident across Arctic regions, and changes have particularly impacted reindeer herding cultures in their traditional environments (Naykanchina 2012). Mongolia's climate is becoming warmer, and between 1940 and 2008 the annual mean air temperature has increased by 2.14°C (35.85°F) (Batima et al 2005). Since the 1990s, the frequency of extreme high temperatures has grown and drought has intensified in Mongolia (Figure 3, MNET 2010), and extreme events such as sand storms and forest fires are at their highest frequency in living memory (Marin 2010). Severe droughts and extreme winters (Mongolian: *dzuds*) have steadily increased since 1940 resulting in widespread livestock deaths across the country, and seven out of the ten most disastrous droughts and winters recorded since 1940 have occurred since 2000. (MNET 2010).

The International Centre for Reindeer husbandry and the Association of World Reindeer Herders claim that tundra fires present challenges for reindeer herders because fire suppression in remote areas such as the taiga is difficult to mitigate. As mining industries, conservation initiatives, and the advance of forests into the tundra due to arctic warming encroach upon pastures, reindeer herders have less flexibility to acclimate to environmental changes and opportunities to prepare effectively for future climate variability (ICR 2017).

Socio-economic Changes Across the Arctic

The rapid encroachment of the tourist industry and its implications for reindeer herding peoples varies across regions where reindeer husbandry operates (Magga et al 2006). Reindeer herding has become a tourism emblem in the European north and has been modified and perpetuated across Russia's Kola Peninsula and northern Mongolia to fit post-Soviet cultural ideologies and standards of adventure tourism (Vladimirova 2011). Exoticization and "othering" of Sami and Dukha reindeer herding peoples characteristic of Western ethnographic tourism has spread throughout central Asia (Vladimirova 2011). In travel brochures Sami and Dukha indigenous culture is advertised in ways that build on difference, tradition, and otherness, and considering the marginal role of reindeer herding globally and its isolated geographic situation, images of primitivism, wilderness and of tantalizing exotics are often embedded in advertisements for tourism in these regions (Vladimirova 2011, 109).

The very image of the wild "frontier" of the tundra-taiga ecosystems is used to produce a twofold fantasy: (1) the tundra and taiga are areas of unimaginable riches that can be tapped or discovered by intrepid souls who can weather the dangers and wildness of the region, and (2) the "savagery" of the land is invoked to dehumanize the local communities inhabiting these spaces, and to desensitize corporations to the human cost of mining and resettlement (Willford 2007,

178). The creation of the fantasy of tundra-taiga economies is built upon frictions generated by the processes of deregulation and expanding capitalistic market systems in post-Soviet economies such as Mongolia's (Willford 2007).

Loss of land due to infrastructure development in the forest and mining industries are particularly impactful to reindeer herders' livelihoods because reindeer graze on pasture in the forest, and land degradation is a severe problem for Mongolia's diminishing grasslands (Sternberg 2007; MNET 2010). Loss of pastures dampens the rate of reindeer population growth, which directly affects the ability of reindeer herders to continue practicing both tundra and taiga reindeer husbandry.

Ingold (1976) asserts that reindeer population declines are results of (1) undernourishment lowering birth and calf survival rates, (2) heavy grazing pressure reducing the total stock before the carrying capacity of the land is reached, and (3) the fact that smaller herds of domesticated reindeer are necessary to continue the industry in regions where pasturelands are diminishing (Riseth et al 2016). In Sami territories, legislation that promoted settlement and diminished pastures forced Sami herders to become sedentary farmers (Lehtola 2015). The Sami regularly lost legal battles over fishing waters in courts due to the society of colonization that required farm-ownership documents for gaining right of possession to land, and rights to traditional territories or ancestral lands were not recognized until the ratification of the International Labor Organization (ILO) 169 Convention in Sami areas in Norway in 1990 (Lehtola 2015, 25). Since the ratification of the ILO 169 Convention, reindeer herders in Norway have continued to adapt to pasture loss by not migrating as deeply into their winter pastures, but instead returning toward their summer pastures to ensure that their herds survive (Oskal et al 2006).

Loss of pastures is also due to forest industry practices and oil-mining reserves that cause health issues and herd population decline. Forest industry practices of spraying pesticides on coniferous forests have made reindeer sick and have in some cases depleted herds significantly (Williams 2003). Critical pastures have been decimated by the oil industry in Russia's Yamal region, where over 20% of the world's known gas reserves are located (Oskal et al 2006, 53). Extraction of energy sources requires the construction of an extensive network of roads, pipelines, and railroads that dissect reindeer herders' migration routes (Oskal et al 2006, 47). Vitebsky (2005) argues that the relation between human and reindeer in Russia is undergoing a vast realignment with the decline in domestic reindeer from 2.2 million in 1990 to 1.1 million in 2005 (376).

The emergence of nature conservation groups committed to sustainable forestry seek to collaborate with national, international, and local communities in realizing their vision of an ecologically sound world (Willford 2007). Tsing (2005) argues that there is much distinction and difference, however, among such conservation groups. "Many, indeed, are inspired by international counterparts and have ideas about nature and conservation that are at odds with the land-use patterns and traditions of local peoples" (Willford 2007, 181). Tsing (2005) further asserts that some nature lovers are cosmopolitans who identify with international ideas of ecological sustainability, while others are adventure seekers interested in more travel and exploration than ecological commitment (Willford 2007, Tsing 2005). In the case of forest management discourse, opportunities for contingent collaborations with reindeer herders exist, although they are fraught with complications and competing agendas (Willford 2007).

In Scandinavia, large corporate forms of extensive reindeer management systems are overtaking smaller herders who practice more traditional, exclusive herding techniques

(Williams 2003). The growth of large-scale reindeer herding corporations relates to the ease of accessibility of reindeer herders in Scandinavia, as infrastructure increases and means of transportation to and from reindeer herding villages become more accessible via technologies such as the snowmobile or truck. The viability of reindeer husbandry in Scandinavia has been affected by the introduction of the snow mobile and an increase in technologies that facilitate the expansion of herds on diminishing pasturelands.

Expanding tourism and forestry practices have also made tundra reindeer herders more visible, as encounters between pastoral reindeer societies and capitalist firms continue to push herders such as the Sami toward economic dependence on the market-economy (Williams 2003). The perceived necessity of bringing capitalist universals into a community transitioning to a market economy becomes more vital as capitalism seeps into more remote areas like the Mongolian taiga where capital, money, and commodity fetishism are spreading – processes that will make the Dukha way of life obsolete unless they adopt such cultural specificities (Tsing 2005, 4).

Stephens (1984) asserts that the historical experience of Twentieth Century Sami has varied to a large extent according to the states in which they live, but existing between them is the transformation of human/animal relations implied by changing technologies and dependence on external market structure in which Sami values can be realized. Improvements in meat transport, freezing and packing have allowed Finnish and Swedish entrepreneurs to develop specialized markets for Sami products outside the local region (Europe and Asia). According to Stephens (1984), reindeer meat is an exotic and high-priced luxury food in southern Scandinavia and western and southern Europe. With the development of a market for deer and deer by-products extending beyond the local region, the logistics of reindeer sales have changed, and in

Europe Finland Sami are in explicit economic competition with Finnish reindeer owners for the most favorable conditions and prices of meat sales to outside buyers. Modern developments in the Sami economy has led to the favoring of market-rancher oriented reindeer husbandry over pastoral reindeer husbandry such as in Mongolia. The rancher-oriented paradigm is concerned with reproducing the herd as an abstracted future resource for market exchange, which opposes the pastoralists' view of ensuring the continued existence and reproductive increase of a standing herd (as substantial extensions of the herder himself) (Stephens 1984, 521).

CHAPTER III: TUNDRA AND TAIGA REINDEER HUSBANDRY

Primary differences between reindeer husbandry practices in the taiga and the tundra relate in significant ways to how reindeer herding populations address issues of climate change, land use, and the preservation of traditional knowledge within their respective communities. Previous research conducted on reindeer herding cultures in the circumpolar north, particularly the Sami of Norway, Finland, Sweden, and Russia provides a striking contrast to the Dukha peoples of northern Mongolia, in degree of recognition and support from international reindeer associations and national and international government organizations alike.

A comparison of major global factors and sociopolitical conditions illustrate key differences between tundra and taiga reindeer pastoralism. The Dukha are taiga reindeer pastoralists who are isolated without extensive networks who receive very little support from the Mongolian government or international reindeer herding associations. Comparatively, some reindeer herding groups in the tundra, such as the Sami in Norway, Sweden, Finland, and the Kola Peninsula of Russia have established networks of communication, transportation, governmental, and nongovernmental support by which they connect with each other to support themselves in the global economy.

One venue for protecting herding rights is through recognition from international reindeer herding agencies. The Circumpolar Biodiversity Monitoring Program's framework document, *World Reindeer Husbandry* (2006) asserts that over 20 indigenous reindeer herding populations are collectively threatened by climate change, competition for land access, and the loss of traditional knowledge and culture. According to annual socioeconomic and climate reports by the International Center for Reindeer Husbandry (ICR) and the Association of World Reindeer Herders (WRH), reindeer pastoralists located in Tundra regions of the circumpolar north are

highly visible and well represented within the global conversation regarding the preservation of reindeer husbandry, as is evidenced by the amount of data and research that have been conducted in this region.

