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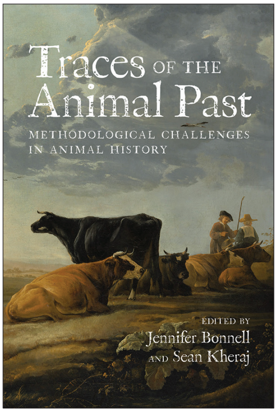

TRACES OF THE ANIMAL PAST: METHODOLOGICAL CHALLENGES IN ANIMAL HISTORY

Edited by Jennifer Bonnell and Sean Kheraj

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Kicking over the Traces? Freeing the Animal from the Archive[1]

Sandra Swart

The world thought it saw the last wild horse in 1969. A ghostly little group had been glimpsed three years before by an expedition into the desolate southern Altai range.[2] But the very the last wild horse, a solitary stallion, disappeared into the Takhiïn Shar Nuruu (the Yellow Wild Horse Mountains) and was never seen again. What made these horses special was that of all the caballine creatures, they were the only ones never tamed.

They were classified as Przewalski's horse (*Equus ferus przewalskii*) in honour of their "discoverer"—a Russian colonel, Nikołaj Przewalski (1839–88), who pursued the mysterious beasts on the steppes of Mongolia in the late 1870s.[3] But, of course, they had long been known to the local people, who called them *takhi*, meaning "free or spirit horse."[4] Eyewitnesses noted their atavistic air: their dun coats had *pangaré* qualities, with pale hair around their eyes, muzzle, and belly. They were robust but very short, with roman noses and large patrician heads. Their manes stood up like mohawks, with no forelock. A strange, dark dorsal stripe ran down their spines, and their legs were striped with primitive markings. They were cave paintings come to life.

It was a historical moment primed by widespread intellectual interest in Charles Darwin's work for there to be intrigue in the wild progenitors of domestic beasts. Scholars eagerly pieced together their past from travellers' records, like *The Secret History of the Mongols*, in which Chinggis Khan (ca. 1162–1227) was thrown from his horse when startled by the sudden appearance of a takhi.[5] Centuries later, a Manchurian dictionary from 1771 defined the takhi as the "wild horse from the steppe."[6] It was widely, almost automatically accepted that the takhi was the wild ancestor of the domestic horse. Indeed, many Mongolians called—and continue to call—the takhi the "father" of their own horses; perhaps the father of *all* domestic horses, some add.[7]

Following their "discovery," the takhi became a coveted consumer item: zoos begged collectors for this spectacular drawing card. While a few bred desultorily in captivity, their native population declined rapidly. Perhaps the capture of foals for collections was a factor, but larger causes were the increasing competition with livestock and hunting (factors that had wiped out another stocky, oddly marked equid on the other side of the world at the same time—the quagga[8]). By the mid-twentieth century, the takhi had all but disappeared; only small remnant populations survived in European and North American zoos. Inbreeding impacted fecundity and a genetic bottleneck resulted from the breeding stock descending from a few of the founder captives. Moreover, domestic horses were occasionally bred back into the so-called Przewalski population. Doomed expeditions in Mongolia failed to locate any remaining herds—the species was designated "extinct in the wild." The world took notice.

So a global program was initiated to stave off extinction. Zoos exchanged captive-bred beasts to promote genetic diversity. By 1965, there was a growing herd spread among about thirty zoos. By the late 1970s, there were almost four hundred horses, which grew to over 1,500 by the early 1990s. It was then that the takhi were released back into the "wild" in Mongolia—but actually into protected reserves: first in Khustain Nuruu National Park.

The horse that "came in from the cold" now had to find forage for themself and survive the dreaded *dzud*—the "killing cold" that may follow an unseasonably hot, dry summer coupled with an icy winter.[9] They had to survive predators, both lupine and human, and even attacks from

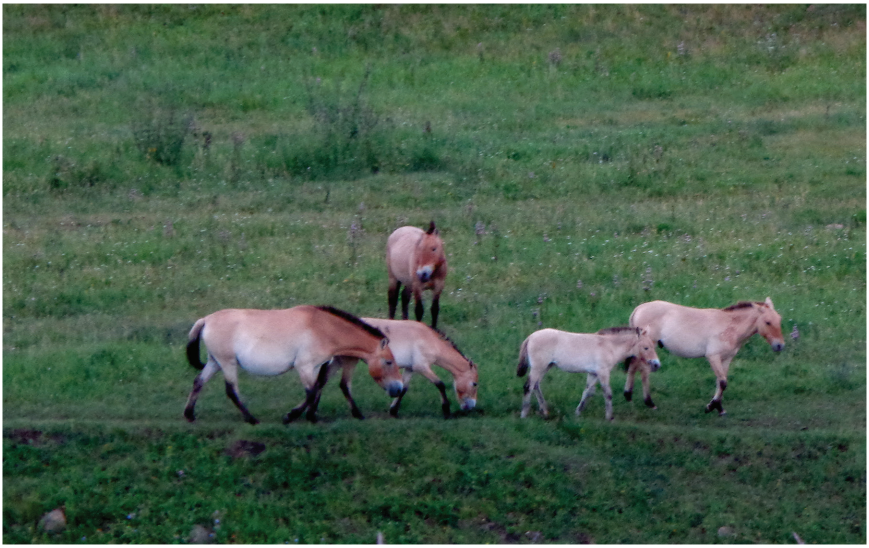

Fig. 1.1 Takhi in Khustain Nuruu National Park at a salt lick. Photo by author, 21 July 2013.

other takhis. At the same time, a persistent and romantic rhetoric survived with them: “Przewalski’s horse . . . is the ancestor of today’s domestic horses. As a species, it was never domesticated and is therefore the world’s last truly wild horse.”[10]

A vast written archive materialized: paperwork on transport, on lineage, on zoo programs, on NGOs, governmental and military agreements. This archive offers us a panglossian tale of reversing extinction through heart-warming global efforts—“we” have saved the “last wild horse.” Now there are at least 2,000, reintroduced into Mongolia’s national parks and other places. Takhis even roam and breed in Chernobyl’s ruined and poisoned wasteland as it is slowly reclaimed by the forest and grasslands, the bears and the lynx. The takhi are thus a mobile metaphor of nature’s redemptive potential, despite anthropogenic despoiling: the horses of the (nuclear) apocalypse now roam a rewilded landscape.

In many ways, this is a powerful and redemptive story, reclaimed through meticulous and extensive archival work. It is rare that not only a species but individual animals are recorded in such fine detail—a studbook traces their lineage as eagerly as any royalist genealogist.[11] There are small stories in the written collections, telling, in almost unmatched details, about the individual lives of horses. We encounter a happy mare named Botania, frolicking with her foal, and an unhappy stallion, Roccol, doomed to pace his enclosure alone. A little racier, we learn about the aptly named Rousseau and his broadminded approach to recreational masturbation.[12] Drawing on this extensive paperwork, we learn about international efforts to save a species, the development of successful breeding programs, and the joyful reintroduction to the lands they once roamed: an infusion of national pride to Mongolia and a sustained boost to its incipient tourist industry. It is a hopeful corrective disrupting the two poles of the continuum of the stories that we all too often tell about the other animals: either the smug Whiggish complacency of the story of domestication or the Malthusian despair of the extinction narrative. It is a good story to tell.

But the archive can only tell one story: ours.

Thus, in this chapter, I try to find ways of telling other possible stories. Although histories of horses have existed for a long time and proliferated in the last decade there are other ways to tell them.[13] I offer three alternatives to the conventional narrative—by exploring the ways we can see the body of the horse as an archive. Firstly, I analyze the findings of fieldwork in Mongolia, drawing on embodied and embedded methodology—the corporeal dynamics of "humans being with horses." Secondly, I look at findings from the natural sciences and consider how these may be incorporated into the historical narrative. Thirdly, I think about including "oral history" drawing on a body of Indigenous knowledge, which has been largely ignored by animal historians. Now, the art of being a historian is knowing exactly how far to go and then going just a little further. So I also wish to suggest that there might even be a kind of oral history not only about horses—but *from* them.

Writing a New Horsetory?

