Introduction

I think back afar to Han and Tang, Song and Ming;
Guarding the Great Wall being their sole scheme for tranquility.
Fertile fields in tens and hundreds of thousands of acres thus forsaken in the wilderness;
How could there be food enough to cover their myriad populace?

The Qianlong emperor, Two Verses on Antiquity

When he posed this question poetically in the thirtieth year of his reign, the Qianlong emperor was presiding over an empire at its zenith that spanned nearly a quarter of Eurasia. The emperor’s question was also rhetorical, given the expansion of his Qing dynasty (1644–1912) that set the teeming “populace” of China proper loose among the “fertile fields” of “the wilderness” of Inner Asia north and west of the Great Wall. In a preface to his 1765 poem, the Qianlong emperor explained that poor Han commoners could now till for a livelihood north of the passes, which had lain outside the mandate of the Qing’s four main ethnic Chinese dynastic predecessors. Liberation from the old Chinese restraints concretized by the Great Wall was to be the final Manchu answer to the perennial Han questions of population growth and northern frontier security. The emperor held this achievement to be so distinctive that he claimed his indirectly self-laudatory poem was “not bragging, but simply an expression of awe.”

The expanse of Qing dominions was certainly awesome, to Manchu emperors and even to their former Han subjects. Writing 162 years later in 1927 in the wake of ethnic Chinese nationalism that had helped topple the dynasty, the compilers of the Draft History of the Qing (Qingshigao)
paid the Qing what was probably the greatest tribute of Han historiography possible at the time. They praised the geographical manifestation of the dynasty’s “imperial radiance,” which united Sakhalin Island to the Pamirs and the Greater Hinggan Mountains to Hainan Island, as unprecedented “since the Han and Tang!” Adherence to old Manchu boundaries inscribed in the Draft History and other dynastic texts was to be a standard Chinese nation-state response to both post-Qing imperialist and domestic ethnic minority territorial challenges.

Beneath the awesome radiance generated by the manifest hyperbole of both emperor and compilers lies more solid ground. The Qing empire stretched through more than 60 degrees of latitude and about 50 degrees of longitude to encompass a vast diversity. The resulting Qing empire faced distinctive challenges arising from the Manchu unification of this expanse’s two main divisions, which can be abbreviated as Inner Asia and China proper. These challenges were not posed solely by human beings, but by this wide-ranging environmental variation of which people were a part. As a result, state control under a fully monocultural or anthropocentric imperial system was impractical. Instead, the state had to recognize that the human “culture” of ethnic identity formation and the “nature” of nonhuman ecology mutually constituted environmental relations of “culture-nature” that inform the historical space of Qing borderlands. This recognition included environmental relationships between humans and animals. Qing borderland space was ostensibly embodied in people, but ultimately dependent on sustaining animal-people interactions that conditioned any human borderland presence. These interactions were primarily existential rather than metaphorical and were not exclusively human social constructs.

I offer three representative case studies of Qing borderland formation to demonstrate the political and historical significance of environmental relations, centered on ties between people and animals: Manchus and game in northern Manchuria, Mongols and livestock in south-central Inner Mongolia, and indigenous peoples and mosquito-borne blood parasites in southwestern Yunnan. Each of these relationships is expressed not simply by human impact on the surrounding ecology, but also by that ecology’s impact on the formation of distinct borderland identities. Manchu military skill depends on game. Mongol steppe survival requires livestock. Yunnan indigenous agency is shielded by malaria.

Diverse borderland conditions generally precluded the uniform imposition of China proper’s key environmental relationship, namely, ethnic or “Han” Chinese intensive cultivation of cereal plants. Instead, the Qing
employed a different strategy, adapted for local conditions, to control each of these borderland zones, which I have metaphorically abbreviated as forest, steppe, and mountain. None of these areas were exclusively human constructs as often implied by their administrative designations as the banner system of Manchuria, the "jasag" system of Mongolia, the system of southwestern native chieftainships ("tusi"), and the network of provinces, prefectures, and districts (the "junxian" system) of China proper. From the perspective of environmental history, a set of wider relationships, which certainly include aspects of all these systems but are not rigidly circumscribed by them, becomes visible. No particular cultural element was definitive, although practices such as ritual, law, and education certainly helped unify and form Qing subjects. These were conducted, however, within a wider dynamic environmental context that required adaptation in order to maintain the hierarchical ranks that defined the empire. Specifically, the Qing state adapted itself to boreal Manchuria’s environment through “imperial foraging” to construct a “borderland Manchu” identity. In steppe Inner Mongolia the Qing adapted through “imperial pastoralism” to construct a “banner Mongol” identity. In forested highland (or “Zomian”) Yunnan it adapted through “imperial indigenism” to construct a “civilized tribal” identity. Each identity would constitute the human resources necessary to secure borderland spaces and natural resources for the dynasty.