The Dukha are currently underrepresented in the ICR, WRH, as well as the EALÁT Institute at the University of the Arctic, where research and financial support are heavily centered on reindeer husbandry in the Tundra. All of the international reindeer husbandry associations and sponsors are located in regions where national governments are cooperative and access to resources are more readily available (i.e. Europe and Russia). World reindeer networks (the ICR and WRH) provide crucial financial and technical assistance, facilitate dialogue between herders and other parties, and coordinate data gathering and information management techniques with national and transnational entities alike (Johnsen et al 2012). This allows for reindeer herding populations to maintain traditional knowledge and disseminate strategies for adapting to changing socioeconomic and political conditions within their respective countries (Oskal et al 2006).

Herding Practices and Geo-Political Boundaries

Two modes of reindeer pastoralism are prevalent in the Arctic: tundra reindeer husbandry and taiga reindeer husbandry. Tundra reindeer husbandry refers to long migrations with large herds of reindeer and a focus on meat production, while taiga reindeer husbandry requires shorter migratory distances with smaller herds and the primary use of reindeer for transportation and milk production (Naykanchina 2012, 10). Tundra reindeer pastoralism is practiced by the Sami, Nenets, Komi, Eveny, Chukchi, and Koryak living in northern Siberia, Europe, Russia, and Scandinavia. Taiga reindeer pastoralism occurs in South Siberia, Mongolia, and the northern tip of China's Inner Mongolia Autonomous Region and includes the Dukha of northwestern

Mongolia, the Tozhu of the Republic of Tyva, the Tofa of Irkutsk Province, the Soyot of the Buryat Republic, and the Evenki (Donahue 2003). In “The Troubled Taiga” Donahue (2003) argues that these taiga groups and their cultures remain virtually unknown relative to the reindeer herding groups of northern Siberia and Scandinavia due to their geographic and political marginalization, language endangerment and loss, and processes of assimilation into the dominant Russian, Mongolian, and Chinese cultures.

In tundra reindeer husbandry, reindeer are primarily used for meat production, while hides, bones and antlers are used for clothing, craftwork, and souvenirs for tourists (Jernsletten 2000). The main aim of tundra reindeer husbandry is meat production, and reindeer meat provides herders with their primary (if not only) means of subsistence throughout the year. Tundra reindeer husbandry also includes antler production enterprises, where males make up a larger proportion of the herds to promote the production of soft antlers for sale as medicinal supplements on the market (particularly the Chinese market where velvet from soft antlers is used in holistic medicines). A larger proportion of female reindeer in a herd produces more meat for herders to sell. Herd composition therefore varies according to industry, as some reindeer herders sustain their livelihoods through the production of reindeer meat while others focus primarily on antler production.

Comparatively, reindeer herders in the taiga region are poorly supported by their governments (Mongolian and Russian) and are at a higher risk of losing their traditional systems of reindeer husbandry and cultural knowledge than herders in the tundra due to their geo-political location within central Asia and their lack of access to viable communication outlets (Keay 2006). Taiga reindeer husbandry usually consists of a few hundred animals and a small migratory route and is mostly oriented toward subsistence and transportation (Jernsletten 2000).

Taiga reindeer herders rarely use their animals as meat sources, but rather use reindeer milk to make dairy products, which constitute the majority of their subsistence diets. This type of reindeer herding has completely disappeared in the circumpolar north, and that is why the taiga zone has been called the “zone of disappearing reindeer husbandry” by scholars (Jernsletten 2000). Reindeer herders in the taiga face poor local economies and lack of access to markets due to insufficient infrastructure and accessibility, which results in a lower standard of living than experienced by tundra reindeer herding peoples.

Taiga reindeer husbandry is still poorly understood by the scientific community and policymakers, which has led to some well-intentioned but failed attempts to transplant the tundra model to a taiga setting (Baskin 1986). Attempts to increase herd sizes by transplanting tundra reindeer to the taiga have failed, as tundra reindeer are more excitable than their taiga conspecifics and are more responsive to the approach and calls of herdsman, but more agitated when saddled or in a team (Baskin 1986). When transplanted to the taiga, tundra reindeer readily disperse without forming herds and are frequently lost by herdsman. The dispersion and movements create many problems which are aggravated by the different methods of grazing reindeer in the taiga or tundra. Taiga reindeer herders make no attempt to maintain their reindeer in a compact mass as practiced by tundra herders.

Annual reports published by the United Nations, the International Center for Reindeer Husbandry and the Association of World Reindeer Herders document the impacts of land-use change and climate change on indigenous reindeer herders land management, and they generally include individual case studies heavily focused on northern reindeer herding cultures. The majority of these reports provide substantial amounts of data for reindeer herders such as the Sami, but little research or recommendations are provided to ameliorate the plight of the Dukha

(Naykanchina 2012). Naykanchina (2012) asserts that each case study provides recommendations for future actions to be taken by the Arctic council and the States of the Arctic to support private reindeer herding as a key foundation for development and maintenance of sustainable reindeer husbandry, but the Arctic council may not be providing enough support to herders in the taiga (36).

The Sami reindeer herding peoples have been particularly visible in international accounts of reindeer husbandry organizations in the following ways: Sami parliaments, their position as a tourism emblem, European and Russian economies, and geographic location. Due to the Sami's population size, location in the Arctic north, and connection to and cooperation with national and international reindeer associations, they receive recognition, support, and funding from government and nongovernmental organizations, while the Dukha of northern Mongolia currently receive a modest monthly stipend from the government and little to no international or domestic recognition of their language or culture.

The Dukha were unwittingly located in the midst of geopolitical conflicts of interest that resulted in the division of their ancestral lands into the nations of Mongolia and Russia in the 1920s, and their geographic location contributes to their current general inaccessibility (Johnsen et al 2012). This differs from the Sami, located across four nations. Sami herders in these nations establish relationships with each other based on shared ethnic identity and vocations, which allows for exchange networks of information and resources to operate between them. The Sami also enjoy relatively convenient access to centers of government in Europe and Russia, and access to technology (i.e. snow mobiles, cell phones, internet access) enables them to connect and communicate more easily with vendors and tourist companies than reindeer herders in more southerly locales.

Political Recognition

The Sami are the only ethnic minority in the European Union that are recognized as aboriginal people, and they joined the UN World Council of Indigenous Peoples in 1975 (Koslin 2010). As the only indigenous people in Scandinavia that are recognized and protected under the international conventions of indigenous peoples, they receive support and attention from national and international organizations alike.

Many of the Sami herding lands are shrinking due to the encroachment of new industry in the *samebys*, such as timber and mining industries. *Samebys* are reindeer collectives that were formed as a result of the Swedish Tax Law of 1605 and the Swedish government's attempt to establish fixed areas for the Sami, and these bodies administer reindeer herding in Sweden. These districts were loosely based on existing herding areas but did not always conform to the Sami's ancestral territory. In both Sweden and Norway, reindeer husbandry is legislatively restricted to Sami, while the Finnish system allows ownership of deer by both Finnish and Sami individuals (although not by corporations) (Stephens 1984, 511).

On Russia's Kola Peninsula Sami are now facing a totally new situation, like many other indigenous peoples in Russia. Russia has about two thirds of the world's population of domesticated reindeer, and today the practice of reindeer husbandry is gradually diminishing (Klokov 2002). The total number of domesticated reindeer has receded from 2.5 million to 1.2 million, and the main reasons for this deduction have been of social and economic character. Reindeer husbandry in northern Russia has three main purposes: the use of animals for transportation, subsistence economy, and meat production (Klokov 2002). Reindeer herding is administered by agricultural cooperatives, and their large herds are comprised of both collectively and privately-owned animals but are administered by enterprises that date back to

the Soviet era. At the Harp agricultural collective in the village of Krasnoye, herders maintain the local reindeer population at around 15,000-17,000 animals by culling reindeer annually (approximately 3,000 per year). They receive a subsidy of 130 rubles (\$2.08) for each kilogram of meat they send to be processed, according to the local government, as well as monthly social support payments (Karpukhin 2016). Culling reindeer would be unheard of in the taiga, where reindeer herd numbers are small and are gradually diminishing.

The governments of Norway, Finland, and Sweden are both able and desire to develop practices that sustain reindeer husbandry and fulfill new economic and social needs that are necessary for the preservation and continuation of the Sami culture (Morgan 2006). Reindeer husbandry plays a significant role in the economies of these European countries, and it is in the best interests of the government to support the livelihoods of reindeer herders in their nations.