Both the strengths and vulnerabilities of horses acted as a historiographic "unseen hand," shaping human history, from warfare to patterns of human movement. Thus, historians have discussed the material difference horses made to human settlements and society, transport networks and military capacity. Including horses in human history does more than simply complete the story—it changes it. What is much less clear is how we write that history. There is now a robust body of scholarship analyzing how to write history that takes animals seriously. Yet, as Andre Gide observed, "[o]ne does not discover new lands without consenting to lose sight of the shore for a very long time."[14] These historians, in pioneering this new territory, have used the conventional archive. Few have "left the shore" and engaged with any new methods in reaching the subject. This essay considers ways to lose sight of the shore (in the playful, adventurous sense suggested by Sean Kheraj in Chapter 12) and head for uncharted water.

Historians hunger for new ways to write history that engage with the lives of animals. Two things have hampered our understanding: finding "animal sources" and interpreting exactly what they mean. This essay suggests new primary sources, approaches, and techniques to help us locate and then understand these "interpreters." Efforts at writing biographies of some elite animals have already been essayed: Bucephalus, Marengo, and Seabiscuit, for instance, have had their "stories" told. But can the stories of ordinary animals be told? Some historians have experimented with new(er) kinds of primary sources—taxidermy and photography. Now, this essay looks beyond the archive at traces on the body: to understand the histories of "ordinary animals" and their humans.

The essay discusses horses' and riders' bodies as visceral—if sometimes ephemeral—archives. It probes the possibility of "riding" itself as a methodology—with examples from the field in a strongly equine society: Mongolia. I explore the possibility of an embodied methodology—based on the bodies of horses and humans—further opening up the archive of blood and bone, muscle and sweat. On the one hand, new sophisticated technological developments in mtDNA analysis are discussed. On the other, a kinetic methodology of learning to ride in new ways, learning new languages of the body from horses in different (non-Western) contexts—and in so doing, understanding the histories of these animals together with those of their humans. Part of the decolonizing intellectual imperative is the shift toward thinking beyond the human, beyond the written page, beyond the hegemonic message left by the colonizer, and even beyond the static to the dynamic and diachronic process of animal-human interaction.[15] This essay thus offers a synthesis of an expanded understanding of the past that is consciously attempting to decolonize itself, coupled with a more sensory grasp of history.[16] So the essay explores riding "beyond the archive" to a new kind of fieldwork.

It then explores primary sources outside the archives: archaeology and DNA analysis.[17] Material evidence of pastoralists is almost invisible in the archaeological record—because of the perishability of their material culture and the light footprint they and their animals left, in contrast to sedentary peoples involved with cultivation. Moreover, in writing the history of humans who left no written records, instead of relying on external descriptions by travellers with only a shallow understanding or by hegemonic colonial officials, we now have access to a more impartial and authentic archive in animals.[18] The outsider view can be countered by—literally—an "insider view" from the animals' very bodies.

Horse-Sense and Sensory History

A half century ago, Levi-Strauss reminded us of how animals afford humans an important conceptual resource (animals, he argued, are good things to think with).[19] Thinking *about* animals is a historiographical imperative. Thinking *with* them is a methodological possibility. But thinking *like* them is hard. In a way, horses see and sense a parallel world to ours. Of course, we share at least the five most common sensory modalities, but their ranges differ. Horses have developed sensory capacity aimed at predator recognition and escape. Equine eyes are on the side of the head with monocular vision so they can see separate objects with each eye at the same time, permitting a grazing horse almost panoptic vision. Horses' nasal acuteness allows them a longer temporal understanding than ours; through smell they travel through time. Pheromone signals allow them to smell past mêlées, allies and enemies, births and death, emotions, and sexuality.[20] A horse's own sense of smell is acute—like their hearing, their sense of smell has evolved as a vital part of their defence system. There is ongoing production and reception of pheromone signals (smell messages produced by skin glands). Members of a herd even have a shared odour. Moreover, horses' hearing is far more sensitive than ours, perhaps to allow the horse to detect stalking carnivores. With our very different sensory experiences of the place, space, and time, horses and humans would thus write very different histories.

Yet, historically, humans have tried harder to understand the world from the horse's point of view than that of any other animal. It was necessary in domesticating, training, and riding them—dangerous and intimate processes that historically have compelled humans to see the world through horses' eyes far more than, say, the eyes of a tapir or a hippopotamus. Compellingly, on the issue of agency, humans historically involved with horses *recognized* their horses' efforts as resistance, so they contemporaneously acknowledged (animal) agency—by executing rogue horses, for instance. Horses also displayed the "weapons of the weak."[21] They disobeyed commands, destroyed equipment, escaped, physically retaliated, and resisted by literally "bucking the system" or "kicking over the traces." In the end, it is impossible to deny their agency.

An experimental blurring of the genres of *history* and *natural history* with an exploratory *horsetory* could offer a hippocentric story, suffused with horses' physical pleasure, memory, intense fear, and cyclical sexuality and fecundity, and strongest traits (as grass-eating herbivores, vulnerable as prey, with a fatal tendency toward overeating and overheating). It might be a story of grass, foals, blood, sex, pain, fear—perhaps mainly grass.[22] But it would be a Rorschach test that would reveal more about the historian (and her own epoch) than about horses. So, instead, the history of horses can be to some extent compared to that of oppressed social groups, but at the same time, horses have been the animals of the colonizing elite and critical in colonization and oppression. Thus, to locate horses at the centre of the narrative, one has had to extend the directions suggested by social history radically while accepting that the parallels are analogous but not interchangeable. Historians have long confronted methods of discussing the silenced—the under-represented, unrepresented, or even wilfully misrepresented in the conventional archive. (But to draw parallels between animals and oppressed humans is neither to conflate nor to underestimate the suffering of any human subaltern.)

The first step is to demonstrate that animals *have* a history in the first place.[23] Just as "great women" or "labour heroes" were initially "reclaimed," historians recovered celebrated warhorses or racehorses who were well represented in the conventional archive. Secondly, historians reconstructed narratives of "massed horses," aggregated victims of society's oppression, who also generated vast reams of paperwork in the archive. So horses' lives can be discovered and these lifeways changed over time, although not in "circumstances of their own choosing," as Marx contended for our species.

Indeed, perhaps it is time to move beyond "agency" as the central concern.[24] Certainly, if one is to take animal agency seriously, one has to reassess the idea of agency itself. Indeed, the failure to question what "agency" means actually reproduces familiar forms of power. The call to move beyond merely "discovering agency in the animal past" parallels a cogent call in African history to move beyond merely asserting agency. As Lynn Thomas has observed, "[t]oo often agency slips from being a conceptual tool or starting point to a concluding argument. For example, in my subfield of African women's and gender history, statements like 'African women had agency' can stand as the impoverished punch lines of empirically rich studies."[25]

Thus, rather than simply asserting or repetitively demonstrating agency, we should ask how agency was understood contemporaneously and what kind of archive and methodology might yield this data. Historically, on the issue of agency, humans involved with horses have long *recognized* horses' agency—but in ways that differed in different historical moments. For example, agency has been seen as both unquestionable and useful by Mongolian herders. They accepted their horse living within a free-roaming social structure that they would adopt of their own, modelled on a long understanding of takhi.[26] In summer, horses graze on wild grass, and as winter comes hay is fed to other livestock, but horses continue to fend for themselves—able to dig up grass even under deep snow.[27] Moreover, only male horses are ridden—and even geldings (castrated in the second year) are ridden only two or three days a week and then released back into the herd, which largely cares for itself. The whole system is predicated on—indeed, depends on—accepting animal agency.

