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## CULTIVATING TORGHUT MONGOLS IN A SEMI-ARID STEPPE\*

### Keywords

Torghut Mongols, Qing dynasty, Xinjiang, Inner Asian borderlands, grasslands, agro-pastoralism

In 1782 acting Shaanxi Governor Bi Yuan 畢沅 (1730–97) submitted an exemplary memorial to the throne that concisely outlined the provincial administrative view of the proper order of relations between people, cultivars, livestock, climate, and water in northwestern China.<sup>1</sup> He began with ostensibly human relations. His premise was that imperial official identity was ultimately formed through its connection to the food security of the general populace: “The root purpose of appointing officials is to prioritize the devotion of effort to civil affairs, and its main end is to put food sufficiency first.” Bi Yuan, like most of his contemporaries, unquestionably valued agriculture as the general and “main source” of food. By virtue of his posting to a China-proper province whose northern reaches lay along an ecotone with the Mongolian steppe, however, Bi Yuan was also distinctively aware of pastoralism as what he called the “second” source. While he made it clear that agriculture was certainly preferable, he was equally plain that human agency’s range of choice was quite constrained in large parts of his jurisdiction, primarily by scarce water and cold climate. “Places in the northern provincial prefectures of Yan’an 延安 and Yulin 榆林, like Suide 綏德 and Fuzhou 鄜州, have land full of sand and gravel. Each is a high, cold frontier area where rainfall and ponds are scarce and inhibited, so that at harvest there is concern about shortfall.”<sup>2</sup>

Even where water was a comparative natural endowment in central Shaanxi prefectures like Xi’an 西安, it had to be extensively managed. Bi Yuan described the

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<sup>1</sup>Helen Dunstan has closely analyzed Bi’s memorial from the perspective of “Sino-Manchu developmental planning”; Helen Dunstan, “Official Thinking on Environmental Issues and the State’s Environmental Role in Eighteenth-Century China,” in *Sediments of Time: Environment and Society in Chinese History*, edited by Mark Elvin and Liu Ts’ui-jung (Cambridge: Cambridge University Press, 1998), 596–98.

<sup>2</sup>Bi Yuan 畢沅, “Shansheng nongtian, shuili, muchu shu” 陝省農田水利牧畜疏, in *Qing jingshi wenbian* 清經世文編, edited by He Changling 賀長齡 (1826; repr., 3 volumes, Beijing: Zhonghua Shuju, 1992), 36.888b.

region's challenging hydrological conditions in traditional terms: "In the center of the province the water is deep beneath a thick layer of earth so that *qi* 氣 does not circulate between mountain forests and river marshes. Each experiences the calamity of prolonged periods without rainfall." Extensive irrigation networks, most importantly the Longdong 龍洞 canal in Jingyang 涇陽 district, were the requisite adaptation to sustain and expand arable acreage. These waterworks were also, unfortunately, well suited to the transport of silt, an inadvertent and unavoidable byproduct of canal irrigation that complicated and could easily undermine maintenance. Bi Yuan reported that he had just dredged the canal to increase irrigated acreage from 10,000 to over 100,000 *mu* 畝. He also noted that silt had become a problem over time not just because of abandonment of existing canals, but also of failure to establish new ones, so that "larger streams became more narrow and the flows of the smaller ones were cut off," with famine the final result.<sup>3</sup>

In Bi Yuan's Shaanxi, both agriculture and pastoralism were human adaptations to the surrounding ecology's water scarcity and related climate aridity prevailing throughout the empire's western borderlands. The province, however, lay across a major ecosystem divide so that a relatively uniform set of natural conditions was not obligingly contained within its administrative space. Bi Yuan's hydrological concerns could not be monolithically provincial as a result. Indeed, these were actually relieved, in a more China-proper fashion, by the "beneficial water and soil stretching all the way to the southern mountains" in the southern Shaanxi prefectures of Hanzhong 漢中, Xing'an 興安, and Shangzhou 商州.<sup>4</sup>

Bi Yuan's memorial is a cultural product of an ecological encounter with a substantially arid landscape. It was a written proposal to cover all the "patchiness" of Shaanxi's ecological spaces to ensure a pervasive food security for both state and locality. Patchiness is an ecological concept that refers to localized areas within wider landscapes that exhibit a different set of ecological dynamics from their surroundings to promote greater diversity.<sup>5</sup>

Patchy hydrological conditions in Shaanxi also drew attention to the management of human resources. Bi Yuan addressed these problems in both general government and borderland terms. He cautioned that excessive commercialization and urbanization drew official attention away from supervision of the countryside in general, so he required his local officials to make annual or seasonal inspections of their rural jurisdictions. Bi Yuan insisted these inspections proceed from an environmental historical perspective by

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<sup>3</sup>Bi Yuan, "Shansheng nongtian," 36.888b. One *mu* is generally taken as .166 acres/.067 hectares, although it could vary considerably between localities. The Longdong canal was part of a much larger old hydrological infrastructure, generally known as the Zheng-Bai 鄭白 irrigation system, of the Wei River valley. By the Qing period, mounting water control problems over centuries, mainly related to excessive siltage of the frangible loess soil, had reduced official water control ambitions to a relatively small scale; Pierre-Étienne Will, "Clear Waters versus Muddy Waters: The Zheng-Bai Irrigation System of Shaanxi Province in the Late Imperial Period," in *Sediments of Time: Environment and Society in Chinese History*, edited by Mark Elvin and Liu Ts'ui-jung (Cambridge: Cambridge University Press, 1998), 284, 307–9.

<sup>4</sup>Bi Yuan, "Shansheng nongtian," 36.888b.

<sup>5</sup>Bruce Winterhalder, "Concepts in Historical Ecology: The View from Evolutionary Ecology," in *Historical Ecology: A Multi-Dimensional Orientation*, edited by Carole L. Crumley (Santa Fe: School of American Research Press, 1994), 33. For an extended discussion of patches within the larger category of boundary dynamics, see, Debra P.C. Peters, James R. Goze, and Scott L. Collins, "Chapter IV.5, Boundary Dynamics in Landscapes," in *The Princeton Guide to Ecology*, edited by Simon A. Levin (Princeton: Princeton University Press, 2009), 458–63.

charging inspectors to compile information on past flood control works and irrigated acreage as they surveyed terrain and to note water resources and agricultural production potential on their rounds to maximize “the capacity to shift water” and store it. Finally, agricultural ideology would be continuously inculcated culturally through the normal operation of periodic state Confucian rituals.<sup>6</sup> Such measures were hardly unique to Shaanxi, but reflected rural-urban anxieties that late imperial officials regularly expressed as well as general concerns over water control that long pre-dated the Ming-Qing period.

Bi Yuan’s human resource provisions for herding, however, were more distinctive in terms of time and place, if equally historically nuanced. For a situation comparable to that of his contemporary Qing dynasty’s pastoral affinities, Bi reached all the way back to the Tang dynasty to recall that Shaanxi’s pastoral administration had once produced more than 430,000 horses, 50,000 cattle and 280,000 sheep. He went on to observe that “today, the land is as it was before, and its grass and water still exist. If they can be appropriately managed, how can we know that the present cannot measure up to the past?” Having recently conducted his own personal survey, he reported that “water and grass remain quite abundant” and suggested that official inquiry should be made in the locality as to “how many herders, camels, horses, cattle, and sheep there are.” This information would then be compiled by central provincial officials to conduct supervised “trial husbandry” (*shiyang* 試養) and to hire qualified instructors “to teach the people about fodder.” Initial state investments would be paid off after the breeding season, with herders allowed to keep the offspring. The state would retain capital reserves of livestock and make allocations for private purchase.