Tundra reindeer herders in Norway, Sweden, and Finland have relatively good access to markets and infrastructure that make the transportation of reindeer, people, knowledge, and ideas possible, and the adoption and use of modern tools and technology by herders has further facilitated access to markets (Williams 2003). Scandinavian reindeer herders have created a meat-based economy for reindeer, an outcome of the recent oil and gas related economic boom in the Yamal Peninsula and the Nenets Autonomous Okrug region in Russia (IRH 2017).

The Nordic Council, the Nordic Organization for Reindeer Research, the Norwegian Reindeer Owner's Association, and the Norwegian Department of Agriculture have conducted extensive studies on the Sami peoples of Norway, Finland, Sweden, and Russia, and have distributed their findings via the International Center for Reindeer Husbandry and the Association of World Reindeer Herders (Williams 2003). The Reindeer Husbandry Agreement was established in 1976 to preserve and develop reindeer husbandry based on its Sami ethnic

traditions in Norway. The agreement is a result of the Norwegian authorities' desire to preserve reindeer husbandry and to provide support to the Sami. The organization of Norwegian Sami reindeer herders (NBR) and the state through the Department of Agriculture and Food annually negotiate on economic, professional and social issues. Economic support for the years 2008-2009 was 97 million NOK (10.1 million €). According to the 2017 International Centre for Reindeer Husbandry website, the financial support agreement includes activity supports, production bonuses, early slaughter supplements, calf slaughter payments, district support, special transition assistances and other payments. Also within the agreement is 35.9 million NOK (3,949 million €) for the Reindeer Husbandry Development Fund (in Norwegian called RUF) and money from RUF can be used as loans and/or grant support to extreme losses of reindeer in the case of accidents, training scholarships and development of related industries to reindeer herding.

The Sami in Norway, Sweden, and Finland have had great success in using the International Labor Organization (ILO) Convention 169 from 1989 to promote land rights and cultural rights (Dahl (2012) 222). The Sami in Norway have used the Convention to promote Sami indigenous rights to land and culture since its ratification by the Norwegian government in 1990, and the Sami in Sweden and Finland – although less successful in this respect – have worked with the Sami Council and support of the national Sami parliaments to achieve UN endorsements of indigenous peoples right of self-determination. The Sami of the three Nordic countries (Norway, Sweden, and Finland) are making efforts to negotiate a Nordic Sami Convention, which is still under consideration (Dahl 2012, 222-223).

As a result of these efforts to mobilize, the Nordic Council, the Nordic Organization for Reindeer Research, the Norwegian Reindeer Owner's Association, and the Norwegian Department of Agriculture have conducted extensive studies on the Sami peoples and have

provided them with support, dialogue, communication and capacity building techniques (Williams 2003). This connection to and cooperation with international reindeer associations means the Sami receive recognition, support, and funding from government and nongovernmental organizations. Williams (2003) argues that the Sami peoples have benefited both socially and economically from collaborating with national and international reindeer herding associations, advantages that the Tsataan Dukha of northern Mongolia have yet to experience.

Comparatively, the reindeer herders in the taiga (particularly the Dukha of northern Mongolia) are marginalized due to their lack of representation in local and national governments. In April 2011, the Mongolian Parliament designated the Tengis-Shishged River Basin as a National Park (IUCN category II), covering parts of the Tsagaannuur, Renchinglkhumbé and Ulaan-Uul *sums* of Khovsgol *aimag* (WWF Mongolia 2011). These newly designated areas include traditional spring and autumn camps and important migration areas of the East taiga reindeer herders.

The Dukha have no community members in elected positions at any level of government (Minority Rights Group International 6th July 2011). They have limited access to legal counsel and information about civil and human rights and have no formal ownership of the taiga – factors which make them vulnerable to exclusion and exploitation (Keay 2008). In 2011, the United Nations High Commissioner for Refugees reported that the Dukha people face widespread societal and institutional discrimination and human rights violations within Mongolian society (Minority Rights Group International 2011). Political marginalizing leads to circumscription of all sorts, as recent political and economic transitions and upheavals have altered the Dukha's

traditional way of life and relationship with their natural environment, leaving the herders with an uncertain future (Johnsen et al 2012).

Wheeler (2000) argues that the future survival of Tsataan Dukha reindeer herders' livelihoods depend on outside assistance, most likely from national and international NGOs. Wheeler refers to the establishment of the Mongolian Reindeer Fund in 1999 to document and support the Dukha, and its aim to "help preserve and promote the indigenous culture, ecology, and reindeer herding economy," however, a current search for the Mongolian Reindeer Fund yields no results (2000, 66). Currently, there exists no international support for Mongolian reindeer husbandry. Furthermore, the reindeer herders of the taiga have received little support from international reindeer herding associations such as the Association of World Reindeer Herders or the International Center for Reindeer Husbandry (Wheeler 2000).

Dukha members of the East and West taiga established community partnerships of voluntary associations of local Dukha residents to help assuage uncertainties arising from recent socioeconomic and environmental changes (UNEP 2012). The partnerships aimed to protect Dukha knowledge and livelihoods and to preserve the land's ecological balance and biological diversity. According to my interlocutors the partnerships are unfortunately not active, and their benefits have been unclear (Johnsen et al 2012).

Based on the request of Mongolia's Ministry of Nature, Environment, and Tourism, the UNEP conducted an assessment of the situation of the country's only reindeer herders and smallest ethnic minority in 2012. These and other studies reveal an urgent need to establish community-based monitoring and management systems within the province (Johnsen et al, 2012). Why aren't the Dukha reindeer herders more visible in the discussion of the preservation of world reindeer husbandry and the cultures that sustain it? Data from Mongolian and

Scandinavian environmental policy, policy statements of data published by the ICR, WRH, and other historical and ethnographic literature show that the Dukha are at a disadvantage for receiving attention and financial support for the preservation of their ethnic livelihoods due to perceived invisibility. These observations point out the disproportionate representation, but also effective ways that the Dukha may become more significantly represented on the national and international stage and reap the benefits of such recognition.

CHAPTER IV: CLIMATE CHANGE AND ADAPTATION

Threats to Reindeer Husbandry

Research documenting practices of reindeer husbandry have produced data on effects of climate change across the arctic, socioeconomic changes, and the degradation of pasturelands that influence herders' livelihoods across the circumpolar north and central Asia. Challenges facing reindeer herders include climatic and socioeconomic changes, loss of pastures, loss of reindeer to predators and illnesses, heritage tourism and popular culture, infringement of indigenous people's rights, and increased development and globalization. Reindeer herders across the world are currently grappling with the pace and intensification of landscape and climate transformation, and the means by which they address and acclimate to such changes varies according to their level of geographic access and socioeconomic marginalization, and the level of political representation and visibility enjoyed at the regional, national and international levels (Willford 2007).

Nearly 40% of Mongolians are herders whose livelihoods are irrevocably intertwined with the natural environment in which they live. Research documenting practices of reindeer pastoralism have produced data on effects of climate change across the arctic, socioeconomic changes, and the degradation of pasturelands that influence herders' livelihoods across the circumpolar north and central Asia. Challenges facing reindeer pastoralists globally include climatic and socioeconomic changes, loss of pastures, heritage tourism and popular culture, infringement of indigenous people's rights, and increased development and globalization, all of which require the renegotiation of individual and collective identities. Reindeer herders across the world are currently grappling with the pace and intensification of natural landscape deterioration and climate transformation, and the means by which they address and acclimate to

such changes varies according to their level of geographic access, degree of mobility, and real or perceived marginalization.

The Dukha, or Tsataan peoples of Tuvan ancestry, are no exception to the changing paradigms affecting reindeer herders globally. I argue that changing local landscapes result in the renegotiation of collective and individual identity for the Tsataan Dukha, as senses of space and place are tied intimately to a sense of self. Disruption in spatial, temporal, ecological, and social organization for the Dukha produces an ever-changing reality in the taiga-tundra ecotone, as the reindeer herders grapple with the relentless complexity of innumerable, interdependent conditions that continue to shape their lives today.

As mining industries, conservation initiatives, and the advance of forests into the tundra due to arctic warming encroach upon pasturelands, reindeer herders have less flexibility to acclimate to environmental changes and few opportunities to prepare effectively for future climate variability. As changing environmental, economic, and social landscapes alter the literal and subjective terrain for the Dukha reindeer herders, both their individual and collective identities are in constant states of renegotiation. Elder Dukha see their world as becoming significantly altered by the presence of new technologies, the influx of tourists and foreigners upon their lands and in their homes, and rapid modernization and development practices that steadily seep into Dukha culture, society, and the natural environment in which they inhabit.

Symbiotic Pastoralism

Reindeer herding is part of an ecosystem that operates via intimate connections between humans and animals, what Ingold (1974) has called symbiotic pastoralism. Ingold observes that even though the herder possesses clear ownership rights over the reindeer, control is based on a form of explicit social contract between the herder and his or her animals (Ingold 1974:537).

Because of this close and mutually beneficial relationship between human and reindeer, reindeer husbandry has historically demonstrated a high resilience to climate variability and change (Oskal et al 2006).