Moreover, the instruments of control—reins, whips, bits—always tell their own stories about how the particular society using it at particular times felt about equine agency. Acts of rebellion might be quotidian, like the horse's flattened ears and bared teeth as the saddle's girth was done up. Such routine rebellion or mundane mutiny might be reflected in efforts to contain it—like tethering on Mongolian *zel* lines—which could not always curb horses, who broke free and galloped to a kind of freedom. These

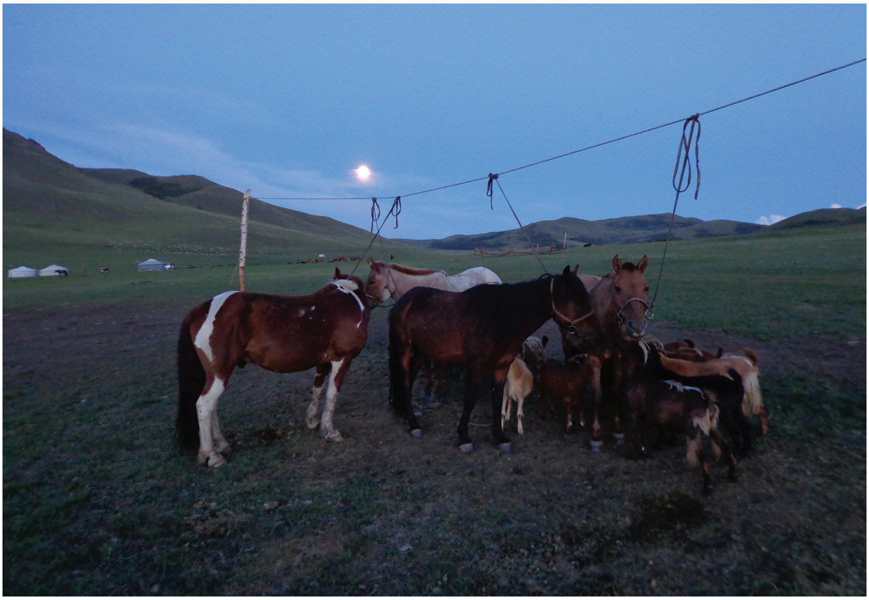

Fig. 1.2 A multi-species solution to sweat: horses tethered on the *zel* lines are licked clean of the day's salt by the ger's goats. Photo by author.

small protests can be overlooked easily by historians—but they offer an ephemeral archive of resistance.[28]

Oral historians would benefit by widening their range of "listening," becoming more attentive to other-than-human animals in their research. This section demonstrates that oral history can contribute valuable evidence about animal lives and human-animal relations to animal history. Oral historians have long reconstructed the history of the silenced, the marginalized and those unable to write. Is this possible for and, more interestingly, *from* the horse? Horses are quiet creatures. They do speak, but mainly through the body. But even then, horses lie. They need to, simply to stay alive. Horses are stoic because as prey animals they mask injury and illness to avoid making themselves a target for predators.

But a good historian is trained in the detection of deceit and misremembering and is also able to learn new languages. Reading the horse's body offers an unexpected archive. Firstly, it is clear that each animal has an individual history written on their bodies. The brands or tattoos on

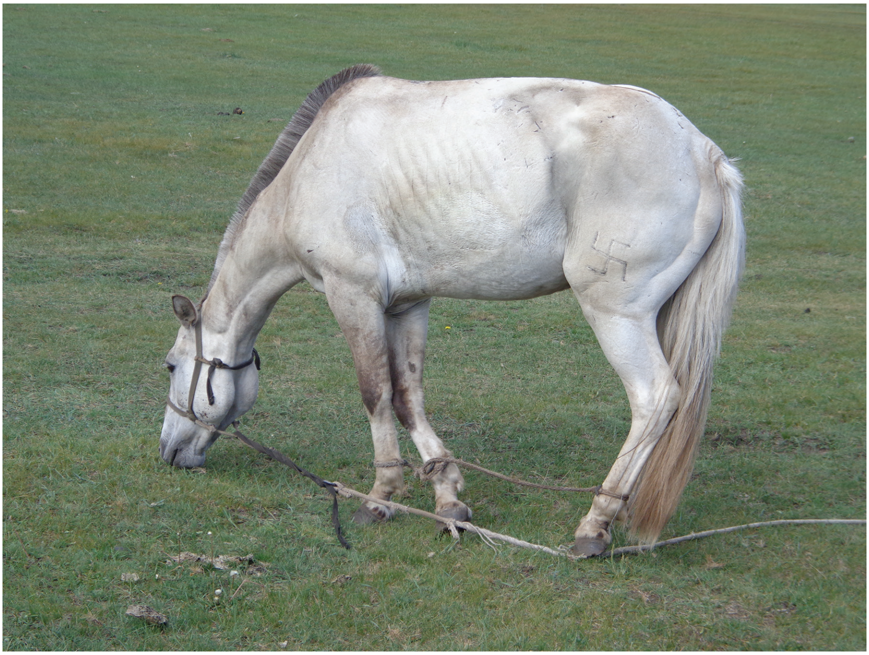

Fig. 1.3 The body of the horse is an archive. Photo by author.

a horse are a rich archive, as I discuss below. A head-shy riding horse or the scarred knees of a cart horse and the saddle-sore scars of a pack horse all bear testimony to how horses have endured human needs. Moreover, their history might be revealed by their actions (and reactions). The dead-mouthed school master and the bolting ex-racehorse all reflect their *past* experiences through their reactions to *current* experience. Body and behaviour need to be observed as closely as possible—and the closeness may be accelerated by riding. As a methodology, it is perhaps best described as "embedded history" akin to embedded journalism or auto-ethnography. An attentive inter-species historian learns by listening, watching, touching, and *being with* the subject. Here horses' and riders' bodies may offer visceral—if ephemeral—archives. Riding is a conversation between two bodies. In essence, I am arguing that riding itself may be a methodology—based on the exchange between the bodies of the horse and human: opening up a different kind of archive of blood and bone, muscle and sweat.

The kinetic methodology of learning to ride in new ways, learning new languages of the body from horses in different (including non-Western) contexts helps understand their histories with humans.

From the Horse's Mouth?

This chapter proposes the first tentative steps toward the intersection of animal history, sensory history, and oral history. Historians of the senses, like Alain Corbin, lament that the historian is always a "prisoner of language."[29] We are captives to "verbocentrism" and "textualism." There have been calls (including this chapter) for oral historians to be more "attentive to other-than-human animals," interviewing humans to understand animal lives and human-animal connections.[30] However, as multi-species ethnographers have acknowledged, "to an even larger extent than other ethnographies, [we are] faced with the problem of representation. No horses were interviewed in our study; it is their humans that speak on their behalf."[31]

But what if the horses could be interviewed?

What if we could hear straight from them? If not from the horse's mouth, then at least from the horse's body? What if, in so doing, we could escape both the anthropocentric ventriloquism of the "animal Other" by human interpreters and Corbain's carcerality of words. In fact, as this chapter will contend, the advantage of history at the nexus of the oral, the sensory, and the animal is that it can reach across the barrier of "species."

Mongolia is a good context for such an experiment. In a new place, riding in a new style, host horsepeople usually tend to try make explicit the "tacit" knowledge of how to ride—but few Mongolians do this, as culturally they favour learning by experience or embodied learning.[32] This is actually a boon to an oral historian eager to try "interview" the horse without a (human) "translator."[33]

In riding, body-to-body connection establishes a tacit dialogue. In this process, horses tell you not only about their present, but their own individual past and their culture—just as in a (human) oral history interview. In a horse-human dyad, we see "talking bodies." Riding can be a shared inter-species "apprenticeship"—as Fijn and Argent suggest—where both humans and horses pass along their social knowledge.[34] Horse and human can only balance by "talking" to each other, feeling the micro-movements of the other, attuning their bodies to a conversation. (According to a Mongolian proverb, "[i]f [only] one finds the right touch, [one] can cope with an unmanageable horse."[35]) Significantly, as this chapter showcases, this embodied knowledge of how to ride is itself embedded in cultural and historical contexts.[36] Mongolian horses have come to expect that their humans not keep the "still seat" of my own horse-human culture. The pony I rode expected me to move more in the saddle and reminded me firmly that a sitting trot was alien to his culture; he explained (through micro-movements) that I should adopt a raised light seat, hovering above his back at a trot, and should mirror his movements to one side or the other as he moved.[37] Of course, partly this is to do with the technology historically adopted—Mongolian riders tilt to one side to avoid their jarringly rigid saddles. (My equine interlocutor reminded me to do that also—my faulty use of the technology irked him too.[38]) The saddle was interesting for a historian concerned with "agency" because it permitted less (human) control over gait and speed. It seemed as though the horse was expected to choose an appropriate gait, where necessary, so that the rider could focus on the job at hand like herding. Csordas calls these "culturally elaborated ways of attending to and with one's body in surroundings that include the embodied presence of others."[39] Bodies communicate not only biology, but also culture—and culture always has a history.