Bi Yuan’s memorial is a proposal for the husbandry of not simply of plants or animals, but also of human beings under borderland ecotone conditions of hydrological fragility. Ecologically, water and climate determine the choice between agriculture or pastoralism. The success of adaptation, however, is in large measure culturally decided by the quality of human resources properly employed. Water and climate here appear to set the initial conditions within which human resources are subsequently developed. This does not mean humans can have no effect on hydrology at all. If that were true, central Shaanxi would have been an agricultural wasteland. It does, however, more appropriately acknowledge human limitation and adaptation in ways not felicitously conveyed by the standard English translation of what Bi Yuan calls *shuili* 水利 (“water control”), or the corresponding English equivalent of what he calls *dili* 地利 (“soil control”).<sup>7</sup>

The imperial human identity that should arise from this complicated interplay of nature and culture is environmentally omniscient. That is, locals, probably Han in this context, can be converted from agriculture to herding as needed. Towards the end of his memorial, Bi Yuan summarily describes his ideal Shaanxi borderlander as follows:

Since cultivation income is only adequate for subsistence and production costs for livestock are inexpensive, husbandry will be seen to increase daily. People’s strength will gradually increase, and military power will gradually strengthen to the genuine and unending benefit of the frontier.<sup>8</sup>

<sup>6</sup>Bi Yuan, “Shansheng nongtian,” 36.888b.

<sup>7</sup>Late imperial officials commonly understood that the full-scale Zheng-Bai system had effectively become unsustainable because of environmental change; Will, “Clear Waters versus Muddy Waters,” 308.

<sup>8</sup>Bi Yuan, “Shansheng nongtian,” 36.888b.

The Qing order did not require this sort of environmental omnicompetence from its Han subjects alone. Despite its Inner Asian Manchu origins, the dynasty proved quite ethnically flexible in its demands on the human embodiments of its borderland authority under conditions of hydrological fragility. One of the most famous events in Qing diplomatic history, the 1771 return of the Torghut Mongols from their self-imposed exile in the Russian steppe to dynastic territory in Xinjiang, shows that pastoralists would likewise be required to make radical agrarian adaptations.<sup>9</sup> The territory's arid climate, however, proved so unresponsive to Qing state imperatives that authorities had to acquiesce to a combination of nature and culture that kept the pastoral Torghuts agriculturally useless.

This article explores some implications of the hydrological limits of Qing empire as the state sought to effect the conversion of Torghuts from herders to farmers under Xinjiang's arid steppe conditions. In the wake of the Torghuts' dramatic arrival in Qing territory, dynastic officials were motivated by security concerns generated from both an immediate food crisis and a prolonged disruption of other nearby pastoral peoples along a sensitive border with Russia. The first section will contextualize the ordeal of the Torghut arrival in terms of these concerns. The next section will focus on the state's crash program to educate the Torghuts for steppe farming. Ecological and cultural (understood together as "environmental") obstacles substantially blocked this attempt to convert the Torghuts. Environmental obstruction compelled the dynasty to adapt its expectations to the fragile steppe ecology and to the Mongol identity most suited to it. The conclusion examines the final integration of the Torghuts as part of the Qing herding order of "imperial pastoralism" rather than of its agrarian order of "imperial arablism." Environmental conditions were instrumental for the resistance of pastoral Torghut to agrarian conversion. The "cultivation" of Torghuts could not be adapted to the arid ecology and pastoral culture of Xinjiang's steppe, state ambitions notwithstanding.

#### THE ORDEAL OF ARRIVAL

The Torghuts arrived in Xinjiang in May 1771 in successive groups hit by more than five months of harsh steppe winter and spring conditions and hounded by Kazakh attacks. According to one report in Manchu issued to the throne within a month of their arrival, the Torghuts

met with an extreme cold on their way here. They had set out in winter and arrived in summer. At one stopover they encountered another attack and their Mongol tents were all abandoned. They normally slept in the open in wind and rain and had no water for several days as they crossed the great desert [*gobi*]. Any who came on water drank it regardless of its quality and ate the meat of livestock that dropped dead. They died from swollen bellies.<sup>10</sup>

<sup>9</sup>Representative works on aspects of the Torghut return include James A. Millward, "Qing Inner Asian Empire and the Return of the Torghuts," in *New Qing Imperial History: The Making of Inner Asian Empires at Qing Chengde*, edited by James A. Millward, Ruth W. Dunnell, Mark C. Elliott, and Phillippe Forêt (London: RoutledgeCurzon, 2004); Ma Ruheng 馬汝珩 and Ma Dazheng 馬大正, *Piaoluo yiyu de minzu: 17 zhi 18 shiji de Tu-er-hu-te Menggu* 飄落異域的民族: 17 至 18 世紀的土爾扈特蒙古 (Beijing: Zhongguo shehui kexue chubanshe, 1991).

<sup>10</sup>*Qingdai Xinjiang Manwen dang'an huibian* 清代新疆滿文檔案匯編, 283 volumes, edited by Zhongguo diyi lishi dang'anguan 中國第一歷史檔案館 and Zhongguo bianjiang shidi yanjiu zhongxin 中國邊疆史地研

A subsequent report confirmed that arrivals' consumption of "contaminated food and water" while "passing through the *gobi*" was "the reason for the extreme number of fatalities."<sup>11</sup>

In their official communications over the succeeding months with dynastic officials, forwarded in Manchu to the throne, Torghut leaders could reduce these incredible hardships of their people's ordeal to a single sanitized understatement: "They have walked far, are quite spent, and have arrived in dire straits."<sup>12</sup> Such formalities were nevertheless given great weight by arresting figures that were a heavy burden to all concerned. Only about 65,000 to 66,000 of around 170,000 Torghut fugitives likely completed the trek back to territories they had left well over a century earlier between roughly 1598 and 1630. The time they chose to desert their nominal Russian suzerains, January of 1771, ensured great hardship from weather alone. Furthermore, at least 3,390 of those who reached Xinjiang subsequently died of smallpox during 1771–72, including the mother, wife, and daughter of the chief Torghut leader, Ubashi (1742–74). By mid-1772, 15,000 Torghut remained too sick to be relocated to permanent pastures within Xinjiang, which would have provided no real relief in any case because none of these people had any livestock and, so, were "truly unable to move."<sup>13</sup>

Although the Qing state was adept at extending disaster relief to its Mongol subjects under challenging circumstances, the extent and politics of Torghut relief created immense difficulties that threatened to collapse the massive aid program local Qing officials were contemplating. One measure that may convey a sense of the extraordinary scale required can be taken in an estimate that the dynasty transferred about 140,000 head of livestock in the initial stages of its little over two-year relief of the Torghut. If a proposed maximum estimate of about 270,000 head in total is accurate, this figure would have been unprecedented for all but major military operations, and would have been impossible to deliver had the Qing not carried out what appears to be an emergency

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究中心 (Guilin: Guangxi shifan daxue chubanshe, 2012), Qianlong (hereafter, QL) 36/7/22, 101:288a-91b/#33. Note that this and many other Manchu documents cited in this paper have been translated into Chinese and published under the title of *Donggui He-bu-ke Sai-er Tu-er-hu-te Manwen dang'an quanyi* 清代东归和布克赛尔土尔扈特满文档案全译, edited by Wu Yuanfeng 吴元丰, Wu Ye-er-da 乌叶达尔, and Ba Ba-tu-ba-ya-er 巴巴图巴雅尔 (Urumqi: Xinjiang renmin chubanshe, 2013). The text translated here, moreover, has been rendered into Chinese in an earlier article from the original archival document; Guo Meilan 郭美兰, "Tu-er-hu-te Han Wu-ba-xi buzhong donghui fadi anzhi shimou" 土尔扈特汗渥巴锡部众东归后拨地安置始末, *Zhongguo bianjiang shi yanjiu* 17.2 (June, 2007), 59. I have chosen to cite the original documents published in *Qingdai Xinjiang Manwen* because they afford greater precision than the generally accurate Chinese translations. These translations are not always adequate, rendering, for example, the Manchu "ongko" (pastureland or grassland) as the Chinese "caoshui" 草水 (grassland/pastureland and water). Nevertheless, I have collated my Manchu document citations from *Qingdai Xinjiang Manwen* with the corresponding Chinese translations from *Donggui He-bu-ke Sai-er Tu-er-hu-te* by adding the latter's document numbers at the end of my citation (e.g., "#33" above), where appropriate. All Manchu terms in the paper, including Torghut personal names, are transliterated according to the Möllendorff system.