Reindeer herders have learned over generations how to live sustainability in severe Arctic environments, and societies that practice traditional reindeer husbandry are highly interconnected with the ecosystems in which they live (Cheek 2008). The traditional knowledge and experience that reindeer herders around the world have cultivated are evidenced in their unique management strategies for the protection of pastures, observation of environmental changes, and the rational use of natural resources (Naykanchina 2012).

Reindeer pastoralism, ancient in origin in all its forms, represents models in the sustainable exploitation and management of northern terrestrial ecosystems that is based on generations of experience accumulated, conserved, developed and adapted to the climatic and political/economic systems of the North (Naykanchina 2012).

Reindeer herders have constantly adapted to changing conditions in the tundra and taiga by observing weather patterns and snowfall, and by using their reindeer to assess the availability of food sources beneath packed snow (Oskal et al 2006). Riseth, Tømmervik, and Bjerke's (2016) climatic and ecological studies of northern Sami reindeer herding found that reindeer herders have historically combatted the socio-ecological dynamics of events including closure of national borders to cross-border herding migrations (historically evidenced in Mongolia by the Dukha migration between Tuva and Mongolia prior to the border closure of 1947), relocations of herder households, overutilization of lichen pastures, catastrophic winters (Mongolian: *dzuds*), and forced herd reductions

(186). Reindeer herding peoples have always known that they must work in collaboration with nature and not against it, and reindeer husbandry is considered an indispensable element as a strategy for sustainable development in the Arctic (Anar 2001).

Natural Environments and Local Landscapes

While sipping warm reindeer milk and gnawing on a hardened chunk of *aarul* (dried cheese curd) that tasted heavily of earth and hay, I sat contentedly on the floor of Tsetsegma's *urtz* (teepee), which smelled of burning sage and tobacco. She kept pouring more tea from a well-seasoned steel pot, passing around thick, sour bread, and gliding about the *urtz* with ease and comfort, gently traversing the circumference between the canvas tarpaulin exterior and the thin larch trees that supported the structure like a skeleton. The thin larches met at a peak in the center of the *urtz*, which allowed for a metal chimney to reach up and out to greet the sky above.

Tsetsegma finished tidying up and tending to her grandchildren who scurried in and out through a grey canvas flap that served as the entrance to the enclosed warmth within. The children wore thick purple *dells* (Mongolian traditional outerwear) and their cheeks were beet red and rosy from the cold. It was warm inside of the *urtz*, the kind of warmth that makes your insides soft and makes you glad that you aren't outside, shivering as the wind sweeps across the open steppe and chills your bones. The wind was howling as rains encroached upon the camp from the mountains to the north; it was the first rain they'd seen in weeks. The canvas exterior of the *urtz* flapped feverishly in the high gusts and made it difficult to hear the crackling of the wood in the cast iron stove, or the boiling of water waiting for Tsetsegma to make more *suutei tsei* (milk tea), the ubiquitous Mongolian drink made with reindeer milk, salt, and muddled green tea leaves imported from China.

Tsetsegma arranged a small stool adjacent to the purring stove, and while adjusting the pleats of her skirt she sat down quietly and placed her hands in her lap. Her eyes were the color of raw honey, and brightness shone in them as she listened patiently to my inquiries. She wore a pale pink bandana adorned with printed daisies to hold back her thick greying hair, and her striped long sleeve sweater was faded from milking reindeer, working around the camp, and traveling across the landscape throughout the changing seasons and powerful taiga weather.

We discussed the daily habits and routine of her family and her reindeer, how many animals she possessed, and how drastically the snow and ice has been receding in recent years. She told me of decades past when the snow was deep and dense throughout the winter, and ice patches remained on mountain passes long after the summer months had gone. The ice persisted throughout the changing seasons without melting, providing the reindeer with cool patches to lounge and feed from during the dry, arid days of summer. She expressed her discontentment with the changing weather patterns and climate, which she viewed as potentially threatening to her family's way of life and traditions, as well as to the health of her reindeer.

Rainfall

The distribution of rainfall across Mongolia is extremely variable, making nomadic livestock production an efficient means of exploiting these highly variable resources. The vast majority of Mongolia's 32 million head of livestock graze in the grasslands of the steppe, which occupy about 70% of the country's area (Fernandez-Gimenez 1999; MNET 2010). Decrease in herd sizes is not solely due to climate change but is affected by multiple factors including hunting and fishing bans, loss of reindeer to predators and illnesses, heritage tourism and popular culture, infringement of indigenous people's rights, and increased development and globalization.

Tsetsegma's husband, Bayandalai, a 63 year old Dukha elder who has lived as a reindeer herder for his entire life, described what the environment of the taiga was like when he was a child: when the mud was so thick around the river banks that horses could barely walk through it, and when rivers flowed more heavily and the rains fell more continuously. Now, men are able to gallop across these same spaces because the ground is drying out. Bayandalai expressed that the "ground is caving in without water", which suggests that the earth is giving way to erosion and loose soil is accumulating due to processes of desertification occurring throughout Mongolia.

Mongolia's climate is becoming warmer, and between 1940 and 2008 the annual mean air temperature has been steadily increasing. Since the 1990s, the frequency of extreme high temperatures has grown and drought has intensified in Mongolia, and events such as sand storms and forest fires are at their highest frequency in living memory (Marin 2010). Severe droughts and extreme winters, which Mongolians term "*dzuds*", have steadily increased since 1940, resulting in widespread livestock deaths for many pastoral families including the Tsataan Dukha (MNET 2010).

Tsetsegma and Bayandalai live as part of the roughly twenty Dukha families who inhabit the West taiga during the summer months. Tsetsegma and Bayandalai move with their reindeer with the changing of the seasons, and during the summer their adult daughters come to live with them and to help with the workload and responsibilities associated with summertime (e.g. milking reindeer, making yoghurt and dried cheese curds, producing handicrafts). They have six children and many grandchildren, with most of their offspring living in the nearest village center or in Mongolia's capital, Ulaanbaatar. Bayandalai and Tsetsegma currently own 80 reindeer, and according to Bayandalai, that number is expected to increase with coming years.

Although herd sizes are increasing slowly, available lands and natural resources such as ice patches and viable pasturelands are rapidly decreasing. When Tsetsegma moved to the West taiga in 1985 from Ulaan-Uul, the land was wetter, the soil denser, and the grass was thicker. Animals and people were happier and fatter. Tsetsegma spoke of how the rainfall was decreasing noticeably with each passing year, and how the ground under the topsoil was becoming more and more exposed, making the trek to and from each seasonal camp more arduous as the granite bedrock becomes unearthed. During conversations with other Dukha and Darkhad peoples, many described the soil erosion and the drying of riverbeds and pastures in each of their respective encampments.

Ice Patch Erosion

The tundra-taiga ecotone which the Dukha inhabit is the world's largest, stretching over 13,400 kilometers (approximately 8,326 miles) across the circumpolar north. Throughout the many climatic fluctuations of the past 150,000 years, tundra-taiga ecosystems have suffered repeated losses of diversity as a result of permafrost depletion, increases in vegetation (e.g. as shrub invasion), and reduction in soil carbon, making the ecosystem particularly vulnerable to contemporary rapid global warming (Moran 208, 124).

While conducting fieldwork, I hiked up mountain summits to survey melting ice patches in the taiga, which local Tsataan people call "eternal ice" (Mongolian: *monkhiin mos*). Many Dukha are steadily realizing that the eternal ice patches are in fact not illimitable but are melting rapidly with each passing year. Our travel guide, Ochoroo, a 34 year old Dukha horseman, referred to many locations throughout the taiga where eternal ice patches were once located, but which have now completely melted and have left no traces of ever existing.

Because ice patches are located at such high elevations (roughly 8,000 feet and higher) and are far from established seasonal camps, people do not travel to access them. However, ice patches provide a solace for reindeer during summer months, where temperatures in the taiga can reach as high as 104° Fahrenheit. Because reindeer are ill suited for hot climates, they rely on ice patches to regulate their body temperatures and to drink from the flow of melting ice. Dukha reindeer herders are dependent on ice patches for the health of their reindeer, so they follow ice and snow during the procession of the four seasons. Ice patches determine when and where Dukha people decide to establish their seasonal camps, and they quite literally “go where the ice is” so that the reindeer will flourish.

Summer camps in the taiga were once strewn with viable ice patches and grasslands for the grazing reindeer, but herders are now being forced to move their summer camps further north toward the Russian-Mongolian border due to the shifting availability of ice and snow. The Dukha change summer camp locations every 2-3 years so that the grass may replenish itself, but with reindeer population size increasing and ice patches melting, allowing the land to rest and sustain itself is becoming more difficult for Dukha families. As the amount of reindeer increases in the taiga, the amount of land needed to support the herds increases as well, and the Dukha don't have access to the expanse of lands they once inhabited due to Mongolian conservation laws and the establishment of the Khovsgol Red Taiga National Special Protected Area in 2011. Reindeer travel approximately 15 miles daily searching for ice patches, grass, and lichen to eat, and land access is becoming scarcer as external environmental and social pressures impact the land and the people who depend on it.