A decade ago, I called the debate over the "Real Animal" versus the "Represented Animal" "an internecine war—or rather policing action—that never ends and has no clear goal; it is the Vietnam War of animal studies."[40] Clearly, what is needed to effect an armistice is either simply letting a hundred historiographical flowers bloom or choosing to embrace a synthesis of analyzing the shifts in representation together with evidence of the material lives of animals in historical contexts. Mieke Roscher has recently argued that a good way to do this may be in drawing on the bodily turn.[41] Historians have embraced, as it were, the "bodily" turn since the 1980s and especially from the 1990s,[42] analyzing the (human) body as historically variable and shaped by context. While early constructionist approaches were influential, they often failed to address individual corporeal experience. The body has been at the centre of a number of recent animal histories, but none have (yet) looked at (let alone argued for *performing*) the physical interactions of humans and horses or indeed of bodies in motion—as my study does, albeit tentatively.[43]

In this historical method of "embeddedness and embodiment," one is effecting a cross-fertilization between animal histories, oral histories, and histories of the body.[44] The interaction of the two bodies brings to light cross-species dynamics. Riding (as well as saddling up, feeding, brushing away flies, and so on) requires physical contact and close intimacy with an "Other"—a different sentient and socialized species. Quite aside from learning from how the horse responds and initiates interaction, the very self-reflexivity in "the doing of riding, the doing of history" is useful—as Kim Marra has argued in a very different context.[45] Oral historians engaged in zooethnography[46] ask and receive different answers. As recently as 1900 in the industrializing West, and much more recently in places like Mongolia, it would not be unusual for many humans to be able to decipher the equine lexicon, and many humans (and horses) would have spoken an idiographic horse-human patois, observable by historians. While some domesticated animals, for example, could be taught highly idiosyncratic signals, horses could not—because horses were typically used by different riders or drivers concurrently and often had more than one rider in their lifetime. A horse that could not comprehend the local horse-human patois was of no (human) utility—and even dangerous. Thus, humans had to teach horses common idiographic signals and codes of behaviour—that potentially could reveal something about that human society at that historical moment.

Equally, humans had to learn and teach horse signals—or co-construct them. They were able to understand the non-verbal vernacular like a horse swishing a tail, or shaking a head, or moving its ears to convey its moods. Some humans were particularly familiar with the subtle nuances of the idiom—those engaged in the horse industry itself, like grooms, or communities that imposed horsemanship as a condition of manhood, as in Mongolia throughout the twentieth century, perhaps most vigorously post-democracy. Mongolian men do not brush or groom ("If we do, the [horse] will grow thin. Maybe lose their strength.") Here we learn from the soft moments of hard men: all they do by way of displaying affection is remove sleep and grit from their horses' eyes in the mornings. This is the only intimacy permissible—purportedly in at least the last few human

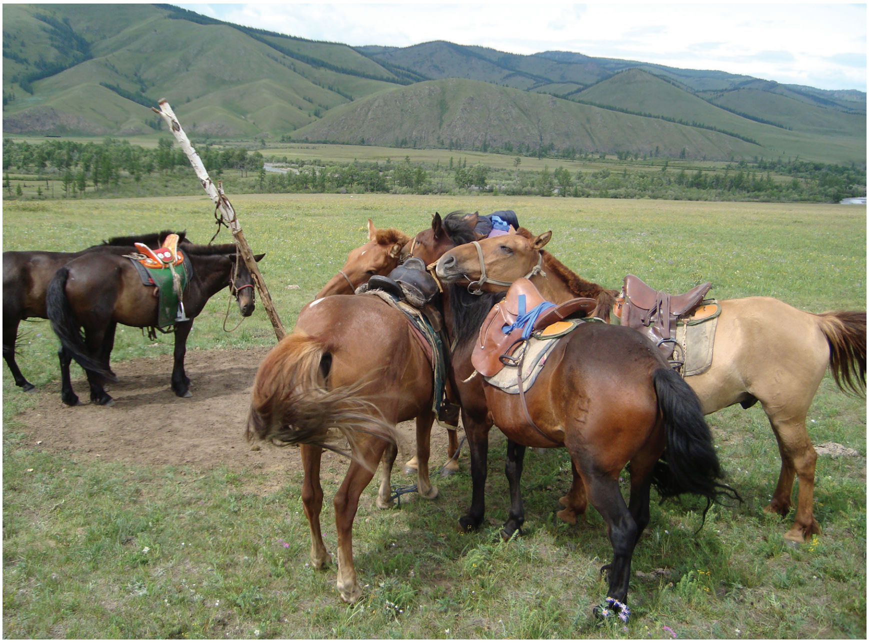

Fig. 1.4 A horse's body language not only conveys signals to its herd but also to the human historian. Photo by author.

generations too.[47] Gendered norms jump the species barrier: horses are conceived as patrilineal, like humans, and good qualities come from stallions rather than mares.[48] To "know" a horse requires human oral history, in any case. Mongolian horses have no papers. A horse's pedigree is local knowledge—a purchaser must ask locals, especially male elders. So much of Mongolian masculinity is invested in horsemanship—a man noted when watching motorbikes herding horses: "Makes me sad. Not real Mongolia."[49] (An interlocutor drolly dismissed my gift, after I offered him my riding helmet when I left the country, with the dead-pan: "If you fall off, you are not Mongolian."[50])

An "Archive on the Skin"?

Identity and masculine status are also inherent to branding horses. The *tamaga (also tamgha or tamga*; brand mark) has passed traditionally from father to son. The brands themselves are embedded in history.[51]

The branding ceremony, at least at certain historical moments, required privacy from women, and sometimes followed the gelding of the colts. Brands have long communicated more than the banal information of who is using which grazing grounds, but rather their spiritual leanings and even traditional wealth and authority. *Tamga* are already used as a local archive: from at least the 1950s, marks were gathered from all over Mongolia as a form of local knowledge to uncover patrimonial descent and determining the lineage of "tribes." The marks could change over time: for example, under the Soviets, some mystic signs were abandoned by newly anti-religious herders, some of whom embraced the hammer and sickle and the initials of their names written in Cyrillic. There are complicated but shifting historical rules about branding[52] (which space does not permit exploring), but Caroline *Humphrey*'s 1970s study of the rich semiotics of branding remains seminal and a useful point for historians interested in tracking change since then:

> The point is that the signs of the tamaga system are not simply addressed to a hypothetical stranger horseman riding through the steppe. They are also intended for the use of kinsmen in their relations with one another, and even, one might say, for an individual in his relation with his social role. . . . [The brand] with mystic power, is handed down unchanged from generation to generation, and this is what—it is believed—shows a man's ancestry and origin. Knowing this, it does not seem so surprising that even today Mongol historians are attempting to penetrate the unwritten ethnogenesis of their tribes by the patient study of horse-brands.[53]

A Body of Knowledge?

The national emblem showcases a horse as the unifying symbol said to capture the essence of Mongolia. Certainly, the horse has survived as national symbol when so many other symbols disappeared as new regimes came to power. Undeniably, rural families still live closely with horses—but the steppes change and horses are no longer at the core of every single homestead nor every man's identity. So in talking about "Mongolian horse culture" we are in danger of a romantic metanarrative imposed on a messy reality. To avoid such ahistorical flattening which elides change over time, we must remember the ruptures imposed by socialist *negdels*, free-market restructuring,[54] technological transition from horses to motorbikes, and the changes imposed by climate change,[55] as well as regional differences (for example, between Darkhad and Khalkha horseways.)[56] Horse bodies help resist teleological and ahistorical flattening and elision. This is illustrated by how their bodies have changed over the years. In different eras, the body of the horse was (probably) affected by the body politic: even in just the twentieth century, Soviet collectivization and then the post-socialist free market *zerleg kapitalizm* ("wild capitalism")[57] impacted the lived experience of horses—recoverable, at least in part, by using the body as a proxy for health and even day-to-day activity. New bodies are appearing as Arab and Thoroughbreds are introduced to create mixed breeds (*eerliiz mor'*), to improve the height and speed of horses over short distances.[58] The size and composition of the herd changed over time, and the manner of husbandry, which affected appearance. Not only do they change over the years, but bodies of horses change visibly over a single year. This is alien to Western horse keeping, which has long strived for bodily consistency, while Mongolian horses lose about thirty per cent of their weight in the spring and regain it in the summer.[59] Many horse activities are seasonal: gelding and branding in the spring, Nadaam races in the summer, (for some) branding in autumn.[60] Such changes—over the years or yearly—can be historicized through travellers' descriptions,[61] old paintings and photographs and archival reports. Oral tradition might augment oral history here—some of this might be reachable in changing idiom and proverb,[62] folklore,[63] traditional songs,[64] or epic poetry.[65]

The changing idiom, the changing horse-human world and the concomitantly changing equine bodies are recoverable through a history of the sensory. Through a variety of primary sources—some of which are breathing beings—one is reminded of the intimacies of knowing between human and horse. Even the smells generated by horses were an everyday part of life. Humans were able to interpret a horse's nervous farting, in contrast to the thunderous farting of a triumphant horse. Historians have long neglected the senses, mainly because of their apparent lack of an archive.[66] The story of the visceral, the sensual, the experiential in history includes how aural, olfactory, tactile landscapes change over time and how humans relate differently over time to sounds. For example, the healthy horse generates a reassuringly familiar flatulence. Our history tends to come deodorized, but a different kind of archive could change that.