<sup>11</sup> *Qingdai Xinjiang Manwen*, QL 36/8/3, 101:425a-29a/#43.

<sup>12</sup> *Qingdai Xinjiang Manwen*, QL 36/11/3, 103:249b-51b.

<sup>13</sup> *Qingdai Xinjiang Manwen*, QL 36/7/22, 101:288a-91b/#33. For an account of the Torghut departure from Xinjiang to Russia during the late Ming dynasty, see Ma and Ma, *Piaoluuo yiyu de minzu*, 39–50.

levy of livestock from military garrisons in Xinjiang and from the main state pasture complexes north of Zhangjiakou 張家口.<sup>14</sup>

Under normal circumstances, distances, terrain, and climate made the direct transfer of livestock impractical, so relief authorities almost always sent grain and silver instead. One reason for this substitution was that ready reserves of livestock could not be moved in requisite numbers without seriously depleting state pastures that generally needed to keep back sufficient breeding stock to maintain themselves. Such relief herds could, moreover, suffer considerable attrition themselves en route.<sup>15</sup> In the Torghut case, the numbers were daunting even for relief officials with the entirety of the main imperial pastures of the Three-Banner and Darganga flocks at their disposal. An August 1771 report arranging for the transfer of 140,000 head of livestock, 30,000 horses, and 110,000 sheep noted that these could be drawn from the over 100,000 horses and over 280,000 sheep currently available in the Darganga pastures. This first stage of Torghut relief alone would require 30 percent of the horses and 39 percent of the sheep from the dynasty's main pasture complex reserve in northern Inner Mongolia.<sup>16</sup>

Very little about the Torghut relief effort was normal, however. Torghuts arriving in Xinjiang probably totaled 15,793 households of 66,073 people. Ubashi's own banner of about 40,000 people, all that remained of the largest Torghut group of 110,000, ate up over 8,000 *shi* of noodles alone.<sup>17</sup> To the great dismay and consternation of Qing relief officials, their Torghut charges also, quite unexpectedly for pastoralists who depended on staple milk products, ate up catastrophic quantities of relief livestock nearly right off the hoof. An early 1772 report by Šuhede (1710–77), the acting Ili Military Governor, and therefore Xinjiang's senior official and the relief's chief coordinator,

<sup>14</sup>*Qingdai Xinjiang Manwen*, QL 36/7/12, 101:204a-08b/27. The ultimate source for the livestock figure is the 1771 text of “Youxu Tu-er-hu-te bucong ji” 優恤圖爾扈特部眾記 (Record of generous relief for the Torghut *aimagh*), which is inscribed in Chinese, Manchu, Mongolian, and Tibetan on one of two steles flanking the entrance to the Chengde Potala temple. The livestock relief figures that a number of scholars have culled from this single source differ unaccountably. Tu-na, relying on a copy of the text published in the *Qingchao wenxian tongkao*, comes up with a total of 270,000 head, despite the fact that only 265,000 head, at most, are listed; Tu-na 吐娜, “Dong huan hou de Tu-er-hu-te shehui zhidu yu qi jingji gaikuang” 东返后的土尔扈特社会制度及其经济概况, *Xinjiang daxue xuebao* (zhexue shehui kexue ban) 22.3 (1994), 55; *Qingchao wenxian tongkao* 清朝文献通考 (Hangzhou: Zhejiang guji chubanshe, 2000), 191:6,534a. Using what is apparently the same source, Ma and Ma put the figure at “over 200,000” head; *Piaoluo yiyu de minzu*, 210. Finally, John L. Mish comes up with a total of 185,000 head; “The Return of the Turgut: A Manchu Inscription from Jehol,” *Journal of Asian History* 4.1 (1970), 81. Mish's total may be based on an original Manchu text, rather than what might be a problematic Chinese translation, although the source language of composition is unclear; Millward, “Qing Inner Asian Empire and the Return of the Torghts,” 104. The figure can best be clarified through a comparison of the the stele's original Chinese and Manchu versions.

<sup>15</sup>The management of livestock was complicated by patchy grassland resources. The transit of the first Torghut delegation to the Qianlong emperor, arriving at Chengde in December of 1771, required relay stations to supplement its pack animals. The positioning of these stations had to be close to grasslands in order to keep their supplementary livestock in good condition while awaiting the Torghut arrival; *Qingdai Xinjiang Manwen*, QL 36/10/27, 103:210a-11b/#66.

<sup>16</sup>*Qingdai Xinjiang Manwen*, QL 36/7/22, 101:204a-08b/#27. For a study of Qing disaster relief of its Inner Mongolian banners, see, David A. Bello, “Relieving Mongols of their Pastoral Identity: The Environment of Disaster Management on the 18<sup>th</sup> Century Qing China Steppe,” *Environmental History* 19.3 (July, 2014), 480–504.

<sup>17</sup>One *shi* conventionally equals about 2.95 bushels or 104 dry liters.

tallied up the devastating appetite of his Torghut charges for meat. Of the roughly 100,000 head initially granted to the three main Torghut group leaders, about 34 percent of Momuntu's (n.d.) original 10,418 head survived uneaten; only about 20 percent of Ts'ebekdorji's (?–1778) original 7,719 remained; Ubashi had only about 25 percent of his original 37,464 head allocation left.<sup>18</sup>

A subsequent Qing admonition makes it quite clear that relief livestock were primarily intended to become Torghut “personal property livestock” (*hethe ulha*). Families would manage their animals as breeding stock to restore lost herds as well as act as an ongoing supply of main staples like milk and buttermilk.<sup>19</sup> Officials sent to supervise the dispersal of Momuntu's, Ts'ebekdorji's, and Ubashi's banners for settlement across a number of suitable pastures explained that their self-destructively carnivorous behavior was a product of the collapse of regular human adaptation to steppe ecological conditions. It was reported that people from the three groups

all need to seek cover to avoid the cold and wind, so they have scattered all about, with many living far from our supervisory garrison areas. The breeding livestock that has been allocated to them has probably been illicitly slaughtered and eaten. This may be so that meat broth can be made for sick people to drink to get better. It is also probable that those people who become ill with smallpox are isolated and unable to watch over their livestock, which is then stolen by others and slaughtered.<sup>20</sup>

Torghut leaders had proven unable to restore the discipline needed for their banners to survive these harsh conditions intact, “a failure of leadership” that Šuhede's onsite relief supervisors found “quite worrying.” Šuhede himself concluded that in their desperate voracity the Torghuts “seem complete strangers to satisfaction,” making it “unreasonable” to waste further livestock on such irresponsible herders. He duly informed the Torghut leaders that nevertheless, given the degree of imperial prestige already committed to the relief effort, the Torghuts would continue to receive provisions, including “sheep... and many fur jackets, cotton, and cloth,... as protection from the cold.” Torghut camels were “still plentiful, there being over 6,000 in Ubashi's pastures alone.” Consequently, the refugees would be allowed to trade their camels to Qing Mongol herders in Ili and Tarbagatai for more sheep and cattle.<sup>21</sup>

Exposure to natural conditions of climate and disease were the main factors in the general breakdown of Torghut discipline, which in turn caused security concerns. Some of these concerns were internal to the Torghuts. Qing officials initially anticipated incidents of rustling to emerge among the refugees and believed, as noted above, that such acts promoted some of the precipitate slaughter of livestock to literally swallow up the crime. The imperative to quickly issue grants of personal property livestock

<sup>18</sup> *Qingdai Xinjiang Manwen*, QL 36/12/24, 104:158a-63a. These figures are also cited in Guo Meilan, “Tur-hu-te Han Wu-ba-xi buzhong,” 60.