Climate Adaptation and Environmental Preservation

Several Dukha lamented about the severity of the changing natural landscapes around them, about the drying riverbeds and the proliferation of lands lost to soil erosion and desert expansion in recent years. They spoke with apprehension in their voices about the future of the mountains, of the rivers and lakes, and of the larch and pine trees that are essential to their existence in the taiga. Natural landscapes provide them their homes, their tools, their places of worship, and their collective sense of self. The Dukha construct their social traditions and personal and social identities in direct relation to the land and the ecological spheres they inhabit. The concept of dwelling for the Dukha reveals highly meaningful relationships between individuals and features of the natural landscape, and Natural landforms, including mountains, rivers and dense boreal forests represent the nexus of Dukha existence by which they actively engage and construct their identities and live their realities. The Dukha embark upon a movement along a way of life that is submerged in and wrapped around the natural environment and natural resources of the taiga.

Because of the close and mutually beneficial relationship between human and reindeer, reindeer husbandry has historically demonstrated a high resilience to climate variability and change, which is evidenced by the Dukha's ability to adapt to changing landscapes over time. Reindeer herders have learned over generations how to live sustainably in severe Arctic environments, and societies that practice traditional reindeer husbandry are highly interconnected with the ecosystems in which they live (Cheek 2008).

The traditional knowledge and experience that reindeer herders around the world have cultivated are evidenced in their unique management strategies for the protection of pastures, observation of environmental changes, and the rational use of natural resources (Naykanchina

2012). The Dukha live their lives almost entirely with and within the natural elements, from the frigid winter months in the forests to the sweltering summers on the mountainous terrain of the taiga. They spend the majority of their lives exposed to and in unison with the natural elements of the Mongolian taiga, and their environmental affinity dictates and is essential to the way in which they perceive the world.

Dukha peoples combat the socio-ecological dynamics of events including closure of national borders to cross-border herding migrations, relocations of herder households, over utilization of lichen pastures, catastrophic winters (Mongolian: *dzuds*), and forced herd reductions. Reindeer herding peoples have always known that they must work in collaboration with nature and not against it, and reindeer husbandry should be considered an indispensable element as a strategy for sustainable development in the taiga.

The Dukha utilize long, thin larch trees felled on forest floors to carve the central poles for both their transient homes (Mongolian: *urtz*) and more permanent structures (Mongolian: *baishin*). Tsetsegma considers herself and other Dukha as the ‘forest cleaners’, or ‘protectors of the forest’; the people who ensure the forests are clean so that they remain healthy and fertile for future generations. The Tsataan Dukha only cut down young trees when absolutely necessary, which doesn’t occur often due to the density of the boreal forests they inhabit during fall and winter seasons. They generally use felled, decaying, or dead trees to make the poles for their *urtz* and posts to hitch their reindeer. Since the steppe above the temperate forest has no trees - only open grasslands and rough, mountainous terrain - the Dukha must haul all of their firewood to their summer camps on the backs of reindeer and horses. Wood is a precious, valuable, and essential resource in summer camps, as it is not readily available and requires the expenditure of a great amount of energy to retrieve from the forest line below the taiga. The Dukha gather

pinecones and fallen brush from the forest floor during fall and spring, and they utilize reindeer dung to make fires when wood is not available.

CHAPTER V: SOCIOECONOMIC CHANGES AND ADAPTATIONS

Access to Ancestral Lands and Mobility

In 2013, Dukha ancestral lands were declared a protected area with the establishment of Khovsgol National Park and the Ulan Taiga Protected Zone. The seminomadic reindeer pastoralists now face fines, prison sentences, and restrictions on where they hunt and when they migrate. The Dukha have a long history of using the forests to hunt sustainably, and the restrictions imposed on them prevent them from subsidizing their diets using the natural resources available to them in the forest. The restrictions have forced many Dukha to rely on *delguurs* (small grocery stores) in Tsagaanuur village or Ulaan-Uul, where they buy flour, oil, sugar, tea, rice and other processed foods and grains generally imported from Russia. This incorporation into the global market economy limits the Dukha's ability to live independently and sustainably within their means and forces them to use their government stipends to purchase items from the village, rather than relying on traditional hunting and fishing practices that have historically sustained them.

Hunting and fishing bans have resulted in the necessity for Dukha herders to sell their reindeer, causing herd sizes to diminish. Herding families have adopted new migration patterns in order to stay closer to Tsaganuur village, an effect of their need for income and services due to the transition to market economy. These migration patterns are not beneficial for sustaining larger herds, as summer pastures closer to Tsaganuur are less nutritious and warmer than pastures found in the higher elevations of the taiga, factors which negatively affect reindeer health (Johnsen et al 2012:35).

Tsataan Dukha communities rely on their knowledge and experience to negotiate their individual livelihoods in the taiga. Nicolas Rasiulis (2015) notes that the Tsataan Dukha's

intimate knowledge of the taiga and its resources is developed through their “nomadic inhabitation of an expansive wilderness” which affords them “extensive, practical ecological awareness” (vii). Much like the nomadic reindeer herding Evenki communities of Siberia, the Dukha practice a mobile hunting and fishing economy with small herds of between 5-100 domestic reindeer per family for transportation purposes (Lavrillier 2011, 216). The yearly travels of a nuclear family in the west taiga describe an extended loop, with an established route connecting a series of campsites which are revisited annually (Lavrillier 2011, 217). Nomadisation routes are guided by the economic calendar and the five main seasons, each posing constraints on possible campgrounds. Lavrillier (2011) posits that “In this scheme, summer and winter encampments represent two ends in a continuum of strategies, with encampments in other seasons located somewhere in-between” (217).

Like the Evenki, Tsataan Dukha herders spend all seasons in campsites located on dry, flat land, and in areas with access to fresh water and dry larch trees for fuel (Lavrillier 2011, 217). Summer camps are located at higher elevations where ice patches slowly thaw, creating abundant water sources on sides of valleys that flow through the taiga steppe lands. During summer months, Dukha families in the West taiga are found alongside freshwater inlets, with no more than 2-4 day’s travel to the nearest forest for hunting and fishing purposes.

In contrast, winter encampments are located closer to Tsaganuur village where reindeer herders often construct log houses out of larch trees (Mongolian: *baishin*) instead of the traditional teepee dwelling (Mongolian: *urtz*). Many Dukha men spend the harsh winter months tending to their herds while women move closer to the village so that their children may attend school. A majority of the Dukha children in the west taiga live in Mongolian dormitories during the school year and live with their herding families during the summer months. As reindeer herd

sizes decrease and Dukha youths contemplate life outside of the taiga, the Tsataan Dukha way of live becomes more precarious.

Recommendations from the UNEP include the establishment of programs to increase reindeer herd size and to improve reindeer welfare. The Arctic Council (2002) argued that the extreme lack of reindeer in Mongolia was the single largest threat to the continuation of Dukha existence. The UNEP's report recognized the importance for the Mongolian government to conduct vulnerability and adaptation assessments of climate, environmental, social, and economic changes in the region so that dialogue between stakeholders could be increased and the establishment of local herders' institutions could be actualized (Johnsen et al 2012).

Returning to Tsetsegma's *urtz* after fetching water, we discuss her experience in the taiga and the importance of her herds for sustaining her family's traditional way of life. Tsetsegma speaks of the importance of the land and appreciation of its particular beauty as intrinsic to what it means to be a Tsataan Dukha. She was born in Ulan-Uul, a small village located about 12 hours by Russian off-road vehicle from Tsagaannuur, the village closest to Tsataan Dukha winter encampments. As we sit in her *urtz* and listen to the howling winds, she recounts the period after the end of World War II, when Tsataan people were living along the border between what is now Mongolia and Russia. After the closing of the borders in 1947, some families remained in Russian territory, and many remained on the Mongolian side of the invisible divide. The creation of the Mongolian border with the USSR was placed throughout different villages with Tsataan inhabitants, causing a breakup of extended kin and families. She recounted how Tsataan people would smuggle goods across the border to bring to their families in Tuva, and how she still has relatives living in Russia today. She remembers growing up hearing about her family's desire for Tsataan people to reclaim their ancestral lands and to reunite with each other in the taiga, which

occurred in 1985. Dukha families who had been forced into Soviet herd collectivizations or sent to work at fisheries in Tsaganuur or Ulan-Uul dreamed of one day owning their own reindeer again and raising future generations of Tsataan reindeer herders in the taiga they had known as children.