Annals, Annales, and Anal History

Humans have long stared into horse dung as eagerly and anxiously as ancient augurs once peered into animal entrails to predict the future.[67] For humans, dung is an unmediated daily record of a horse's well-being—not unlike the concise, chronological annals of the medieval period. Its production is one of horses' vital signs, along with their temperature, heart, and respiratory rate. Quantity at a time, quantity of events, consistency, and colour are all clues to equine health and habits. Dung is a diary abandoned in the grass.

For horses, excrement is a richer archive still—it reveals current identity and past biography. Feces can provide horses with information about another herd's proximity, or an individual horse's social and reproductive status. Defecation is a ritual not only with a physiological but a social purpose: when one horse excretes, others often follow suit. In fact, the daily defecation rituals at a stud pile are one of the more striking ethologically observable features of herd life, taking up a substantial amount of a stallion's time. Stallions urinate over the manure of the females, while breathing in the communicative odours.[68] A mare coming across dung simply smells it. If lost, she sniffs *any* excrement she encounters to follow the trail back to her herd. In this way, a fecal record is a diary, a database, and a map for horses—but it can also be useful to historians.

Ancient coprolite—fossilized feces—offers clues into more than bodily being but also behaviour. Horses never travelled alone. They were long pursued by predators—but the fellow travellers of horses were not always wolves or us. Or even visible. Sometimes the ecosystem horses co-created was internal. We are now able to analyze part of the interior ecosystem of equids, including gut microbiomes and the parasites sustained and spread by horses. This helps tell a more complete story about where horses were at various times, what they were eating, how closely they lived with other livestock and people. For instance, a recent study looked at the fecal material from a medieval latrine in the coastal town of Riga (Latvia) in order to identify the intestinal parasites present within the (human) population.

They found two eggs of pinworm (*Oxyuris equi*), which proved the presence of this parasite and therefore that equids were in this region by the medieval period.[69]

Horse Tales from Horse Tails

An archive of consumption follows the horse. Their fecal remains, so casually dropped behind them, leave a record for us of what they ate, their parasites, and their health. But something that follows more closely, if less pungently, in their wake contains an equally rich and untapped seam of data to be mined: their tails.

Hair is made up of a protein complex formed from amino acids from sources that are from outside the body (food, environmental water) and sources from within (metabolic turnover of tissues). Tail hair is a neatly ordered chronological archive of ecological, physiological, and geographical data that can be decoded through isotopic analyses. A recent study used it as a primary source to discover how takhi food resources have changed in the Gobi since the end of the nineteenth century. Researchers measured the amount of stable[70] carbon-13 (^{13}C) in the tail's hair follicles.[71] This isotope occurs in the cells of grasses in different magnitudes than in woody plants. Thus, by measuring its quantity, it is possible to determine whether the animal was grass-eating or leaf-eating.

Here, conventional and unorthodox methodologies converge, human and horse archives intersect, and the living and the dead connect: archival samples of hair from the tails of adult takhi were taken from horses hunted in the Dzungarian Gobi in the nineteenth century and were compared to that of modern takhi reintroduced to the area. (For a control sample, museum specimens of Asiatic wild asses or khulans [also kulans] were compared to those now living in the area.) Tail hairs grow regularly and slowly and are also resistant to degradation, so they constitute a neat little archive (like tree rings in dendrochronology).

An intriguing change was evident over time: today's takhis feed on grass throughout the year, but in the nineteenth century, only in the summer months. Grass grows in the plains near water sources. But woody shrubs survived both in more arid areas of the plain and in the foothills—and it was these the takhis relied on in the long winters of the nineteenth century. Once this empirical story was uncovered and triangulated with archival primary sources, an explanation had to be found: perhaps the seasonality of past diet was caused by their periodic need to seek refuge from people and their livestock—thus seeking winter shelter in the semi-desert. Living in the arid shrubby scrubland helped them elude hunters and competition from grass-feeding *Aduu* (Mongolian riding horse).[72] This is supported by the more conventional historical sources of the narrative descriptions of takhi survival, as noted by the brothers Grumm-Grzhimaylo in the 1890s and a few accounts from locals from the 1930s to 1950s, recoverable by oral historians interested in local or vernacular knowledge.[73] Reintroduced takhis are differently understood now—it is safe for them to stay and eat grass because they are protected by law. Moreover, they are cherished as a generator of national pride and international currency. Yet the study found that there were no changes in how the khulans ate: they still ate seasonally like nineteenth-century takhis. This is perhaps because, unlike the reconstructed history and symbol of pride attached to fellow-equid takhis, asses were still illegally hunted so they strategically avoid humans. But this kind of archive calls us to action: history matters in policy making.[74] After all, the results suggest that, in the future, the growing populations of takhis will trigger clashes with local herders, as they did in the nineteenth century, and future reintroduction projects should eschew the grasslands and restore the takhi to areas once preferred for subsistence.[75]

Thus, if the daily dung over time offers us an annal, the measurement of their tail archives offers us an archive of the *longue durée*, which includes environmental factors, long-term trends, quantification, and paying special attention to geography, akin to the historiography of the *Annales* School.

Animal historians can learn from the methods used to understand animal histories in the natural sciences. These methods may reinforce one another (as in the case study above), but they can come into conflict, as in the study below. Certainly, fresh archives might engender reconsidering the equine past, and integral to that is rethinking the taxonomic position of the takhi. We must reconsider whether the takhi is a species or rather a feral variety of the domesticated horse that reclaimed wildness a long time ago. The contention is *not* that we suddenly have a definitive new version (nor that science trumps archives!). Genetic resources are not necessarily

Fig. 1.5 Over two decades ago, the pioneering environmental historian Donald Worster called for environmental historians to get mud on their shoes. In getting out of the orthodox archive and into "embedded history," you get a lot dirtier than that. Photo of author by Graham Walker, 26 July 2013.

more robust than our archives—in fact, they are contested. The contention is rather that competing stories will emerge from the bodies of other horses. This is a call to consider the body of the horse as an archive, rather than solely relying on textual references or even material archaeological excavations.

Blood and Bones

We saw how historians can use *tamaga* as an "archive on the skin," but beneath the skin lies another archive. It has long been thought that the Botai culture of hunters and herders in today's Kazakhstan first tamed horses about 5,500 years ago. Finding horse-meat fat and milk fat in Botai pottery, researchers surmised that they ate horses they bred (or perhaps merely hunted) and kept mares confined for milking. Moreover, evidence of tooth damage suggests that the Botai used bits—suggesting a mounted culture.[76] But new genetic analysis has problematized this generally accepted model: a study sequencing horse DNA at a Botai excavation site suggests that this is not where today's domestic horses originated. In fact, it hints that perhaps Botai horses contributed little to the lineage of modern domestic horses—so *their* ancestors might come from an as-yet-undiscovered stock.[77] (For a historian of horse-human connections, the heated debate over origins, the discourse of domestication, and so on prove just as interesting as the question of original domestication itself.) Maybe Botai horse culture migrated to other parts of Eurasia, cross-breeding their herds with so many wild equids that very little of the original Botai DNA remained or perhaps the Botai horses did not survive and were substituted by horses domesticated in another place, meaning there were (at least) two centres of domestication. In any event, it is likely that the grand metanarrative of a single domestication event was not the case and that horse domestication was probably a messy process with many experiments, many failures, and a few successes.