<sup>19</sup> *Qingdai Xinjiang Manwen*, QL 37/4/20, 106: 275a-79a. For an example of personal property livestock provisions as normal state disaster relief, see Manwen lufu zouzhe 满文录副奏折, subject category of Manchu holdings in Zhongguo diyi lishi dang'anguan 中国第一历史档案馆, Beijing, QL 14/3/28 [03-0172-0682-005].

<sup>20</sup> *Qingdai Xinjiang Manwen*, QL 36/12/24, 104:158a-63a.

<sup>21</sup> *Qingdai Xinjiang Manwen*, QL 36/12/24, 104:158a-63a.

had in fact been partly intended to eliminate incentives for rustling. Xinjiang officials also recognized, however, that rustling would not remain confined to the Torghuts, but would inevitably spread to nearby pastures where other Qing herding subjects, including groups of Kazakhs and Buryats, had been stably settled.<sup>22</sup>

An imperial edict issued by the Qianlong emperor (r. 1736–96) in September of 1771 made due provision of personal property livestock, but also instructed Šuhede to begin to lay plans for a reconstruction of Torghut identity from pastoral to agricultural:

In making calculations for the benefit of [Torghut] livelihood over the long term, nothing is more important than the cultivation and stockpiling of grain. So, they should be directed to live in arable places that can be presumed to have very extensive rich fields. Since they are all able to farm, they can be encouraged to exist by cultivation, which will be of great benefit for them if they do.<sup>23</sup>

This is a rather blithe expression regarding the primacy of the Qing environmental relationship informing the core of its domain in China proper that I have elsewhere termed “imperial arablism.” Through the promotion of select types of cultivation in various material and discursive aspects, the Qing state sought to maintain a relative monoculture of human interactions with cereal plants that would produce not just a stable revenue, but a uniform, Han Chinese ethnic identity. Imperial arablism accordingly made the vast environmental diversity encompassed by the Qing easier to administer by reducing the range of that diversity’s legitimate cultural and ecological expressions. The Qing Empire’s relations, however, remained “multi-environmental” because its authority stretched beyond the comparative wet zone of China proper into the arid Inner Asian steppe, among other ecosystems. In these drier, and often cooler, climes intensive agriculture was impractical and other forms of stabilizing environmental relations prevailed, most distinctively, “imperial pastoralism,” which was based on human relations with livestock also orchestrated by dynastic authorities through various discursive and material means that included disaster relief.<sup>24</sup>

In the Torghut case, however, the dynasty acted not to fix an existing pastoral identity, as it normally would have in its Inner Mongolian steppe core, but to transform it into an agricultural identity for purposes of regional security, which would ideally include stabilized grain production. From a relatively anthropocentric perspective, this might seem a matter of changing human culture. This particular, and particularly ambitious, dynastic identity reconstruction project, however, would prove imperial pastoralism to be the more appropriate human adaptation to arid ecological conditions, which were not subject to the ungrounded cultural determinations of the Qing state.

#### CULTIVATING TORGHUTS IN THEORY

In response, Šuhede quickly shifted the terrain that deceptively underlay these imperial arablism presumptions. Even as he acknowledged compliance with the emperor’s edict,

<sup>22</sup> *Qingdai Xinjiang Manwen*, QL 36/8/26, 102:157b-62a/#50.

<sup>23</sup> *Qingdai Xinjiang Manwen*, QL 36/8/26, 102:157b-62a/#50.

<sup>24</sup> David A. Bello, *Across Forest, Steppe and Mountain: Environment, Identity and Empire in Qing China’s Borderlands* (Cambridge: Cambridge University Press, 2016), 2–4.



Šuhede appended a brief, corrective description of the environmental relations prevalent among these new Qing arrivals: “Zunghar people have known how to cultivate fields from the beginning,” but the Torghut and Khoshuud normally bought grain when resident in Russia. Yet, he acknowledged that “although they cannot cultivate fields, if they are instructed on how to do it, they will then always be able to make a living.”<sup>25</sup> Even this comparatively accurate formulation did not entirely capture the ethnic and ecological complexity of the region. The Qing’s previously vanquished rivals for control of Xinjiang, the Zunghar Mongols had, for example, actually relied on their East Turkestani subjects’ considerable irrigation skills on which to build their own multi-ethnic steppe empire. The Qing continued this practice.<sup>26</sup>

While steppe Mongols in many places and times certainly could farm, this was not their primary environmental relationship, substantially because of limits induced by climate. Moreover, even Manchu rulers, whose own origins and traditions were rooted in foraging rather than farming, considered Mongol agriculture quite perfunctory. The Qianlong emperor expressed such an arabilist view in his 1754 poem “Wild Fields” (*Huang tian* 荒田):

With no knowledge of weeding and hoeing, each works diligently.  
Merely saying dearth and plenty always depend on Heaven,  
They move out in pursuit of grass and water all summer long,  
Returning just before the autumn harvest;  
They plow indifferently for an indifferent result.

In the poem’s preface, the emperor calls this Mongol farming style “fields that rely on heaven” (*kao tian tian* 靠天田), where “no attention is paid to weeding or hoeing.”<sup>27</sup> The emperor’s is, admittedly, a stereotyped view, but the Torghuts seemed to have conformed to it in significant respects. This is not simply because of malleable human cultural inclinations, but also because the “heaven” under which the Torghuts labored was a natural one for grass and a marginal one for cereals.

Šuhede’s greater practical experience with environmental conditions in Xinjiang conditioned his own imperial arabilist convictions, which were far from the exclusive property of Beijing elites. He went on to articulate a more detailed and prescriptive version of the imperial pastoralist critique of Mongol agriculture in general as it applied to the project to reconstruct the Torghuts as farmers. In considering the agrarian fundamentals of the proposal, Šuhede observed that if the Torghuts were assigned fields and seed with minimal supervision, they would, naturally, still have to care for their livestock. Consequently, they would

become dispersed as they herd, attending to pastures and water. The evil and the lazy would secretly not cultivate. They would eat the seeds, etc., and it would be difficult to make an

<sup>25</sup> *Qingdai Xinjiang Manwen*, QL 36/8/26, 102:157b-62a/#50. Some Khoshuud groups had also moved with the Torghuts.

<sup>26</sup> Fang Yingkai 方英楷, *Xinjiang tunken shi* 新疆屯垦史, two volumes (Urumqi: Xinjiang qingshaonian chubanshe, 1989), 2:657.