These identity constructs, however, were not entirely determined by dynastic fiat or indigenous resistance or some compromise between the two, because borderland peoples lived off their climates, flora, and fauna. Any ethnic identity formation was, consequently, not just cultural, but also ecological. Some current work in human psychology indicates that the formation of ethnicity is a semiconscious choice by individuals to reductively order the complex diversity of “the social world” into groups to make it more easily intelligible and less uncertain. Such an adaptive reduction is not wholly social, however, because it remains semiconsciously dependent on other nonhuman organic connections. I will abbreviate these connections as “ecological” and consider them mainly as embodied in animals. The internalizations of Qing ethnic identity still remain “products of an imperial culture,” which imposes and refines requisite formative criteria, but also remain conditional because they are always born within a larger ecological context.

Ecologies have played a role in the formation of ethnic identities beyond that of mere anthropogenic constructs of “nature.” Studies of peoples such as the Gimi of Papua New Guinea, who see themselves as...
“dialectically connected to” animals, reflect constructions dependent, not imposed, on local ecologies. Although there is a cultural component to this process, it is not culturally determined. If it were, there would be no existential need to protect the biodiversity that shelters indigenous identity. Cultural, rather than environmental, determinism seems the more pervasive analytical obstacle, exaggerated fears of a “downgrade” in “individual agency” notwithstanding. As the Gimi apparently know from experience, culture is not autonomous, but informed by ecological interactions. Similar sorts of culture-nature interconnections also formed Qing borderland space.

ENVIRONMENTAL RELATIONS AND EMPIRE

These environmental interconnections, perceived or not, were critical for the production of difference across borderlands. The Qianlong emperor’s grandfather, the Kangxi emperor (r. 1662–1722), provides an example in his 1707 sighs of resignation over the limits of Qing power in Guizhou:

The native chieftains are of myriad types and their customs vary. From antiquity the royal regulations were unable to bind them. It is completely impossible to control them as we do the subjects of the interior and this has been so from the beginning. We must make the best of it and attempt only a general type of control. An excessively stringent application of the law will be the source of endless trouble . . . Preventing incidents from occurring must be our main policy, for an excess of incidents will be too costly for our state to bear.

This was the emperor’s response to his provincial Governor Chen Shen’s recitation of the native chieftainship system’s official formula — the state would “use Han laws to reign in the native chieftains, use native chieftains to reign in [their own] Miao [subjects],” then “use Civilized Miao to reign in the Wild Miao.” People remain at the middle of both these ideal and practical views of chieftainships, so state administrative adaptation appears as accordingly “anthropocentric.”

As the following chapters will show, however, such appearances, which strongly inform state discourses throughout dynastic borderlands, conceal a wider range of connections that structure “people” problems of various types. The core relationship here is that which “humans share with their environments” as a result of “evolved methods of adaptation.” Qing administrators can appear obtuse in this regard when they decry environmental problems, often centered on resource access, as having entirely human causes, such as corruption, negligence, etc. Another expression of the Kangxi emperor’s exasperation, a
1716 vermilion rescript on Ordos droughts and snowstorms, is again exemplary. His anger is entirely undiluted by any consideration that the herds of “greedy” Ordos lamas may have also been too devastated by the steppe’s characteristically extreme weather for voluntary donations of any relief livestock to their distressed followers.15 Such attitudes may have arisen from a kind of expediency that tacitly acknowledged the limitations of state control, which was most effective over people rather than plants, animals, or climate.16