As this essay has argued, a lot rides on the takhi being the "last wild horses." However, recent research also shows that there are several ways to disrupt the takhi as truly "wild" and rethink conservation rhetoric. They might even be the feral escapees from domesticated Botai horses—it might be 1990s rewilding efforts were not the first time the takhi had gone back out into the snow. Moreover, takhis and ordinary Mongolian horses interbred.[78] In fact, one could even make an argument that it may be equally important to "preserve" the ordinary Mongolian horse and its varieties.[79] After all, the Mongolian horse is of an ancient line, historically integral to building the Khan Empire and thus spread out over a vast territory, and concomitantly key in the genetics of several modern Eurasian horse breeds.

Natasha Fijn has pointed out the absurdities (and Western bias) in simply labelling the takhi as "wild" and other horses as "domesticated"—if the latter category implies animals whose breeding, environment, and diet is totally controlled by humans. After all, Mongolian horses are not moved to human-constructed habitats—instead they freely wander the unfenced steppe grasslands that once accommodated their very own Pleistocene forebears. Just like their ancestors, they make their own choices about

Fig. 1.6 In the shadow of a reimagined Chinggis Khan, an incipient tourist industry is being created, predicated on selling a full-horse experience—seeing the “last wild horses” and riding in the vernacular style on Mongolian ponies. Photo of author by Graham Walker.

mobility, food, friends, and sometimes even sex.[80] The stallion is expected to guard the herd against wolves, and, in contrast to other livestock, horses are not herded to new grazing or water everyday. Yet, in stark contrast, the much vaunted “wild” takhi were a carceral population for many generations: captive in foreign lands, with no agency in food choice, territory, nor breeding. When they were finally released back into their homeland, they needed shelter and food.[81] Moreover, the dichotomous divide is further problematized because, as Bökönyi contended, “Mongolian animal breeders would capture Przevalsky [*sic*] foals, admit them to their herds and rear them there: that is to say, they domesticated them”—the hybrids do produce fertile progeny. Although, tellingly, Bökönyi still felt the need to insist that this “does not at all reduce their quality as *genuine wild horses*.”[82]

Conclusion

This chapter has proposed the first tentative steps toward the intersection of animal history, sensory history, and oral history that can breach the borders of "species." The opening vignette focused on the last wild horse, increasingly remembered (indeed, marketed) as Mongolia's national pride. The chapter then delineated a redemptive story of successfully forestalling extinction. But this metanarrative was disrupted by asking: Can we free the animal from the archive, just as the captive "Przewalski's horse" was freed from zoos to become takhis again?

To do this, we historicized a relationship that is recoverable—at least in part—through the sensory, the bodily, and the remembered, in order to engage with the material and semiotic complexities of living with horses. The horse's body offers us many kinds of archive. If we look, we can find new histories of horses in unexplored places: in both the living and the dead—in untapped Indigenous archives of knowledge, in bodies (theirs and ours), both in muscle and movement, in skin and hair, in blood and bones. A new kinetic methodology may be found in "embedded history," building an archive of praxis through riding or *being* with horses and their humans, and thereby learning an idiographic human-equine patois. What becomes clear from taking the oral history of horses and humans seriously, as well as the bodies they left behind, is that it is unhelpful to divide the world so simply into diametrically opposed and hermetically sealed categories.[83] What is "wild" when all the living takhi come from stock that was incarcerated in zoos for generations? What is "wild" when so-called tame horses must fend and forage unfenced and for themselves? After all, as noted, in Mongolia geldings are ridden only two or three days a week and then released back into the herd, which largely cares for itself. It is hard to say what is "wild" when nuances of "wildness" exist, like the difference between *agsam mor'* and *khangal*—roughly "unbroken and rebellious, either fierce or fearful" versus "untamed, undamaged, complete."[84] Moreover, stallions (*azrag*) kept for breeding and to be part of the milk production process[85] have long manes[86]—and as one interlocutor observed: "[Of course, we] [n]ever ride a stallion. It is like a wild animal. It is proud like a takhi."[87] Words that are used in categorizing display a different understanding from the stark binary of "wild" or "domestic," "tamed" or "untamed."[88] For example, a *khangal* refers to a horse that has not yet been trained but only "touched by the wind"—so it is not impossible to still train him. Wild and tame are on a continuum: not opposing categories, but palimpsestic and therefore full of possibilities.

Local or vernacular knowledge is a wildly under-utilized resource in writing human-animal histories and oral history is vital, for example in the cultural classification of significant animals. Turning to local knowledge can illustrate other linkages between people, animals and the environment—but so far, sensory and bodily histories as well as animal histories have merely genuflected in that direction.[89] A new archive of meaning may be found by foregrounding vernacular ideas. In a telling moment about different ways of knowing animals, I asked why Mongolian horses have no names. My guide answered: "Only colours." So I asked: "But what if you have two the same colour." He laughed gently and said: "They are never the same colour."[90]

NOTES

1 Warm thanks to Jennifer Bonnell, Sean Kheraj, and Nigel Rothfels for their comments.

2 Zoltán Kaszab, "New sightings of Przewalski Horses," *Oryx* 8, no. 6 (1966): 345–47.

3 The original name by Poliakof was *Equus prezewalksii*, with "*ferus*" added in the twentieth century.

4 Also "Przewalski's wild horse," "Asiatic wild horse," and "Mongolian wild horse."

5 Inge Bouman and Jan Bouman, "The history of Przewalski's horse," in *Przewalski's horse: The history and biology of an endangered species*, ed. Lee Boyd and Katherine Houpt (Albany: State University of New York Press, 1994).

6 N. Dovchin, "The Przewalski horse in Mongolia," trans. E. Geldermans, *Equus* 1 (1961): 22–27.

7 Fieldwork conversations, Ulaanbaatar, July 2013.

8 Sandra Swart, "Zombie Zoology: The quagga and the history of reanimating animals," in *The Historical Animal*, ed. Susan Nance (Syracuse: Syracuse University Press, 2015).

9 In fact, these "wild" animals are provided with roughage and salt licks. Fieldwork observations, July 2013.

10 Association pour le Cheval de Przewalski: TAKH, https://www.takh.org/en/the-horses/the-przewalski-s-horses-in-brief, accessed September 1, 2019.

11 Admittedly, the studbook was itself flawed, built from questionnaires that asked people to remember horses from decades earlier.

12 Following German zoologist Erna Mohr's 1959 monograph *The Asiatic Wild Horse: Equus Przevalskii Poliakoff, 1881* (London: J. A. Allen, [1959] 1971), a deluge of studies followed with at least twenty investigations by the early 1990s.

13 For a recent sampling, see Susanna Forrest, *The Age of the Horse—An Equine Journey Through Human History* (New York: Grove Atlantic, 2017); Ann Norton Greene, *Horses at Work: Harnessing Power in Industrial America* (Boston: *Harvard* University Press, 2008); Sandra Swart, *Riding High—Horses, Humans and History in South Africa* (Johannesburg: Witwatersrand University Press, 2010).

14 André Gide, *The Counterfeiters*, trans. Dorothy Bussy (London: Penguin, [1925] 1990).

15 The broader decolonization project that urges us to rethink how we study the past should include challenging insular anthropocentrism and the *Cartesian* dichotomy between animal and human, which several theorists are contesting now. See Alice Hovorka, "Animal geographies I: Globalizing and decolonizing," *Progress in Human Geography* 41, no. 3 (2017): 382–94; Kelly Struthers Montford and Chloë Taylor, eds., *Colonialism and Animality—Anti-Colonial Perspectives in Critical Animal Studies* (London: Routledge, 2020).

16 For the sensory turn, see Mark Smith, "Producing Sense, Consuming Sense, Making Sense: Perils and Prospects for Sensory History," *Journal of Social History* 40, no. 4 (2007): 841–58.

17 Of course, historians will access these at one remove being largely untrained in the methodology required—calling for interdisciplinary collaboration or merely reading research from zooarchaeological and cognate disciplines. Susan Nance has pointed out that writing animal history requires the willingness to be open to a range of methodologies and to learn from disciplines far removed from history, "from philosophy to veterinary medicine to find principles or theories with which to read historical sources for evidence." Susan Nance, "Animal History: The Final Frontier?," *The American Historian*, no. 6 (*2015*): 28–32.

18 Sandra Swart, "Settler Stock? Animals and power in the mid-seventeenth century contact at the Cape, c.1652–1662," in *Animals and Early Modern Identity*, ed. Pia F. Cuneo (Farnham: Ashgate, 2014).

19 Sandra Swart, "'But Where's the Bloody Horse?': Textuality and Corporeality in the 'Animal Turn'," *Journal of Literary Studies* 23, no. 3 (2007): 271–92.