<sup>27</sup> *Qing Gaozong yuzhi shi er ji* 清高宗御製詩二集, nineteen volumes, edited by Gugong Bowuyuan 故宫博物院 (Haikou: Hainan chubanshe, 2000), 4:265b.

effort to investigate malpractices like these.... Numbers of supervisory personnel should be equally distributed and, in consultation with their leaders, people exclusively devoted to cultivating fields should be deployed. Cultivation can begin next spring. The rest of the people can pasture their livestock as usual.... Furthermore, if [Han Chinese garrison] troops are required who can familiarize them with cultivation,... [these troops] can be dispatched from Urumqi to nearby [Torghut] locales and from Tarbagatai to its nearby [Torghut] locales.... Once [the Torghuts] have obtained the tools and have cultivated for a year, our people will be withdrawn, and they will be made to cultivate on their own.<sup>28</sup>

It is certainly possible to read Šuhede's identity construction project in purely cultural terms of exclusive human interaction. One group of people, Han Chinese troops who were regularly employed in the production of their own food supplies to ease logistical difficulties in an underdeveloped borderland, are dispatched to educate another group of people, the Torghuts, who are unskilled in any form of cultivation. Still another group of people, Qing local officers, are required to keep the somewhat untrustworthy new farmers under appropriate supervision.

Little of this rather elaborate structure of ethnic administration would be necessary, however, if ecological conditions were more appropriate for sedentary farming rather than herding. The "patchy" steppe terrain traversed here favors a far-flung human-livestock dispersal "in pursuit of grass and water" that must be taken into administrative account. Widespread patches of water and grassland within larger, less hospitable arid ecology are why "pursuit," and ultimately supervision, are required. The patchy presence of water, and its main product, grassland, cannot be sufficiently terraformed to impose an imperial arablist order on herding peoples or steppe terrain. The state, therefore, had to make an initial concession to herding, while aspiring to educate any, probably destitute, herders willing to cultivate. Here, water scarcity limits state arablist ambitions and preserves a Torghut pastoral identity.

Given the existing structural obstacles, both cultural and ecological, to the agrarian conversion of the Torghut, it is not readily apparent why Qing authorities were so anxious to proceed. The need for quick relief was not, in and of itself, an adequate justification for a task of this magnitude and complexity. In a follow-up report he submitted near the end of 1771, Šuhede and his colleagues deliberated a more ambitious arablist agenda to address profound regional security concerns about Qing state capacity to integrate a large population of restive Torghuts into the existing imperial pastoralist regime in Xinjiang. Agrarian conversion was central to cultivating Torghut Mongols for viable transplantation into Xinjiang's larger borderland order.

In the process of deliberating which Torghut groups would be pastured in what areas of the northwestern Xinjiang steppe, Šuhede "received a secret communiqué" from Duke Fulungga (1746–84), Manchu head of the Ministry of Works (*Gongbu* 工部), that included an imperial edict. Šuhede had already made an authorized decision about relocating about 8,000 households of 35,000 Torghut divided under the leaderships of Ubashi, Bambar (?–1774), and Ts'ebekdorji. A fourth leader, Šereng (r. 1771–92), led a small number of no more than 300 households of around 1,000 people. All these newly subjected herders would be spread out from their temporary refugee areas,

<sup>28</sup> *Qingdai Xinjiang Manwen*, QL 36/8/26, 102:157b-62a/#50.

which included accommodations in Xinjiang's administrative capital of Ili for about 9,000 refugees immobilized by illness and lack of livestock. The Torghut groups would be divided over four main locales in Erga Habirga, Gurban Jirgalang, Jair, and Hobok Sari. The throne's edict frankly reveals that the main problem for the Qing was not Torghut relief, but Torghut identity:

Although it is thought that this [dispersal measure] will prevent incidents of unrestricted plunder, and keep [the region's] relay stations and commercial zones quiet, these people are not too reliable. Now they have come to submit themselves in an exhausted state, so they dare do nothing. With the passage of a few years, however, once their livelihoods have been restored and their strength returns, it cannot be guaranteed that they will not seek to go back to their original place. We are now only concerned with the tranquility of the relay stations and commercial zones, but if they are settled far from Our generals and ambans, there will be continuous communication and plotting among them, which will be extremely detrimental.... They must be settled apart from each other, with our forces garrisoned in between them, and absolutely prohibited from mutual communication. Then it will be fine. Furthermore, among those [being resettled], the three [leaders] Ubashi, Ts'ebekdorji, and Šereng [and their subjects] cannot be settled in the same place. Divide them into three groups that reside far from each other.<sup>29</sup>

Spatial division and isolation, however, were not enough to pacify Torghut identity within the Qing imperial pastoral order. In addition to relocation, Torghut herding culture would be steadily attenuated through agricultural inculcation:

If [the Torghuts] are put to herding and hunting exclusively, then their strength will steadily increase, which will not be good once it develops.... Affairs may yet benefit from driving them to an increase in cultivation. Although this will not diminish their prowess all at once, it will divert their strength, somewhat. Their prowess will daily wane,... [which] will render Xinjiang eternally peaceful.<sup>30</sup>

The edict serves as a concise outline of the significance of two of the empire's main forms of environmental relations for the construction of various subject identities as the embodiments of Qing borderland space. The function of arablism in this space is to demilitarize potentially dangerous subject identities, which are constructed from the pastoral and "venery" relations that are actually the most compatible with existing regional ecological conditions. Pastoral and venery relations are exclusively reserved within the larger Qing borderland order across Inner Asia for more reliable subject constructs,

<sup>29</sup> *Qingdai Xinjiang Manwen*, QL 36/10/7, 103:6a-10a/#56. Despite his few subjects, Šereng was singled out because he alone had fought against Qing forces and defected to the Russians. Qing concerns about Šereng, whom the throne pardoned, are expressed in *Manwen Tu-er-hu-te dang'an yibian* 满文土尔扈特档案译编, edited by Zhongguo shehui kexueyuan minzu yanjiusuo 中国社会科学院民族研究所, Minzu shi yanjiushi 民族史研究室, and Zhongguo diyi lishi dang'anguan Manwen bu 中国第一历史档案馆满文部 (Beijing: Minzu chubanshe, 1988), 37–38. Further details on the rationale for separation may be found in *Qingdai Xinjiang Manwen*, QL 36/11/7, 103:283b-92a. The four main Torghut groups under Ubashi, Bambar, Ts'ebekdorji, and Momuntu, were ultimately dispersed in four "marches" (*lu* 路) corresponding to the cardinal directions, within several Ili sub-jurisdictions. Šereng was kept at a distance from these "Old Torghuts" to lead a more isolated "New Torghut" group; Ma and Ma, *Piaoluo yiyu de minzu*, 213.

<sup>30</sup> *Qingdai Xinjiang Manwen*, QL 36/10/7, 103:6a-10a/#56.

whom I have elsewhere called “banner Mongols” and “borderland Manchus.” Imperial pastoralism and imperial foraging are the proper environmental relations in Inner Mongolia and Manchuria, respectively, to ensure the construction of these two main populations of reliable Qing troops.<sup>31</sup> As new arrivals from Russia, informed by different environmental orders, the Torghuts cannot have been properly cultivated; they were not “home grown” Qing soldiers.

