The large, resource-intensive monuments of the Mongolian Bronze Age are often presented as demonstrations of elite power and territorial control (Allard and Erdenebaatar 2005; Fitzhugh 2009; Houle 2009; Houle and Erdenebaatar 2009). However, in this chapter, I argue that they can be interpreted as monuments that discourage inequality by commemorating events of social cohesion (see Bradley 1993, 1998; Edmonds 1999), and that the largest monuments are not monuments to hierarchy but are instead demonstrations of community solidarity and leveling mechanisms in a Bronze Age society in which models of social order were being negotiated by early nomadic pastoralists.

INNER ASIAN PASTORAL NOMADS

Ethnohistorically, Inner Asian nomads form a complex mobile society in which animals—primarily sheep, goats, cattle, and horses—are the foundation of wealth and are essential to nearly every aspect of human endeavor (Barfield 1993; Ekvall 1968; Erdenebaatar 1996; Fernandez-Gimenez 2000; Lattimore 1940; Simukov 2007 [1934]; Vainshtein 1980). Horses are of central importance and are used for transport, secondary products, and meat. Mobility, both in regards to human populations and herds, is a central factor affecting a range of decisions that pastoralists make related to kill-off choices, social landscapes, resources, time and scheduling, seasonal survival decisions, and knowledge about distant cultural landscapes. The human ecology of pastoral nomads is a key component of the argument of this chapter, particularly the unrestricted possibilities for mobility,
the resulting utility of horses, and the necessity to organize social space on many scales.

THE MONGOLIAN BRONZE AGE

The Mongolian Bronze Age (ca. 2000–750 BC), the focus of this analysis, is a period characterized by the fluorescence of charismatic (following Simberloff 1998; Walpole and Leader-Williams 2002; also see Wright 2007) monument building in Eastern Inner Asia, and is the period of the adoption of nomadic pastoralism and horse riding. Its beginning is defined by the appearance of horses and bronze objects in grave monuments (Anthony 2007; Di Cosmo 2002; Mei 2000), and its end by notable shifts in monumental form and arrangement as well as historically documented shifts in the scale of political organization (Barfield 1989; Konovalov 2008; Minyaev 1983).

The Bronze Age is the period in which nomadic pastoralism became widespread in Inner Asia. By its end, in the mid–first millennium BC, we can reasonably say that many of the patterns we know ethnohistorically were present. Prior to this time, during the thousand years spanned by the Bronze Age itself, the nature of pastoralist practice is less clear. As the most common remains of the Bronze Age, monumental sites are a way to start looking at the role that horses played when the cultural landscape included new pastoral-agriculturalists (perhaps migrants with new technologies), a powerful new social order, and pastoralists only a few generations away from being hunter-gatherers (Anthony 2007; Fitzhugh 2009; Houle 2009; McKenzie 2010; Weber 1994).

THE MONUMENTS

The archaeological record of Inner Asia is primarily a record of historic and prehistoric mobile populations and is dominated not by domestic structures but by monuments. Monuments provide a physical record of memory and past activities, create meaningful places, communicate information to observers (see Bradley 1993, 1998), and frequently serve as repositories for bones and—less commonly—items of value. Because of their robust and enduring nature, and the necessity for many people to be involved in their construction, monuments communicate enduring concepts of social order. Their spatial organization and structure, arrangements into groups, intervisibility, positioning in relation to productive areas, and so on, makes them defining features of the social and economic landscape. They can communicate a wide range of information to people familiar with them, including the importance of a
locale; memories of events that took place at the monuments, including their construction, reconstruction, and modification; and a sense of local cohesion that ties people and architecture into a common phenomenon of monumentality that reaches beyond the immediate region.

Many interpretations of the monumental landscapes of Eurasia depict them as landscapes of inequality (following Wilkinson 2003). These are landscapes in which there is a pervasive experience of hierarchy, in which the most important cultural manifestations are distinctly related to a hierarchy in which observers know where they stand. Applying this characterization to the monumental landscape of the Mongolian Bronze Age specifically, stone monument sites of different sizes are interpreted as direct representations of hierarchy among the people who built them. Smaller monuments are associated with larger ones, giving them status and lineage affiliation. Large mortuary zones mark central places in the geography of Bronze Age chiefdoms (Allard and Erdenebaatar 2005; Fitzhugh 2009; Houle 2009; Houle and Erdenebaatar 2009; Humphrey 1995).

This “inequality scheme” is contingent on acceptance of a hierarchical mobilization of labor and alienation of wealth in monuments. At the core of the inequality argument is the notion that large monuments are built as monuments to the power of an elite class, particularly their ability to command labor and consume animals, especially horses. There are, however, reasons to believe that this was not the case and that the landscape of Bronze Age Mongolia was not a landscape of inequality.

An alternative to the inequality argument is that many monuments, including most of those that consume horses, were built primarily as mechanisms to strengthen community solidarity and to discourage inequality rather than to solidify hierarchy and difference. To make this “solidarity argument,” I first highlight the difference between human burials and the places where horse remains are found. I then examine the parallels between these monuments and the active use of these spaces and suggest that monumental contexts are signifiers of living horses and thus recall events that, because of the nature of the monuments themselves, are community, not hierarchically, oriented. Horses are the key element of this monumental landscape because they are essential for the mobility of early nomadic social relations.