“Next year we will have a ceremony to commemorate the celebration of 1,000 reindeer”, Bayandalai proudly adds as he crosses his ankles on the hardened ground with the look of a proud patriarch. Bayandalai tucks his thick leather boots under his *dell* and continues recounting the history of the Tsataan Dukha in Mongolia. With the establishment of collective agricultural cooperatives (*negdel*) throughout Mongolia in the 1950’s, herders could no longer trade reindeer and their products but received salaries as workers (Johnsen et al 2012, 26). Those not employed by the *negdel* settled in *sum* (village) centers where they worked for logging or fishing enterprises (Johnsen et al 2012, 26). According to Bayandalai, each family received an allotment of around 200-300 reindeer to herd and utilize for milk products which were communally gathered and exchanged for grains and other provisions, including stipends for sugar, flour, oil, rice, and other household staples Under the *negdel*, reindeer herders had access to veterinary care, health care, and education in the *sum* (village) centers, which generally improved living standards for the Dukha (Johnsen et al 2012, 26). During the *tzud* (severe winter storm capable of decimating entire herds of animals in Mongolia) of 1978, the Mongolian government decided that reindeer herding was economically unviable and seized 600 reindeer for slaughter to feed the children’s dormitory in Ulan-Uul village, a decision that resulted in a drastic decrease in herd sizes (Johnsen et al 2012, 26).

As processes of liberalization and reform were occurring throughout Mongolia in 1985, the Dukha made the communal decision to reunite all Tsataan peoples in the taiga. During the

democratic revolution of 1990, all reindeer were returned to and distributed across Dukha families, although by then the herd numbers were significantly dwindling due to disease, inbreeding, and predation. Bayandalai remembers how drastically reindeer herd numbers decreased following decollectivization and the democratic revolution in the 1990's due to lack of free public services and the breakup of the *nedgel*. He now puts the collective number of reindeer for both the east and west taiga at around 2,000 heads, though census numbers reflect a larger statistic in government data bases, as there is no systematic way of counting individual animals from all Dukha families.

Bayandalai was born in the taiga and moved with his family to Ulaan-Uul during the 1970's collectivization era, where he lived until 1985. After meeting Tsetsegma in the 8th grade, both moved from Ulaan-Uul to the taiga in 1985 to return to Bayandalai's place of birth. The need to return to ancestral lands for the Tsataan Dukha was motivated by a need for their herds of reindeer to thrive and grow in numbers, and for the Dukha people to access their spiritual spaces and places that they had become distanced from. The mountains, forests, rivers and pasturelands represent important spiritual places which they had been restricted from for decades due to expulsions by the Mongolian government, followed by forced Soviet sedentism and herd collectivization. A return to the taiga meant a combining of new livelihoods, a new hope for the future, and a return to the traditional spaces and places for the Tsataan Dukha.

Sacred Spaces and Places

Many Mongolians view the land on which they were born to carry sacred and spiritual importance to their daily lives and their family's overall wellbeing. In the Gobi Desert, Mongolian camel herders burn incense to the towering sand dunes and give thanks to the land on which their lives depend. In the taiga, the Dukha view the trees, mountains, rivers, and pastures

as sources of spiritual strength for their peoples. They construct cairns out of limestone and granite rocks that grow taller and more adorned with each passing year as families make their way through traditional migratory paths and return to the same places of worship. They hang *haddocks* (ribbons or scarves made of silk) around tree trunks and branches to honor the shaman spirits that inhabit the land.

In the west taiga, the Dukha are blocked from many of those sacred sites due to national park protections and conservation initiatives. They may visit their sacred places if they receive the proper permission from authorities, but for some Tsataan Dukha this is an unacceptable and offensive way to properly honor their ancestors. Many of the Dukha I spoke with said that their most revered places to visit and most important spiritual sites were located in summer pastures in the taiga, where the rolling green hills stretch endlessly for miles, only interrupted by the sight of *urtz* (teepees) and mountainous valleys that tower above the landscape.

Ochoroo - our Dukha horse guide who took us through the tundra to the taiga and ensured our safe return from the peaks of dangerous mountain cliffs - discussed the importance of place for his individual sense of self and identity. His family's special place is a river called *Barman*, which is near Mongolia's border with Russia in Khovsgol province. He laments that he hasn't been there recently, as the trek is too far, and he is too busy with the demands of his job and his family. His maternal grandfather was a shaman from Tuva, and when he died, they laid his body and his belongings at *Barman*.

Dalai and Bolortsetseg did not recount the importance of a shamanic site for their spiritual worship. Instead, they focus on the importance of their reindeer and the health of the natural landscape to honor and worship. When asked what features of the environment or what specific places they consider most important to them, they answered, "A beautiful mountain with

a river running around it, a place that is good for grazing and where there are few bugs to irritate both humans and their reindeer”.

The Reindeer/Land Connection

The importance of viable land for reindeer preservation and breeding extends directly to Dukha perceptions of spirituality and their collective and individual identities. The lives of Tsataan Dukha are permeated by the influences of the natural world, and they are inextricably linked with the health of the natural environment and of their reindeer herds.

While visiting with Bayandalai and Tsetsegma’s son, Erdenet, we discussed the daily routines and habits of both the Tsataan peoples and their reindeer. Erdenet’s son Dalai sat in the corner of the *urtz* with a jar of red currants dripping from his hands and face as he happily slurped up their juices. During the summer, Erdenet’s wife Jargal wakes at 5:00 am to milk the reindeer. At 7:00 am after the milking is completed, they release the deer from their pens and perform household duties and tasks throughout the day. These include making reindeer crafts to sell to tourists, collecting dung, managing the *urtz*, making dairy products like *aarul* (dried cheese curds) and *suutei tsai* (milk tea), and preparing meals. Around 5:00-6:00 in the evening, the men take to their horses to retrieve the reindeer from wherever they have wandered. It always amazes me how the men are able to locate their deer with such ease and efficiency over such a large expanse of land. Once the reindeer are herded back to the camp, all members of the family assist with the penning, trapping and separating of the reindeer. Often reindeer from multiple families will travel together, so it is not uncommon to see families appearing on the horizon to retrieve their missing animals from neighboring families. Once all families have their respective reindeer in the communal corral, the families separate the bulls from the females and the calves from their mothers. The bulls are tethered to poles in the ground with the quick tie of a knot that

I could not master. Erdenet allowed me to guide the reindeer to their proper penning areas, but he took care of the tethering for fear that one of his reindeer would run away during the night if I were left to tie the necessary knot. The females are tethered in a circular pattern, and once they are settled, the Tsataan release the calves. The calves immediately run to their mothers, nurse from them, and lay down to sleep. The calves do not need to be tethered, as they remain next to their mothers for the duration of the night and do not stray from the camp or the safety of their mothers.

The entire summer day for a Tsataan Dukha revolves around their reindeer. Even when the reindeer are let out to pasture, the Tsataan spend the daylight hours utilizing reindeer horns to carve beautifully elaborate knives, ornaments, and jewelry. The women use reindeer hides and fur to make purses, hats, and knapsacks, blankets, and clothing. They spend hours making dried cheese curds using a special plastic mold, which just appeared in multiple families' homes this year. Before the mold, Tsataan peoples simply cut rectangles and squares out of the drying milk to make curds and hung them in cheese cloths or light linens in the poles of their *urtz* to dry. Practically all components of Tsataan Dukha life are permeated by the presence and well-being of the reindeer, which they get their name, lifestyle, and spiritual identity from.

Structural Limitations

With increasing concerns and measures to preserve biological diversity within the taiga, such as the creation of national parks or protected/restricted areas, access to pastures is limited and hunting laws are having a major impact on the food security of the Dukha (Johnsen et al 2012). Due to the transition to a market economy during the 1990s, laws limiting species and seasons for hunting have been imposed, which further impact Dukha herders (Johnsen et al 2012).

Taiga reindeer herders have been historically likened to hunter-gatherers, rather than true pastoralists because hunting wild meat has played an integral role in their livelihoods (Donahoe 2003). Since the focus of herding is rarely on the production of reindeer meat for consumption, as is the case for reindeer herders in tundra ecotones including Scandinavia and Russia, taiga reindeer herders have traditionally relied on hunting to supply their families with alternate sources of protein (Johnsen et al 2012). The ban on hunting instated in 2000 subjected the Dukha to restrictions on hunting without compensation to reinforce their means of existence by alternative measures (Jernsletten and Klovov 2002). Regulations on hunting practices have impacted their relationship with the land, and the Dukha are presently struggling to maintain their way of life in northern Khovsgol province.

In 2011, Dukha ancestral lands were declared a protected area with the establishment of Khovsgol Red Taiga National Special Protected Area. The semi-nomadic reindeer pastoralists now face fines, prison sentences, and restrictions on where they hunt and when they are allowed to migrate. The Dukha have a long history of using the forests to hunt sustainably, and the restrictions imposed on them prevent them from subsidizing their diets with animals from the forest, such as caribou and moose, or fish from the many streams and rivers that flow from Lake Baikal in southern Siberia.