Even the most basic considerations of Torghut relocation had to take environmental relations into serious account. Keeping Torghut settlements far enough from each other, from Qing settlements and from potential Russian and Kazakh subversion, was influenced by seasonal climate changes that created complex necessities for the movements of people and their livestock:

When they are relocated next year, Ubashi’s and Bambar’s pastures will remain in Jair, and Ts’ebekdorji’s pastures will be in Hobok Sari. None of these locales is very far from Tarbagatai and Urumqi, so it is easy to keep them under supervision. Moreover, Jair and Hobok Sari fall, winter, and spring [pastures] are distinctly separate locales that are far apart. Only in summer during hot weather when cool pastures are being sought will we have Ts’ebekdorji’s pastures shifted to Sebestai Mountain region. Ubashi’s pastures will be shifted to the Orhocr Mountain region. As these [locales] appear to be somewhat close together, supervisory officials should be stationed in well-situated intervening terrain and outposts set up so as to preclude mutual contact and collusion.<sup>32</sup>

The initial deliberations on Torghut relocation and transformation were pervaded by the Xinjiang steppe’s arid climate and its effects on people, animals, and plants. These effects would continue to affect the implementation of these deliberations. One of the working assumptions of relocation planning that further complicated these already complex maneuvers is that all settlements had to be sustainably arable. In at least one case, Ts’ebekdorji’s locale of Hobok Sari, this was not ecologically feasible in practice.<sup>33</sup>

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<sup>31</sup>Bello, *Across Forest, Steppe and Mountain*, 3, 48–49. “Venerly” here refers to relations between Qing mounted hunter-soldiers and game, whose pursuit was critical for the formation of an Inner Asian elite military, or banner, identity in theory and practice. Properly constructed Qing Mongol steppe subjects “who had enjoyed unstinted imperial favor for many generations” were admonished in a late 1771 edict to continue “to attend to the regular necessities of guarding the various outposts and relay stations, standing sentry to observe from afar, and reconnoiter.” Senior Khalkha Mongol officers were specifically ordered to “raise horses and livestock as the traditional livelihood of your subjects, carrying out the practice of the male [military] virtues and maintaining the army colors and weapons in perfect order, so that there are absolutely no deficiencies;” *Qingdai Xinjiang Manwen*, QL 36/10/19, 103:127b-31a/#63. This order was specifically directed at various Mongol subjects to the north and west of Inner Mongolia whose military obligations had eased considerably in the wake of the final Qing pacification of the Zunghars and of Xinjiang by 1759.

<sup>32</sup>*Qingdai Xinjiang Manwen*, QL 36/10/7, 103:6a-10a/#56.

<sup>33</sup>For an administrative study of Ts’ebekdorji’s ultimate resettlement locale at Hobok Sari, see Tu-na 吐娜, “Shilun beilu Tu-er-hu-te meng qi zhidu” 试论北路土尔扈特盟旗制度, *Xizang yanjiu* 3 (2009), 22–28. For a general survey of Torghut socio-economic conditions during and after resettlement into the nineteenth century, see, Tu-na, “Dong huan hou de Tu-er-hu-te shehui,” 55–57. For an account of their initial resettlement, see Ma and Ma, *Piaoluo yiyu de minzu*, 206–14. For a study of resettlement of the main Torghut banner under Ubashi as “the southern march” (*nanlu* 南路), see Guo Meilan, “Tu-er-hu-te Han Wu-ba-xi buzhong,” 56–66.

## CULTIVATING TORGHUTS IN PRACTICE

Although there was some deliberation over whether or not Ts'ebekdorji's people should actually be moved to Hobok Sari, his initial locale's deficiencies of arable land and pasture decided the issue in favor of relocation. Frigid weather imposed a delay until spring of 1772 "at the proper time for cultivation." A relatively small party of escorted Torghut leaders, returning from an imperial audience at Chengde far to the east in late December of 1771 less than two weeks before this deliberation, had already had to follow a slow route through *gobi* and heavy snowfall. They had to be constantly on the alert for sparse grazing pastures and switch pack animals at various stages, as they transited through six Xinjiang outposts between Barkol and the Tuin River (now in Mongolia), a distance of about 400 miles (644 km). Ts'ebekdorji's people, whose "strength was depleted" and also hampered by women and children, were deemed too weak for such conditions, which had reduced the able-bodied to "slow progress."<sup>34</sup>

It was only around the first of May, 1772, after a delay of about a month, that cultivation in Hobok Sari commenced in earnest under the supervision of a Qing officer, Sarašan (n.d.). A Han Chinese officer, Hai Tianren (n.d.), supervised the excavation of irrigation canals while grass and trees were being burned off for fields. Seeds and troops who were assigned to give the Torghuts their first instructions on how to plant them had arrived late in the area from Urumqi on March twenty-first. Their unexplained delay had nearly exhausted the sowing season, so the Torghuts were urged to accelerate their planting to compensate. Qing officials were, moreover, hoping that the Hobok Sari harvest would be successful enough to enable the termination of all state grain subsidies, leaving Ts'ebekdorji's Torghuts wholly dependent on their own cultivation.<sup>35</sup>

Herding, nevertheless, retained the priority claim on the soil. Cultivation areas were deliberately selected from land unsuitable for pasturing in the Hobok Sari locale of Jekdelik and at a significant distance from working pastures. By mid-September, Jekdelik's cultivators-in-training were confronted with a crash course in agricultural disaster management when a swarm of locusts landed in their ripening grain fields. The Torghuts were led by Sarašan and their other instructors to conduct a "rapid eradication" operation over several days, sustaining a loss of 10 to 20 percent of the crop.<sup>36</sup> There was also a "great frost" about two weeks later. By mid-November, Sarašan could relay a final harvest report to the effect that

Ts'ebekdorji's subjects have cultivated 5,000 *mu* of fields, of which 1,500 are barley and from which was harvested 1,588.2 *shi* 石 of grain. 10–20 percent of the 2,500 *mu* of wheat fields they have now cultivated were lost to locusts. Aside from this loss, there remains, after reaping, a total of 1,881.7 *shi* of grain. A great frost on the twenty-seventh day of the eighth month harmed the millet in the 1,000 *mu* of short millet fields cultivated. It has now all been reaped and a total of 330.6 *shi* harvested.... The three items total 3,505 *shi* of grain, a 70 percent harvest.<sup>37</sup>

<sup>34</sup> *Qingdai Xinjiang Manwen*, QL 36/11/28, 103:451a-53b/#71 and QL 36/11/18, 103:371b-73b/#69.

<sup>35</sup> *Qingdai Xinjiang Manwen*, QL 37/3/29, 106:108a-10a/#100.

<sup>36</sup> *Qingdai Xinjiang Manwen*, QL 37/8/18, 108:121a-22a/#121.

<sup>37</sup> *Qingdai Xinjiang Manwen*, QL 37/10/18, 109:214b-17b/#125.

Despite the Torghuts having done well under less than ideal conditions as new farmers, Sarašan estimated that the grain harvested would only suffice for six months' consumption. When Qing officers advised Ts'ebekdorji to expand cultivation to ensure a harvest bountiful enough to last a full year, he explained that

of the more than 5,200 people in our pastoral locale, once lamas, women, the old, and the young are subtracted, there are only 1,300–1,400-odd able-bodied men available. Excluding those who pasture our herds and attend us, there are only 800 men available. So, we do not have enough people to expand cultivation further for a requisite increase next year in cultivated fields by 3,000 *mu* to afford a total acreage of 8,000 *mu*.<sup>38</sup>

According to Hai Tianren, however, cultivation was not only limited by a shortage of proper human resources, but of water resources as well. He explained that “the Jekdelik region relies only on the Hobok River for water for cultivation. There is only enough water to plant 7,000–8,000 *mu* of fields. There is not enough water for more cultivation.” Nearby, the lay of the land was typically and unproductively patchy: “Elsewhere there is either spring water with no fields or fields with no water.”<sup>39</sup>