Such an anthropocentric mind-set can be defined by the extent to which authorities discount plausible nonhuman causal factors. Such factors were difficult to escape in practice, if often evaded in rhetoric. So Guizhou’s mountainous terrain loomed behind even Governor Chen’s neat prescription as he acknowledged that his strategy was framed by the fact that these indigenous “myriad types” differed from peak to peak.17

The bewildering connection of human diversity to ecological diversity conditioned and restricted, but certainly did not preclude, the Qing borderland construction project in the southwest and elsewhere. In the southwestern ecological context, mountains were certainly one structuring factor. The overlapping reproductive cycles between insects and parasites that spread disease to humans, the theme of Chapter 4, were another, and one that was also influenced by variation in elevation and differential human resistance. These cycles produced a symbiotic “animal,” the malarial mosquito.18 Unaware of these complex cycles, which are not fully understood even today, the dynasty adapted its regional order to rely more exclusively on a human subject that could endure the cycles’ malarial results. This so-called civilized tribal identity was, moreover, predicated on a precariously ambitious conversion from indigenous swiddening to Han agrarian practices. There was no comparable attempt to covert “borderland Manchus” and “banner Mongols” into China proper farmers, but both identities were tied to relations with, much more accessible, animals that the state also worked to manipulate.

All three Qing borderland identities can thus be seen either as artificial, even illusory, state impositions on local diversities or as viably malleable adaptations to those same diversities. None, however, were constructed by humans alone. Over the past fifty years work such as that of cultural ecologist Julian Steward and sociologist-anthropologist Bruno Latour have effectively challenged analytical frameworks based on “the fruitless assumption that culture comes from culture” or on “the tautology of social ties made out of social ties.”19 Recently Latour has proposed “Actor-Network Theory” (ANT) in recognition that actions “rarely consist of [solely]
human-to-human connections . . . or of object-to-object connections, but will probably zigzag from one to the other.” Others have gone farther to assert that humans and nonhumans share agency in the formation of nature that encompasses both. Common to such revisions is the recognition that human agency must be qualified by its larger ecological context so as to include “the earth . . . as an agent and presence in history.”

A number of influential historical studies of imperial relations have subjected human action to such environmental conditioning. William Cronon’s Changes in the Land: Indians, Colonists and the Ecology of New England shows how distinct sets of environmental relations were formative for the respective ethnic identities and cultures of native Americans and British settlers, with profound effects on North American history. Alfred W. Crosby’s Ecological Imperialism: The Biological Expansion of Europe, 900–1900 portrays nonhuman entities as essential to a formation of empire. More recently, some of these ideas have been developed into critiques of anthropocentric tendencies in modernity. Timothy Mitchell, for example, connects “dams, blood-borne parasites, synthetic chemicals, mechanized war and man-made famine” in often inadvertent and unpredictable interactions that underlie a “techno-politics” based on “the ‘social construction’ of things that are clearly more than social.”

A consideration of China’s environmental history using newer approaches also qualifies some established western concepts. It is difficult, for example, to approach structures of Qing domination from Crosby’s generally compelling “ecological imperialist” perspective. Much longer periods of closer interspecies contact minimized the biological expansion of neighboring Han Chinese “portmanteau biota” to effect change comparable to the rapid conversion of the Americas and Oceania into “Neo-Europes” central to Crosby’s account. On the steppe there was nothing like Crosby’s disparity of domesticated animals favoring European colonists over American indigenous peoples. There were not even real bison equivalents, although the voracious grasshopper Chorthippus may have leapt at the opportunity to fill the bison’s grass-eating ecological niche.

Environmental imperial histories show how environmental relations materially affect the human hierarchy based on ethnic difference that defines imperial relations to produce ungovernable changes over time. An empire’s attempt to subject environmental diversity to greater uniformity required an anthropocentric control prone to undermining its own stability through alienation from this same diversity. This formulation is an environmental corrective to postcolonial conceptualizations of imperial relations that often “start with the people as creators of
themselves and transformers of their environment.” Critical studies of western colonialism have often been predicated on such anthropocentric, if politically understandable, premises. Similar assumptions inform studies of Chinese imperial history where the Han majority appear as mainly self-creators and environmental transformers.