When asked about the impacts of the protected zones in the taiga, Bayandalai exclaims “*Bid Ulaan Taigagiin khamgiin ikheer örtöj bui khümüüs yum*” (We are the people most affected by the Red Taiga National Special Protected Area). Since grazing in protected areas is prohibited, Bayandalai and his family have had to relocate their herds during the fall months to pastures in more northerly locations, which boast fewer natural resources for their herds. As Bayandalai is a well-known elder in the community, he continues to assert his right to use the

lands for his reindeer. He spent 2-3 months during the fall of 2017 camping with his herds within the prohibited limits and received several notices from national forest rangers notifying him to evacuate the premises within an allotted period of time. He asserts that the lack of grazing areas during the fall that lay outside of protected areas is detrimental to the health of his herd, and therefore he continues to use the protected zones out of necessity and from sentiments of land attachment and entitlement. When Bayandalai receives notices to leave the area, he sends notes in return which essentially say, “don’t bark at me” although he uses a more vulgar Mongolian term which has the same meaning. Bayandalai worries about the future of the forest and asserts the importance of Dukha knowledge and experience for maintaining it. He says Dukha never set fires or harm the lands, outsiders do.

In a deeply sincere, guttural voice Bayandalai speaks of his family’s sacred mountain, which is located within the confines of the protected area. Although the Dukha have permission to access spiritual sites located within the protected spaces, they must acquire notarization and permission from the forest rangers before doing so. Bayandalai visits his family’s sacred mountain to conduct shamanic ceremonies and sacrifices to his ancestors and their spirits, but legally must go through the proper channels before he is granted permission. Bayandalai’s wife Tsetsegma concedes that the protected areas are good for protecting the land from outsiders who do not know how to respect it, but the laws and regulations are unacceptable for the real daily lives of people who live off of the forests that are being protected.

Because of the restrictions placed on the Dukha regarding access to lands traditionally used to herd reindeer, Dukha in the western taiga are moving closer and closer to each other during the seasons, which decreases the amount of pastureland available to each respective family’s herd. Dalai, an avid hunter and son of Bayandalai and Tsetsegma, and his wife

Bolortsetseg, a Darkhad Mongolian who has been living in the west taiga for 16 years and now considers herself a Tsataan Dukha, described the pain they feel from being forced out of their ancestral lands. The health of their reindeer is at stake, as the lack of suitable pastures results in sick reindeer, which they attest did not occur before the land enclosure. Dalai predicts that there will be no reindeer left in ten years if the reindeer are continually forced to overgraze the land. Dalai ponders if it might be better to stop herding reindeer completely if the government fails to work with the Dukha to better actualize their current needs. Such despair and disgruntlement over the Mongolian government's ability to successfully incorporate the Dukha herders into conversations regarding conservation tactics is unsettling and cause for consideration for many Dukha families.

Bolormaa, the matriarch of the Dukha family with which I spent the summer of 2017, spoke of the grievances she experienced after the establishment of the protected zone. They didn't consult with the local Dukha in Tsaganuur village or discuss the parameters or implementation of the laws that were to directly affect Dukha livelihoods. She wants to get along with the rangers and to avoid confrontation, but she laments on how the Dukha tried with no avail to address the Mongolian Parliament regarding the negative impacts that the conservation laws have upon Dukha lives.

Hunting and fishing bans have resulted in the necessity for Dukha herders to sell their reindeer, causing herd sizes to diminish for some families. During my visit to the taiga in 2017, a group of tourists from New Zealand wanted to purchase a reindeer from Bolormaa's family. Since the Dukha only kill 1-2 older reindeer per year for consumption during the particularly harsh Mongolian winters, killing a reindeer in the summer was not considered a necessity or culturally appropriate. Because the tourists offered such a large sum of money to Bolormaa and

her family, and agreed to pay them further to slaughter, prepare, and cook the reindeer, Bolormaa and her husband agreed to sacrifice a member of their herd.

The decision to sell the reindeer to the foreigners did not come lightly, as there were many sensitive components to be considered. The large amount of money offered to the family from the tourist group that didn't arrive in the taiga to stay with them, but were staying with another family, was problematic. How does the money get distributed? Is it fair that they pay Bolormaa's family for the meat when another Dukha family had housed them during their stay in the taiga? How do the Dukha decide which family's reindeer will be sacrificed? These issues persist as tourism grows in the taiga, which will be further discussed below.

Tourism

Currently, the most direct form of economic integration for the Dukha is tourism. Since the collapse of the Soviet Union and the rise of democratic capitalistic development since 1990, the Mongolian government has actively promoted the tourist industry of Mongolia's traditional nomadic culture and has largely supported legal reforms aimed at increasing tourism in the taiga. Tour companies promise visitors an opportunity to experience life in the 'mystical taiga' where a 'disappearing tribe' still practices shamanism and lives in the same manner as their ancient ancestors. The increase in tourism in the taiga has provided limited profit for Dukha themselves, who bear the brunt of environmental and social impacts caused by irresponsible tourists and tourist companies alike.

Tourism offers both an opportunity and a threat to the Dukha, as it provides much needed income and a direct link to the market economy, but it also reduces herders' mobility and forces reindeer to feed on pastures of poorer quality, which limits the ability of herders to increase their herd size.

Apart from sporadic income from selling souvenirs of carved antlers, other handicrafts, or homemade bread, the herders are generally not part of the tourist value chain. Although staying in one pasture for a long period can negatively affect reindeer health, herders feel they have no choice, as they are dependent on the income from tourists. This way tourism provides both a threat and an opportunity for the taiga people (Johnsen et al 2012, 35).

The Dukha are trying to have more influence on tourism in their communities. Rasiulis provides information on the once thriving Tsaatan Community Visitors Centre (TCVC), the community-run organization that is currently operating with meager financial income with little to no money available for reinvestment in the Centre's headquarters. Rasiulis (2016) argues that the TCVC once played an important role in the socioeconomic development of the Dukha peoples in regard to tourism, but is now operating under precarious conditions, if at all. My interlocutors informed me that the TCVC has not been operational since 2016, and that most tourists organize their trips through companies located in the Ulaanbaatar or abroad. In these cases, the only income that goes directly to Tsataan communities is what they can make from selling carvings or other handiwork (Johnsen et al 2012).

During my visit to the taiga in 2017 as a Peace Corps volunteer, I met a Dukha woman named Ulzii who served as the director of the newly established Dukha research center and museum in Tsaganuur that had been provided by the Turkish Cooperation and Coordination Agency (TIKA). During that time, the research center and museum housed artefacts and relics from Tsataan Dukha families who had donated them for purposes of cultural preservation. There were traditional Dukha hunting bows and arrows, traditional clothing made from the pelts of reindeer, and photographs of Dukha families spanning generations – all encased in glass. Ulzii was in the process of distributing kinship maps to both the east and west taiga families, and the research center was outfitted with computers, books, and recording equipment for Dukha use. One of Ulzii's main goals was to establish a safe space for Dukha children residing in Tsaganuur and their families, a place where elders could record the Dukha language for posterity and

education and where the children could learn about their Dukha heritage. The museum was to provide information to tourists before entering the taiga, and to educate the Khalkh and Darkhad Mongolian population living in Tsaganuur. When I returned to Tsaganuur and visited the museum in 2018, the doors were locked tightly, and wooden boards were nailed across the windows. When I visited Ulzii's house to inquire about the museum, her neighbor informed me that Ulzii was not home, and that the museum had been broken into and was not operational. Upon further questioning later with the Dukha in the west taiga, I learned that the museum had been ransacked and no one knew when (or if) it would reopen.

Ochoroo, our Tsataan Dukha horseman and guide through the taiga, sat next to the fire he had just built for us and adjusted his bucket hat and freed his arms from his thick grey *dell* (Mongolian traditional outerwear). He adjusted the tarp around the makeshift *urtz* (teepee) he'd constructed for us to keep us out of the rain that had been relentless throughout the morning and began rolling a thick cigarette to share with his nephew. Since we were on our way down from the taiga and camping in the forest, we had a lot of free time to lounge around the fire, trying to keep ourselves warm in the dropping temperatures due to the freezing rain. It had snowed lightly the night before, and we were all anxious to continue our trip back to his house in Harmai, where his wife and two young children were anticipating our safe return. While in the Dukha summer encampment above, we encountered German and Italian tourists who spent a few days living with Ochoroo's extended family members. Ochoroo and I discussed the encounters with the tourists, and I asked him about his past experiences with tourism in the taiga. As he has spent twenty years as a tourist guide, he was very well-versed in the current state of the taiga tourist economy. Ochoroo generally works with researchers instead of tourists, and he has established

his reputation as a dependable leader throughout years of working with anthropologists, archaeologists, and biologists throughout the area.

Ochoroo believes that the general consensus among Tsataan Dukha regarding tourists in the taiga is positive. He explained how tourism enables families to build sedentary homes in Tsaganuur or Harmai, which also increases the average Dukha family size. This is one of many paradoxes that the Dukha face, leaving them somewhere between their mobile past and sedentary future, where an influx in capital allows them to abandon their lifestyle on the taiga while simultaneously depending on said lifestyle to grow the tourism industry. Ochoroo explains that not all families in the west taiga have received tourists in their homes, although they have expressed explicit desire to do so. Usually the families with the largest herds and availability of resources (extra tents/teepees for tourists to sleep in, the ability to cook and provide for tourists, etc.) end up housing the majority of tourists who arrive during the months of April through October.