Shortage of human and water resources was a typical arid borderland obstacle to the expansion of imperial arablism, which tended to take China proper's much more substantial reserves of both crucial resources for granted. There were no great rivers like the Yangzi, or even the less dependable Yellow. Nothing like them could be tapped through an extensive irrigation infrastructure built and maintained by generations of numerous Han cultivators raised on the expanded and intensive produce made possible by the arablism core's comparatively lavish endowments, which included a precipitation rate higher than its evapotranspiration rate. As in many areas of northwestern China proper, Xinjiang water was a product of indeterminate snowmelt from the surrounding mountains rarely supplemented by lowland rainfall, which was in any case inadequate on its own because it evaporated and transpired at much higher rates than it fell.<sup>40</sup> The most immediate solution was, in fact, pastoral. Within a few weeks permission had to be granted for the Torghuts to fall back on their more traditional means of subsistence. Ts'ebekdorji was allowed an advance on his stipend as a newly appointed Qing officer to purchase 6,000 “sheep that have milk” (*sun bisire honin*) from Tarbagatai. These sheep had to be strong enough to be driven through harsh winter weather from Darganga, avoiding excessively snow covered routes along the way.<sup>41</sup>

Agriculturally undeveloped borderland areas could not easily deal with these structural problems, some of which seriously afflicted cultivation in the northwesterly parts of

<sup>38</sup> *Qingdai Xinjiang Manwen*, QL 37/10/18, 109:214b-17b/#125.

<sup>39</sup> *Qingdai Xinjiang Manwen*, QL 37/10/18, 109:214b-17b/#125.

<sup>40</sup> Yalikun Tashi, Philippe C. Chamard, Marie-Francoise Courel, Tashpolat Tiyp, Yiliminuer Tuerxun, and Sam Drake, “The Recent Evolution of the Oasis Environment in the Taklimakan Desert, China,” in *Water and Sustainability in Arid Regions: Bridging the Gap Between Physical and Social Sciences*, edited by Graciela Schaefer-Madanes and Marie-Françoise Courel (Dordrecht: Springer, 2010), 52; Li Baofu, Chen Yaning, Chen Zhongsheng, Li Weihong, Zhang Baohuan, “Variations of Temperature and Precipitation of Snowmelt Period and its Effect on Runoff in the Mountainous Areas of Northwest China,” *Journal of Geographical Sciences* 23.1 (Feb. 2013), 17.

<sup>41</sup> *Qingdai Xinjiang Manwen*, QL 37/11/1, 109:358a-61b/#129; *Qingdai Xinjiang Manwen*, QL 37/12/24, 110:335b-37b/#132.

China proper itself. Sarašan even concluded that the proposed “solution” to Ts’ebekdorji’s problem, expansion of cultivators and farmland, would reduce the harvest to a mere three months of subsistence once the additional seed was extracted.<sup>42</sup>

The Hobok Sari Torghuts’ immediate regional superior, Tarbagatai Superintendent (*Banshi dachen* 辦事大臣; *baita ichihara amban* in Manchu) Eletu (?–1785) nevertheless insisted on construing what were in many respects genuine ecological limits on steppe cultivation described in Sarašan’s report in totally human terms. Eletu simply ordered Sarašan to have Ts’ebekdorji come up with the “extra people” needed to expand cultivation in a different Hobok Sari locale. He declared that there had been “very many cultivated fields in excess of the capacity of Jekdelik” during the prior residence of other pastoral Mongols in the area. Water was also not a problem in Eletu’s view, which saw the Hobok River as the region’s adequate water source. He assured Sarašan that, “if its irrigation is skillfully managed,” the river would be able to fulfill any expanded agricultural requirements. Eletu also felt it “possible” to locate “other springs and brooks” to farm separate areas beyond the river’s reach. He concluded that “it must be impressed upon Ts’ebekdorji to dispatch more people for cultivation.”<sup>43</sup>

Eletu’s dismissive reduction of all agricultural problems to human ones is an extreme, but far from unique, example of the degree of willful social construction the imperial arablist mentality could impose on grassland facts. From this perspective, adequate resource supply becomes a matter of human ingenuity rather than of ecological constraints. Water nevertheless remains “one of the most profound” grassland limiting factors, the critical resource in shortest supply that, consequently, restrains growth like that casually urged by Eletu.<sup>44</sup>

By April of 1773, the Hobok Sari Torghuts were ready to try steppe farming again. A report issued that month affirmed that “although the locale has extensive arable acreage, there is little water.” The Hobok River was the only source for irrigation to deal with this problem, and there were “no other springs” that could be used to extend the system. Fortunately, however, “a great snow in the mountains” would allow the requisite 10,000 *mu* to be cultivated. In other words, acreage expansion was only possible weather permitting. Human interventions like irrigation were insufficient by themselves. Frigid weather and frozen ground had, moreover, impeded the initial excavation of canals in March.<sup>45</sup>

By June, Šuhede, now the Military Governor of Ili, was able to evaluate the agricultural efforts of all the Torghut groups during the previous year of 1772. With one small-scale exception, he found that too little acreage had been farmed in the various Torghut pasture areas, and it is apparent that climate was the major inhibiting factor. Expanded cultivation in all Torghut settlements of a total of 94,000 *mu* so far in 1773 had been impeded by “somewhat frigid conditions and lingering snow in some pastures and water shortages from temporary suspension of mountain down flows in others.”

<sup>42</sup>Qingdai Xinjiang Manwen, QL 37/10/18, 109:214b-17b/#125.

<sup>43</sup>Qingdai Xinjiang Manwen, QL 37/10/18, 109:214b-17b/#125.

<sup>44</sup>Le Kang, Xingguo Han, Zhibin Zhang, and Osbert Jianxin Sun, “Grassland Ecosystems in China: Review of Current Knowledge and Research Advancement,” *Philosophical Transactions: Biological Sciences* 362.1482 (Jun. 29, 2007), 1,000.

<sup>45</sup>Qingdai Xinjiang Manwen, QL 38/3/12, 112:39b-41b/#151.

Nevertheless, the early wheat and barley, as well as the later wheat and millet, had all been sown and were developing properly.<sup>46</sup>

By mid-August, however, a human complication had arisen in Ts'ebekdorji's pastures and he was being told to relocate once again in response. Qing officials feared Torghut desertions to nearby Urianghad Mongol pastoralists and, possibly even their return to Russian territory. These concerns were ultimately laid to rest, partly because Ts'ebekdorji expressed extreme reluctance to further pressure his overstressed people, who still lacked sufficient livestock, to leave an area he described as endowed with fine grasslands, plentiful water, rich soil, and abundant wildlife.<sup>47</sup> Security concerns arising from human interactions had become secondary to more immediate and fundamental human environmental relations with the surrounding ecology, which afforded a wide potential for the Torghuts to pursue agricultural, pastoral, and foraging livelihoods.

By the end of September, Hobok Sari's harvest had improved to afford food for the following seven months, but was still insufficient to convert the Torghuts to fulltime farmers.<sup>48</sup> Moreover, within two months it became apparent that almost half of the cultivated area of 10,000 *mu* was not sustainable. "Infertile areas with dense grass" that had emerged within existing fields had to be abandoned, as was much of an expanse of 4,500 *mu* that had proven "too infertile to be cultivated for three years in a row." These losses were made good by shifting to others areas, amounting to about 5,000 *mu* in total, of "good land" that was, critically, accessible to irrigation. It was unclear, however, whether or not similar soil limitations would ultimately emerge.<sup>49</sup>

By late April, 1774, the Hobok Sari Torghut were working "over 10,000 *mu*" of land that had been laboriously deforested and excavated. Over a year later these efforts appear to have succeeded. Inner Asian banner troops supervising pastures and the Han Chinese Green Standard troops supervising agriculture, along with additional troops stationed at various security outposts to keep order, were withdrawn from Hobok Sari after four years of residence. It was formally declared that "the Torghut now know how to" cultivate. Their leaders were, however, reminded that

cultivation is of extreme importance and, although your subjects breed a bit of livestock, they ultimately rely on grain.... You must strongly encourage your people to cultivate in accordance with the Green Standard troops' instruction, although they will now be withdrawn. Those who are lazy and do not cultivate good fields will be seriously punished to set a general example. Cultivated fields should not be damaged through carelessness. After each annual harvest, calculate what is sufficient for the consumption of your subjects, distribute it evenly, and do not allow casual consumption to the point of dearth.... As to your livestock, you must clearly inform your subjects to do their utmost to breed as many as possible and not

<sup>46</sup> *Qingdai Xinjiang Manwen*, QL 38/5/2, 113:168b-70b/#161.