Pertinent debates over Sinification, for example, have deliberated the conventionally accepted power of Han culture to assimilate non-Han cultures without being significantly altered by them. The “New Qing History” has played a leading role in this debate through studies emphasizing the persistent influence of Qing Inner Asian, especially Manchu, culture on imperial “Chinese” practice. The New Qing History certainly adopts a more imperially appropriate perspective in terms of ethnic diversity and geographical scale. Yet both sides in this resolutely cultural debate ignore the influence of ecological factors on issues of Han ethnic superiority.

Serious consideration of the environment will not end divisions over contending definitions for key analytical terms such as race, ethnicity, acculturation, and assimilation. An environmental perspective, however, does expose the significance of the anthropocentric assumptions that underlie them. From this alternative vista, multiple dimensions appear beyond the binary of “Manchu-Han” relations, for example. Northeastern peoples who did not accompany the Manchu diaspora to China proper maintained direct connections to northeastern flora and fauna. Differences here did not simply arise from contrasting and constructed cultural interaction. They also arose from physical degrees of alienation or interaction with regional ecologies that distinguished borderland Manchus from all inhabitants, Manchu and Han, of China proper.

Variants of Han identity were likewise formed through regionalized ecological contacts. Consider, for example, the effects of “patchiness” in William T. Rowe’s account of dam conflicts in Wuchang below the Han and Yangzi confluence in Hubei. Patches are localized areas within wider landscapes that exhibit a different set of ecological dynamics from their surroundings to promote greater localized diversity.

Wuchang had patches of lakes and marshes that contained annual upsurges in water upstream, complicating standard forms of water control for agriculture. Wuchang residents had adapted in two ways to these conditions over time. One was the usual strategy of wet rice cultivation that was not very successful, and the other was a highly successful fishing
economy. The region’s preexisting patchiness allowed the emergence of both fishing and farming cultures that “practiced very different lifestyles and lived in very different worlds comparable to those sometimes encountered at ecological frontiers (say between steppe and cultivation, or nomadic gathering and permanent settlement).” Violent conflict, as both groups tried to concentrate water resources for their exclusive benefits, was endemic, with the state, exhibiting a “strong Confucian agrarian bias,” tending to favor rice cultivation.27

Hills spattered throughout the lower Yangzi provided another patchy zone for the formation of “shack people” (pengmin) identity. As Anne Osborne relates, these land-hungry migrants brought “new techniques and crops, which would exploit” agriculturally marginal slopes “through a distinctive adaptation to the highland environment.” Unfortunately, this adaptation relied on ephemeral forms of shifting cultivation, causing deforestation and erosion that “threatened the stability of the [existing] agricultural ecosystem” through the promotion of drought and flood. This was Han-style swiddening, far less sophisticated and sustainable than the “slash and burn” practices of hill peoples in the southwest. Han-style swiddening was a product of new relations between cultivators and New World crops that created a new identity, shack people. The state found it difficult to integrate this new identity, because shack people’s practice of their constituent environmental relations led to “a downward spiral of reclamation, abandonment and new reclamation which threatened agricultural and social stability” in both the marginal hills and the lowland cores.28 Restated in terms of environmental relations, the ecological effects of the formation of shack people identity threatened to erode the agrarian basis of the established Han identity.

These examples from China proper’s core regions of the middle and lower Yangzi suggestively exhibit a “significant degree of microvariation” in “environmental exploitation” recognizable in Mark Elvin’s sketch of a “Chinese style” of “premodern economic growth.”29 All show state and society exerting agency to transform their surroundings, but only within certain ecological limits, set in part by conditions such as patchiness. Once exceeded, these limits exert a counterpressure, in the form of water shortages, erosion, and the like, that may not only vitiate new adaptations, but undermine older ones. Indeed, it is often human attempts to effect excessive concentrations of key resources, while overlooking their wider interdependencies, that inadvertently trigger ecological counterpressures. There is, moreover, evidence to suggest that such counterpressures are inevitable forms of “creative destruction,” or “dynamics of
disharmony,” intrinsic to all life processes. These dynamics move to promote wider, more diversifying, and more stable circulations of biomass that might otherwise become precariously overloaded. Vegetation is periodically consumed in naturally occurring forest fires that actually promote ecosystem maintenance in this way. The cultural turn rejected concepts of decontextualized, ahistorical, and “natural” human practices. Environmental science’s dynamics of disharmony likewise rejected previous ideas about the ecology’s steady-state character, with implications for social science analyses informed by a “new ecology.” This approach, which actually has been developing since the 1970s, emphasizes the interdependency and variability of social-ecological action across different scales of time and space in an often “nonequilibrium” fashion significantly beyond human prediction or control.