20 Particular smells—like those of fire and blood—generate extreme but not excessive alarm in carnivore-fearing ungulates that evolved while roaming over highly combustible grasslands.

21 James C. *Scott, Weapons of the Weak*: *Everyday Forms of Peasant Resistance* (New Haven: Yale University Press, 1985). Scott showed how peasants who seemed utterly oppressed resisted their so-called "masters" with subtle, covert techniques of evasion and resistance, including daily acts of defiance. Fundamentally, like oppressed humans, horses also sometimes refuse to accept the terms of their subordination.

22 This section is drawn from Swart, *Riding High*, 217.

23 Drawn from Swart, *Riding High*.

24 Joshua Specht, "Animal History after Its Triumph: Unexpected Animals, Evolutionary Approaches, and the Animal Lens," *History Compass* 14, no. 7, (2016): 326–36

25 Lynn Thomas, “Historicising Agency,” *Gender & History* 28, no. 2, (2016): 324–39.

26 This is reflected in the treatment of horses more dear to them. Like the takhi, these are not eaten but allowed to go into the wild and die naturally. Sometimes the skull is brought to an *ovoo* (the stone mounds in the shamanic tradition) to allow the horse to “go to the sky.” A properly respected horse might bring good health to the living herd, while a restless soul might cause harm, like wolf attacks. Fieldwork, July 2013.

27 Fieldwork, July 2013.

28 Horses stay tied up with their saddles on until dusk—not from neglect, but because they are covered in salt from sweat. So if saddles were removed in sunlight their skin would burn. Fieldwork, 22 July 2013.

29 Alain Corbin, “Charting the Cultural History of the Senses,” in *Empire of the Senses: the Sensual Culture Reader*, ed. David Howes (New York: Berg, 2005), 135.

30 Carrie Hamilton, “Animal stories and oral history: Witnessing and mourning across the species divide,” *Oral History Review 45,* no. 2, (2018): 193–210; Jianxiong Ma and Cunzhao Ma, “The Mule Caravans of Western Yunnan: An Oral History of the Muleteers of Zhaozhou,” *Transfers* 4 no. 3, (2014): 24–42.

31 Anita Maurstad, Dona Davis, and Sarah Cowles, “Co-being and intra-action in horse-human relationships: A multi-species ethnography of be(com)ing human and be(com)ing horse,” *Social Anthropology* 21, no. 3 (2013): 324.

32 Children between four and five also learn to ride horses, and horses are ridden from as young as two. For children, teaching consists of “embodied showing,” as they learn by doing. Richard Fraser, “Motorcycles on the Steppe: Skill, Social Change, and New Technologies in Postsocialist Northern Mongolia,” *Nomadic Peoples* 22, no. 2 (2018): 330–68, see 352.

33 This communication was not only one-way—I tried to speak *Aduu* with a little leg pressure, reins in one hand and direction and pace changes suggested by the body, but my fieldnotes record how I inadvertently slipped into speaking “South African horse” and how rapidly the horse I was riding learned “some of my body language” in a matter of days until we spoke if not an international Esperanto, then at least a kind of shared equine pidgin. 22 July 2013.

34 The best ethnographic monograph we have on “living in multi-species herds” in Mongolia is *Natasha* Fijn, *Living with Herds: Human-animal Co-existence in Mongolia* (New York and London: Cambridge University Press, 2011). In a seminal study, Gala Argent focused on sacrificial horse burials two and a half millennia ago in the Altai Mountains, but, unconventionally, she explored the cooperative relationship between horse and human—demonstrating how archaeology can transcend the stereotype of animals as mere possessions. Gala Argent, “Inked: Human-Horse Apprenticeship, Tattoos, and Time in the Pazyryk World,” *Society & Animals* 21 (2013): 178–93.

35 John Hangin et al., “Mongolian Folklore: A Representative Collection from the Oral Literary Tradition,” *Mongolian Studies* 9, (1985–86): 34.

36 Lynda Birke and Kirrilly Thompson, *(Un)Stable Relations: Horses, Humans and Social Agency* (London: Routledge, 2018). Ethnographic studies that embrace the agentic possibility of the horse and communication between horse and human include Charlotte Marchina on lasso-pole horses, Robin Irvine on training racehorses, and Fraser on Mongolian livestock herding where it includes sheep and goats. Charlotte

Marchina, “Follow the horse: The complexities of collaboration between the lasso-pole horse (uurgach mor’) and his rider among Mongolian horse herders,” in *The Meaning of Horses: Biosocial Encounters*, ed. Dona Davis and Anita Maurstad (Abingdon: Routledge, 2016), 102–13; Robin Irvine, “Thinking with horses: troubles with subjects, objects and diverse entities in eastern Mongolia,” *Humanimalia: A Journal of Human/Animal Interface Studies* 6, no. 1 (2014): 62–94); Fraser, “Motorcycles on the Steppe,” 349.

37 My own horse in South Africa would have expressed her chagrin at these outrages to *her* human-horse culture.

38 Of course, sensory experience is transient, so offers a real challenge to historians, and while written descriptions of sensory experiences in the past can be used, we historians can go further by trying to recreate past sensory experiences, to better understand past ways. Thus even just riding in a “traditional saddle” is a method of experiential history: learning from trying to use technology of the past. Mongolian saddles sit high off the horse’s back—perhaps herders ride half-standing and tilted to the side to offset not only the hard saddles but their small horses’ short and concomitantly choppy gait?

39 Thomas Csordas, *Body/Meaning/Healing* (New York: Palgrave Macmillan, 2002), 7–8.

40 Sandra Swart, “Historians and Other Animals” (Review of D. Brantz, *Beastly Natures: Animals, Humans, and the Study of History*), H-Environment, November 2011, https://www.h-net.org/reviews/showpdf.php?id=31301.

41 Mieke Roscher, “New political history and the writing of animal lives,” in *The Routledge Companion to Animal-Human History*, ed. Hilda Kean and Philip Howell (London: Routledge, 2019).

42 Roy Porter, “History of the Body Reconsidered,” in *New Perspectives on Historical Writing*, ed. Peter Burke (Cambridge: Polity Press, 2001), 232–60; Iris Clever and Willemijn Ruberg, “Beyond Cultural History? The Material Turn, Praxiography, and Body History,” *Humanities* 3, no. 4 (2014): 546–66.

43 Pascal Eitler, “Animal History as Body History: Four Suggestions from a Genealogical Perspective,” *Body Politics* 2, no. 4 (2014): 259–74.

44 For our purposes, see Kathleen Canning, “The Body as Method? Reflections on the Place of the Body in Gender History,” *Gender & History* 11, no. 3 (1999): 499–513.

45 For another kind of auto-ethnographic equine encounter, see Kim Marra, “Riding, Scarring, Knowing: A Queerly Embodied Performance Historiography,” *Theatre Journal* 64, no. 4 (2012): 489–511.

46 Thus operating at the confluence of ethology and ethnography, but “reading” not only the present but extracting this data by reading past texts through this lens.

47 Fieldwork, July 2013. There is little verbal communication (other than shouting *khai!*—“stop that!” Or a soft *chu*—“go”).

48 In the 1970s, the genealogies of stallions were remembered for about four generations—a useful project for a historian would be to plot how this has changed in the last fifty years. See Caroline Humphrey, “The Semiology of Horse Brands in Mongolia,” *The Cambridge Journal of Anthropology* 1, no. 1 (1973): 23.

49 Fieldwork, July 2013.

50 Ironic given the great Chinngis' own fall (mentioned at the start of the essay). However, fieldwork etiquette required not pointing out this inconvenient archival truth.

51 Like the modified hammer or swastika brand (opinion was locally divided) on display at *Naran Tuul* ("The Black Market") in Ulaanbaatar. I first thought this brand referenced the new movement in Mongolia that embraces the trappings of German fascism, including a Nazi-themed bar in Ulan Bator (largely as an anti-Chinese gesture), but one must remember that the swastika was a Buddhist symbol long before Nazis adopted it and swastika brand-marks were around in Mongolia in at least the 1970s and probably long before. Fieldwork, July 2013.

52 For example, the elite branded the right flank and ordinary folk the left.

53 Humphrey, "The Semiology of Horse Brands in Mongolia," 33.

54 Andrei Marin, "Between Cash Cows and Golden Calves: Adaptations of Mongolian Pastoralism in the 'Age of the Market'," *Nomadic Peoples* 12, no. 2 (2008): 75–101.