<sup>47</sup> *Qingdai Xinjiang Manwen*, QL 38/6/29, 114: 184b-91a/#170 and QL 38/8/15, 115:116a-17a/#175.

<sup>48</sup> *Qingdai Xinjiang Manwen*, QL 38/8/15, 115:117b-120b/#176.

<sup>49</sup> *Qingdai Xinjiang Manwen*, QL 38/10/15, 116:270-72/#175. Grasslands have certainly been critical for the development of agriculture. Most staple grains, for example, were originally bred selectively from wild grasses. However, grassland fertility is quite fragile. Cultivation of grasslands can easily deplete their rich carbon deposits by 50% in the first year, with restoration possible only after nearly a century of lying fallow; Martha Downs and Osvaldo E. Sala, "Grasslands," in *The Princeton Guide to Ecology*, edited by Simon A. Levin (Princeton: Princeton University Press, 2009), 615.



casually slaughter them. Should there be any such incidents, you will mete out severe punishment.<sup>50</sup>

It would appear from this declaration that the Torghuts had been successfully converted from pastoralists to agriculturalists along the lines similar to those drawn by Bi Yuan in 1782. People, cultivars, livestock, climate, and water had been properly orchestrated to fully and sustainably exploit the agro-pastoral potential of northwestern arid borderlands in fundamentally imperial arablist terms. Seven years after Bi Yuan's essay had been written and fifteen after their declaration of agrarian independence, however, the Hobok Sari Torghuts were released from any state requirements to farm. During the interim, they had begun to revert to their pastoral type.

#### CONCLUSION: ARID PROSPECTS

There were already indications of some persistent difficulties during the first year the Torghuts were farming on their own in March of 1776. Regular preparations for spring sowing had been thrown off by an earlier than expected thaw. The resulting hasty organizational response would "inevitably" ensure a deficient harvest. Officials thought that the Torghuts were still "not used to making provisions beforehand" independently. There was also an ongoing problem with insufficient livestock for plowing, with some suggestion that the Torghuts were having difficulty balancing agricultural and pastoral requirements.<sup>51</sup>

By 1789 some Torghut were literally confessing their taste for pastoralism. The Ili Military Governor, Booning (1734–1808), received such a statement from the Torghut leader of the eastern march league and Bambar's successor, Prince Ts'eren-delek (r. 1774–92). The Prince, who was initially "afraid... to reveal the truth," finally admitted that his people "do not like to consume grain, although they were pressed to cultivate fields," and that they had been eating "the meaty ones" among their livestock while milking others to add to their regular tea. These practices had effectively undermined agriculture in violation of Iletu's standing regulations, so they submitted false harvest figures to avoid punishment. They had not even followed basic storage procedures, so that more than half the harvested grain in reserve had been ruined by moisture and worms.<sup>52</sup>

Local Qing officials who had conducted an investigation recommended that Ts'eren-delek's people could "rely on livestock breeding to render their livelihoods relatively easy." In fact, if the state continued to impose cultivation on them, they "would not be able to pasture their livestock" and would continue "to submit false reports" on their agricultural output. Only destitute Torghuts, namely those without personal property livestock, farmed and to little effect. Therefore, "forcing them to cultivate [interlinear imperial vermilion comment: "How?"] would be of no real benefit to them. So, henceforth, they can cultivate, herd, and trade as they wish." The report also cited a previous declaration, affirmed by imperial decree, regarding "the herders" of the Torghut and the

<sup>50</sup> *Qingdai Xinjiang Manwen*, QL 40/5/16, 124: 114a-20a/#231.

<sup>51</sup> *Qingdai Xinjiang Manwen*, QL 41/1/29, 128: 3b-5a/#255.

<sup>52</sup> *Qingdai Xinjiang Manwen*, QL 54/9/24, 186: 410b-12b/#423.

Khoshuud leaders who “have long been subjected” and now had stable livelihoods supported by “numerous” livestock. These groups were allowed “to conduct their way of life as they wish” and there was no longer “any need to have them cultivate fields.” This decree was also specifically applied to the Hobok Sari Torghuts, among others, under the leadership of Ts’ebekdorji’s nephew, Ts’erin Ubasi (r. 1784–1814), who had succeeded his father, Ts’ebekdorji’s brother Kirib (r. 1779–84), in 1784. The Hobok Sari Torghuts were freed from cultivation obligations despite having reported grain was doing well just a year before in 1788.<sup>53</sup>

In effect, the now widely dispersed Torghut refugee groups had become integrated into Xinjiang’s imperial pastoralist order, which was more in conformity with regional nature and culture. Doubts about their integration had been expressed as late as 1778, when Iletu successfully stopped merchant contact with Torghut and Khoshuud pastures. He argued that both groups, being “newly subjected... are not, after all, comparable to our Mongols beyond the passes. All sorts of incidents arise among them and handling them is complicated.”<sup>54</sup>

In the intervening decade, however, the Torghuts had indeed been changed. They were now seen by Qing officials as “our Mongols,” but not by virtue of having been transformed from herders to farmers by imperial fiat. The Qing state vainly devoted extensive agro-pastoral resources to effect a rapid reconstruction of Torghut identity to deal with concerns authorities believed best addressed through the imposition of an imperial arablist order that restricted movement and stabilized food supply. While this order sustainably conformed to such expectations when operating in China proper, it teetered on the verge of collapse in arid borderlands like the Xinjiang steppe.

Culture certainly constituted part of imperial arablist’s precarious borderland equilibrium. Ts’erendelek, and possibly Ts’erin Ubasi, lied to Qing officials. Some Torghut remained militantly carnivorous. Other Torghut rustled or just deserted to Qing rivals. These acts of human agency, however, occurred in dynamic response to environmental conditions formed from ecologies as well as cultures. People’s taste for meat relied on livestock’s taste for grass flourishing under cooler, drier conditions than cereals could without any need to divert human effort from raising animals to raising plants. Aridity also pervaded the constant need to keep searching for just the right patch of arable ground that could be adequately irrigated to produce a sufficient harvest for more than a few years without wearing out the soil while trying to re-educate and supervise thousands of refugees whose formative experiences were rooted in animals, not crops.

As Bi Yuan suggested, establishing and maintaining order along the empire’s northern and northwestern ecotones was less a matter of selection among choices than of adaptation to necessities arising from an abiding abundance of grass and a chronic scarcity of water. Under these conditions, cultivating Torghut Mongols faced starkly arid prospects in eighteenth century Xinjiang.

<sup>53</sup> *Qingdai Xinjiang Manwen*, QL 54/9/24, 186: 410b-12b/#423 and QL 53/4/21, 180: 350b-53a/#415.

<sup>54</sup> *Qingdai Xinjiang Manwen*, QL 43/2/1, 134: 233b-35a/#415/#276.