Compared to the east taiga, where summer camps are more easily accessible from Tsaganuur village and the trek less arduous, the west taiga Dukha do not enjoy the high volume of tourists who flock annually to the opposite camp. According to Ulzii, who works with families from both the east and west taiga, families in the east taiga live closer together and construct extra *urtz* for tourists to sleep in, and they have developed their souvenir industry at a higher rate than the Dukha in the west. Handicrafts made in the east taiga tend to be more varied than those in the west, due to the increase in exposure to tourists, knowledge of what tourists want to purchase, and their relative ease of accessibility from Tsaganuur when compared to the western Dukha.

In the west taiga you will find carvings of reindeer, knives, necklaces, bracelets, small handbags made from reindeer pelts, and the occasional spatula or fork, all produced from reindeer antlers or limestone found in the taiga. The east taiga Dukha produce all of the above souvenirs with the addition of rings and elaborately carved statues but they have had more time to finesse their craft and ability to barter with tourists than their western counterparts. Also, the families in east taiga have altered their migration patterns in order to more readily accommodate tourists, something that the families in the west taiga cannot do because of their larger herd sizes (Johnsen et al 2012, 51). They stay longer on the pastures located about six to eight hours from the nearest road from Tsaganuur and maintain closer contact with horsemen in the village so that when tourists arrive, they may be more likely to travel to the east rather than to the west (Johnsen et al 2012, 51).

Many Dukha families in the west taiga rely heavily on the tourist industry to support their livelihoods, and likewise depend on their youth to contribute to their growing tourist economy. During my time in the taiga as a Peace Corps volunteer, the Dukha elders asked that we teach their children words and phrases that would be useful when speaking with foreigners or tourists. They wanted their children to know basic English numbers, how to barter, and how to make polite conversation with the tourists while they peruse each item for sale. The children were tasked with visiting tourists in neighboring encampments in the west taiga, often appearing on the horizon toting a knapsack filled with handicrafts to sell to the new foreign arrivals.

With climate change and increasing socioeconomic pressures, some Dukha have moved their reindeer further south toward Ulaan-Uul or Moron, Khovsgol *aimag*'s provincial capital. During the summer months just outside the perimeter of the provincial center of Moron, it is not uncommon to see Dukha herders on the side of the highway with a single elderly reindeer

outside of an *urtz*. Signs advertising photo opportunities for both foreign and domestic tourists alike accompany the *urtz*, and you will find many cars pulled over to take pictures and pet the reindeer, which many Mongolians also treat as a novelty and worthy of a few tugriks (Mongolian currency). The reindeer that the Dukha bring as far south as Moron cannot survive in the harsh heat of summer in Mongolia, therefore it is in the herders' best interest to bring the most aging and sickly members of their herds to sell as tourist experiences in such southerly locales.

CHAPTER VI: CONCLUSION

“I can sometimes sing, and I can sometimes cry” - Bolortsetseg

With the loss of ancestral lands to climatic and socioeconomic changes, structural limitations, globalization, and the impact of tourism, Dukha families exist in a liminal state between their nomadic past and a sedentary future. Tsataan Dukha identities are shaped by the natural landscapes in which they live and their relationship to their reindeer, and as these landscapes change so do their collective and individual identities. To be “Tsataan Dukha” means to have and to herd reindeer, and herders like Ochoroo express pride in belonging to an ethnic group that he asserts were the first to inhabit the Mongolian taiga and who continue to live in balance with nature. Bolormaa wants the land to be protected by the Dukha, and for her sacred spaces and places to be shielded from the destruction of human exploitation. Bayandalai expounds on the necessity for Dukha children to become protectors of the forest and to continue the Dukha lifestyle to ensure their cultural survival. Bayandalai wants his children to grow up identifying as Tsataan Dukha, but this will only be possible if his reindeer herds are able to thrive and his children are economically efficient enough to continue life in the taiga. If the reindeer die out, then people who identify as Tsataan Dukha become simply Dukha, or ethnically Tuvan peoples with Mongolian nationality.

All of my informants expressed a sincere desire for their children to continue the Tsataan Dukha way of life but recognized the necessity to adapt to changing landscapes and develop means by which to navigate shifting socioeconomic paradigms in the taiga. With an increase in the availability of technology and the impacts on globalization upon Dukha youths, this future may not be possible. The Dukha depend on natural resources from the land to ensure the health of their reindeer, which in turn ensures the health and continuation of the Tsataan way

of life. With pasturelands decreasing, reindeer herd numbers also decrease, leaving the Tsataan Dukha pastoralists with dwindling resources to extract from both the land and their herds.

As Tsataan Dukha youths become more educated, they orient themselves toward more urban areas such as Ulaanbaatar and Moron and establish more western lifestyles, often leaving their families in the taiga to pursue more economically lucrative employment opportunities elsewhere. According to Dalai, the Dukha language is rapidly fading and it is very rare to find Tuvan speaking people younger than the age of forty. This may be evidence of the last stage of a complete language shift with Mongolian taking over most domains, and the Dukha language becoming limited to narrow symbolic functions and mostly employed by Dukha shamans during ceremonial worship (Graber 2017, 163; Kristensen 2015).

The Dukha are subject to emergent cultural forms – including forest destruction and environmental advocacy – and these are persistent but unpredictable effects of global encounters across difference (Tsing 2005). This thesis has reviewed how even seemingly isolated cultures, such as the Dukha, are shaped in national and transnational dialogues (Tsing 2005). The Dukha's limited access to international reindeer herding organizations keeps them from sharing and exchanging knowledge of ethnic conservation and education initiatives, and their lack of political representation at the local, national and international levels ensures that their voices be stifled. These seemingly marginalized peoples have accommodated themselves to global forces of environmental change and capitalistic drives by adjusting accordingly, although the continuation of their reindeer herding livelihoods is dependent both on their children's desire to continue the herding lifestyle and for them to support both themselves and their herds in a capitalist economy (Tsing 2005). The links (or lack thereof) across distance and difference in international reindeer

herding organizations that shape global futures of reindeer herders may be ensuring the Dukha's uncertain status (Tsing 2005).

Various international calls have reiterated the need to secure the unique culture, livelihoods and destiny of reindeer herding groups in Europe and Asia. Calls to engage indigenous peoples and their traditional knowledge in the promotion of ecosystems and biodiversity, such as the Kautokeino Declarations, made at the 4th World Reindeer Herders' Congress, which recognized the importance of conserving tundra and taiga reindeer husbandry, expressed the need to implement programs to assess and strengthen reindeer husbandry (Johnsen et al 2012).

Domesticated reindeer herding in Mongolia is currently hanging by a thread, as the Dukha's industry has been subjected to extreme environmental and political conditions during the twentieth and twenty-first centuries (Jernsletten and Klovov 2002, 152). The Dukha are currently facing the decimation of their ancestral lands in the Sayan Mountain region where Mongolia's northern border meets the Russian republics of Tuva and Buryatia. External economic, environmental, and sociopolitical forces playing out on both domestic and transnational frontiers directly impact this seemingly isolated group in a remote region. Theirs is not a unique story, but the Dukha are disproportionately affected because of their pervasive marginalization and location in northern Khovsgol *aimag* (province), where protected areas continue to expand and encroach upon Dukha ancestral lands.

This thesis has provided a broad and multidimensional framework for understanding globalization and its effects on specific populations, specifically the Tsataan Dukha reindeer herders (Willford 2007). I offer an understanding of the structural parameters of Dukha visibility and allow the reader to feel the friction of global connection while connecting at the level of

empathy with a particular people and their culture (Tsing 2005; Willford 2007). This thesis has further explored the friction caused by global connections that allow the Dukha to slip between the cracks of perception and representation (Tsing 2005; Willford 2007). Their small population numbers and location in the Taiga and outside the provincial center of Khovsgol *aimag*, far from the capital of Ulaanbaatar, makes them hard to access and makes the transportation of information and resources difficult. Essentially you cannot see them, and it is difficult and costly to get to them, but they exist: “an economy of the invisible” (Tsing 2005). I have sought to ethnographically anchor the complex specifics of local and global socioeconomic and environmental changes in the lives of those being affected by rapid transformations of Mongolia’s landscapes under pressures of capitalist interests and global climate change (Willford 2007).

Dependence on the market economy for the Tsataan Dukha results in a dependence on capital, and capital is currently predominantly derived from the tourist industry. The tourist industry in the taiga can only thrive with an increase in infrastructure and technology, both of which threaten the natural landscapes and sacred spaces and places for the Dukha. The ethnic identity of the Tsataan Dukha is derived from both their connection to and reliance on their reindeer herds and the availability of natural resources in the tundra/taiga ecotone in which they live. Both reindeer and the fragile tundra/taiga ecosystem are threatened by development, globalization, and climate change, which directly relate back to the drive of capitalism in Mongolia. The Tsataan Dukha depend on reindeer for nearly all aspects of survival, as well as cultural, spiritual, linguistic, and economic identity, and the encroachment of modernization threatens the continuation of this system of interrelated symbolic pastoralism by which the Tsataan Dukha exist (Keay 2006, 1).

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