In other words, the more successful human intervention is at concentrating ecological resources, the more unstable the resulting consolidated environmental relations become over time as this excessive concentration disruptively severs itself from other connections. Zhao Zhen’s study of Qing state forest “conservation” policies in the Shaan(xi)-Gan(su) region of northwestern China can be read as exemplary of these inherent contradictions. Attempts to limit deforestation in the region were primarily motivated to ensure ongoing agricultural development, which was itself largely responsible for deforestation in the first place. The direct relationship between the two practices was substantially ignored until the excessive concentration of resources for fields at the expense of forests revealed the limiting factors of their mutual dependency. This does not seem to be an exclusively modern dynamic brought on by advanced technological change, although allowances must be made for differences of scale, speed, and the like. Rather, this dynamic defines a limit on the life expectancies of all human assemblages, empires included, without precluding them entirely. Human cultures are in this way integrated into larger environmental cycles.

Important western work on Chinese environmental history, most notably Robert Marks’ interdisciplinary study of South China’s socioeconomy, has understandably focused on the Han core as the center of agro-urban transformation extending throughout and well beyond this area. This is largely true of studies in Chinese as well, which also tend to focus on longstanding themes and regions such as disaster relief and the Yangzi basin. Significantly, some recent Chinese scholarship has begun to recognize the historical implications of environmental, not simply cultural, interaction. Yet even exceptional works, such as Qin Heping’s study of maize cultivation’s effects on demographics of Yunnan indigenous peoples,
Luo Kanglong’s study of agricultural and ethnic distinctions between various forms of rice cultivation in the southwest, Zhao Zhen’s book on ecological change in the northwest, the book by Xiao Ruiling et al. on Inner Mongolian desertification, and Liu Shiyong’s study of malarial vectors in Taiwan all proceed from the ecological effects of Han migration.\textsuperscript{36}

Overall, this body of work, which influentially informs current Chinese environmental history, is primarily concerned with the effects of a single ethnic group. This can unintentionally reinforce the impression of the Han alone as self-creators and environmental transformers. There is no doubt that this work has firmly established the historical significance of human interactions with various ecologies in many dimensions. It has also shown that these resulting environmental relations at the core of imperial China cannot be severed from expressions of Han ethnic identity. However, in dynastic cases such as that of the Qing, which supervised nature-culture connections well beyond China proper, environmental relations further afield need to be taken into more active account.

ENVIRONMENTAL RELATIONS IN THE QING BORDERLANDS

Qing China’s environmental relations were not constituted solely by Han activity, as critical as that was for the empire as a whole. Han migration, for example, would have been severely restricted without the dynastic consolidation and radical expansion of borderland spaces, particularly those just north and west of the ecotone conventionally delineated by the “Hu Line” (\textit{Hu Huanyong xian}).

This geographical concept was first formulated in 1935 by Hu Huanyong, one of the founders of modern demography in China. Hu determined that around 6 percent of China’s population lived scattered across 64 percent of the country’s land area northwest of a line he determined cut diagonally across China northeast from Heihe County, Heilongjiang Province, southwest to Tengchong County, Yunnan Province. The remaining 94 percent of the population inhabited a mere 36 percent of the land southeast of this line, an area roughly equivalent to the whole of China proper, excluding most of Gansu and the northeastern half of Sichuan. Hu employed both ecological and cultural explanations in his analysis of this condition. Considerable differences in climate due to elevation encouraged more pastoral adaptations in the relatively cool and dry northwest as opposed to agricultural adaptations in the warmer, wetter southeast. In 1987, 96 percent of China’s grain was still produced southeast of the line, and 60 percent of its sheep came from the northwest of it.\textsuperscript{37}