55 Navchaa Tugjamba, Greg Walkerden, and Fiona Miller, "Adaptation strategies of nomadic herders in northeast Mongolia: climate, globalisation and traditional knowledge," *Local Environment* 26, no. 4 (2021): 411–30.

56 Since 1990, Mongolia has seen the creation of a democratic state and market economy, with the privatization of livestock—a radical change not only from Soviet-era collectives, but also from the pre-Soviet regime, when herders had access to grazing but under the authority of religious and aristocratic powers.

57 Rebecca Empson, "The Dangers of Excess: Accumulating and Dispersing Fortune in Mongolia," *Social Analysis* 56, no. 1 (2012): 117.

58 Irvine, "Thinking with Horses."

59 Bekhjargal Bayarsaikhan, *Travelling by Mongolian Horse* (Ulaanbaatar: Bit Press, 2005), 102.

60 "When Mongolia throws a party, the rest of Asia locks its doors," as Naadam celebrators boast of the traditional annual summer festival of wrestling, archery, and horse-racing, the so-called manly sports (although women now compete in the latter two). Robert Peck, "Chagi's charge," *Natural History* 107, no. 5 (1998): 28.

61 As early as the thirteenth century, travellers like Chao Hung wrote about horse-human cultures. Bat-Ochir Bold, "The Quantity of Livestock Owned by the Mongols in the 13th Century," *Journal of the Royal Asiatic Society* 8, no. 2 (1998): 237–46.

62 A. Neville Whymant, "Mongolian Proverbs: A Study in the Kalmuck Colloquial," *The Journal of the Royal Asiatic Society of Great Britain and Ireland* 58, no. 2 (1926): 257–67.

63 Hangin et al., "Mongolian Folklore."

64 See, for example, L. Munkhtur, *Words that Illustrate Mongolian Horse Appearance, Its Meaning and Structure* (Ulaanbaatar, Mongolia: Mongolian State University of Education, 2007).

65 In epic poems, horses possess mystic powers and offer sound counsel to the heroes. Chao Gejin, "Mongolian Oral Epic Poetry: An Overview," *Oral Tradition* 12, no. 2 (1997): 322–36; Ágnes Birtalan, "Some Animal Representations in Mongolian Shaman Invocations and Folklore," *SHAMAN* 3, no. 1–2 (1995, 2009): 17–32.

66 For new research, see Melanie Kiechle, "Preserving the Unpleasant: Sources, Methods, and Conjectures for Odors at Historic Sites," *Future Anterior* 13, no. 2 (2016): 22–32.

67 It is a very large part of avoiding colic, a common cause of death in horses and concomitantly a major concern for horse owners.

68 Perhaps transmitting a social message to the mare (or another stallion in the territory) such as “She’s mine.”

69 Hui-Yuan Yeh et al., “Intestinal parasites in a mid-14th century latrine from Riga, Latvia: fish tapeworm and the consumption of uncooked fish in the medieval eastern Baltic region,” *Journal of Archaeological Science* 49 (2014): 83–89.

70 Fittingly.

71 Martina Burnik Šturm et al., “Sequential stable isotope analysis reveals differences in dietary history of three sympatric equid species in the Mongolian Gobi,” *Journal of Applied Ecology* 54, (2017): 1110–19; Petra Kaczensky et al., “Resource selection by sympatric wild equids in the Mongolian Gobi,” *Journal of Applied Ecology* 45 (2008): 1762–69.

72 Local people call their horses “Mongol” as distinct from the takhi. See Natasha Fijn, “The domestic and the wild in the Mongolian horse and the takhi,” in *Taxonomic Tapestries: The Threads of Evolutionary, Behavioural and Conservation Research*, ed. Alison Behie and Marc Oxenham (Canberra: Australian National University Press, 2015), 282. *Aduu* refers to a horse in general; *Mor’* to a gelded horse, which is normally ridden.

73 “Local knowledge” (sometimes called traditional or Indigenous knowledge) is knowledge that has dynamically developed over time and is tailored to local culture and environment.

74 Jo Guldi and David Armitage, *The History Manifesto* (Cambridge: Cambridge University Press, 2014).

75 Petra Kaczensky et al., “Stable isotopes reveal diet shift from pre-extinction to reintroduced Przewalski’s horses,” *Scientific Reports* 7 (2017), https://doi.org/10.1038/s41598-017-05329-6. This could be a particularly rich archive for ordinary Mongolian horses too, as many homes preserve tail hair as sacred, and the *moriin khuur* or horsehead fiddle has bow and strings traditionally made of horse hair.

76 This is a contested topic, with new research arguing that the damage to Botai horses’ teeth is not from bits, but just from natural grazing. This study argues that it signals harvesting of takhi, and so perhaps horses were domesticated elsewhere. William Taylor and Christina Barrón-Ortiz, “Rethinking the evidence for early horse domestication at Botai,” *Scientific Reports (Nature)* 11 (2021), https://doi.org/10.1038/s41598-021-86832-9.

77 Charleen Gaunitz et al., “Ancient genomes revisit the ancestry of domestic and Przewalski’s horses,” *Science* 360 (2018): 111–14.

78 Barbara Wallner et al., “Fixed nucleotide differences on the *Y* chromosome indicate clear divergence between *Equus przewalskii* and *Equus caballus*,” *Animal Genetics* 34, no. 6, (2003): 453–56.

79 Some “strains” spoken of include the Galshar (in the east) or the Darkhad (in the high mountains of the north). See Gro Bjørnstad, N. Ø. Nilsen, and Knut Røedl, “Genetic relationship between Mongolian and Norwegian horses?,” *Animal Genetics* 34, no. 1 (2003): 57.

80 Stallions can breed with mares from other herds if they can defeat the competition.

81 Fijn, "The domestic and the wild," 284–85.

82 Emphasis added. Sándor Bökönyi, *The Przevalsky Horse* (London: Souvenir Press, 1974), 85, 45.

83 There are so many overlapping ways to classify horses: by condition (a worn-out horse = *adasq-a mori*; a slow horse = *bolki mori*), by context (a horse of the steppes = *keger-e-yin mori*; a horse kept separately as a reserve = *ongquu mori*), by work (a horse trained to work with a pole lasso = *ury-a(n) mori*; a relay horse = *ulay-a(n) mori*), by state of education (a trained horse = *kölücin*; a horse that has not been ridden for at least one year = *qur [baiysan] mori*), by sex or reproductive state: hence, a gelding = *ayta mori*; a mare that produces a foal only once every three years = *esgel*; a sterile mare = *eremeg gegüü*. Horses can also be classified by gait (a racing horse = *aryamay* [may also designate a thoroughbred, or simply a good horse]) or spiritual classification (a horse used in a sacrifice to Chinggis = *morin ödke*). From Ruth Meserve, "The Expanded Role of Mongolian Domestic Livestock Classification," *Acta Orientalia Academiae Scientiarum Hungaricae* 53, no. 1/2 (2000): 23–45.

84 Gelding is an undeniable difference between wild and domesticated horses—castration is unlikely ever to happen to (even a very unlucky) "wild" horse. Castration means that males can continue to stay in their birth herds instead of being chased out by the stallion.

85 The stallion's job is to ensure mares are pregnant or nursing to create milk for *airag* (fermented milk beer). Mares require an engagement with human bodies despite not being ridden as they are milked. Foals are tied up near the *ger* while their mothers graze without restraint except for being milked several times a day. At night, foals and mares graze together. Fieldwork, July 2013.

86 Some horses have sheared off manes, but stallions' manes are not trimmed; like the biblical Samson, their hair is their strength.

87 Fieldwork, 23 July 2013.

88 The "taming" process (a necessary act even in domesticated horses) has a history that calls out for analysis—through oral history. The one act I witnessed closely was violent and involved hitting the horse with a long rope line and shouting *chu chu*; the aim was to tire him and frighten him into a kind of submission. A little girl watching this process wandered away and then eagerly copied him—with a calf.

89 For discussion of vernacular/local/traditional/Indigenous knowledge in animal history, see Sandra Swart, "Writing animals into African history," *Critical African Studies* 8, no. 2 (2016): 95–108.

90 Fieldwork, Khustain Nuruu, 21 July 2013.