CONTEXTS IN WHICH HORSES ARE FOUND

Inner Asia monuments are typically glossed as mortuary structures, or structures that contribute to mortuary constellations. Many monuments are
graves, but the bodies that are really required for monumental construction and continued use of monumental sites are not humans, but animals—most notably horses. The practice of horse-head burial spans the entire Bronze Age (Allard and Erdenebaatar 2005; Fitzhugh 2003; Hall et al. 1999; Houle 2007; Torbot et al. 2003). Several analyses of horse remains excavated from different contexts around north and central Mongolia show a wide demographic profile for the animals (Allard and Erdenebaatar 2005; Fitzhugh 2003); no particular age or sex group is preferred for any particular type of interment.

As archaeologists we expect to find distinctive, patterned, faunal deposits within monumental structures, and it is reasonable to say that the monument builders in the Bronze Age also knew what kinds of animals were hidden beneath the surface features of monuments. For any nomadic pastoralist, that knowledge immediately links those structures with both the active symbolic and social value of the animals and their economic worth. The place of horses in monuments is a record of their place in the social order and a reminder of their central importance in mobility—the key to the survival of all nomadic pastoralists.

The data that are the basis of this discussion are drawn primarily from two intensive regional surveys in Mongolia (Figure 13.1): The Egiin Gol Survey and the Baga Gazaryn Chuluu Project (Amartuvshin and Honeychurch 2010; Erdenebat et al. 1999; Honeychurch et al. 2009; Torbot et al. 2003; Wright, et al. 2007, 2009; Wright et al. forthcoming). Because these are primarily surface-archaeology projects, interpretation proceeds by the comparison of surface remains with a small sample of excavated features. As a result, the discussion here is not about faunal remains, but about the contexts in which those remains may be found.

Horses, particularly horse crania, are found in three distinct but overlapping Bronze Age monumental contexts. Monuments of the first type are slab burials (Figure 13.2a). These are quadrilateral burial monuments about four meters long in their longest dimension, and they consist of large stone slabs standing on edge. They contain shallow burial pits holding the remains of one to three human skeletons, one or more horse heads, and occasional postcranial horse remains along with bronze objects, ceramics, and pieces of saddlery (Csorba 1996; Erdenebaatar 2002; Mandelshtam 1983). These represent the first unequivocal appearance in the archaeological record of horse-riding nomads and burials that include both humans and horses in Mongolia.

Monuments of the second type are known as deer stones (Figure 13.2b). These distinctive, carved standing stones, showing animal-human forms, abstractions, personal equipment, and domestic and wild animals, are found
over a wide area of Eastern Inner Asia (Jacobson 1993). They rarely occur in isolation. Deer stones occur in groups and also are accompanied by other monumental stone structures. It is in these other structures, usually buried beneath small satellite mounds, that horse crania are frequently found (Fitzhugh 2009; Takahama and Hayashi 2003).

The third context for Bronze Age horse interments is a type of monument known as a *khirigsuur* (Figure 13.2c). These are central stone mounds surrounded by stone alignments and smaller mounds. Though there is regional variation, the central mounds are in the range of ten meters in diameter, and the total width of the alignments is thirty meters or less. Horse heads are found buried in structural components of the monuments and in satellite mounds much like those at deer-stone complexes. It is khirigsuur monuments that are the focus of this discussion because they are most variable in final form. Though the majority of them do not contain human remains or grave goods, they are frequently interpreted as burials or cenotaphs with their surrounding elaboration and scale indicative of the status of the deceased.

Within khirigsuur and deer-stone complexes, satellite mounds are the most common place that horse remains are found (Figure 13.3). Although not all satellites contain horse crania, based on many different excavations in...
Figure 13.2. The three major monumental contexts in which horse crania are found: (a) slab burials, (b) deer-stone sites, and (c) khirigsuurs. (Photos by author.)
Mongolia, and excluding exceptional cases (see below), one-third to one-half of these satellites contain horse crania. Considering the two most complete data sets discussed here, from Egiin Gol and Baga Gazaryn Chuluu (Table 13.1), the average number of satellites per khirigsuur is five to six, which suggests two or three horses per monument, with extremes reaching to fifteen to twenty animals.

It is important to note that all three types of monument can coexist in a monumental complex alongside one another. Also, in terms of the labor
investment, measured by the amount of stone moved to build them, each of these three monument types is within the same range. Khirigsuurs are the largest monuments, but slab burials require larger individual stones, and deer stones themselves would have required the acquisition of the appropriate stone and its carving and polishing.

All of these typical types of structures can easily be modeled as having been built by groups as small as twenty people. Where differences emerge is when monuments of vastly different sizes are considered. Although there can be large groups of slab burials and deer stones, it is khirigsuurs that can grow to tremendous size, and these larger monuments would have required the mobilization of a greater labor force to build.

**VEHICLES OF INEQUALITY?**

When one considers examples from later chronological periods in Inner Asia, or the Kurgan burials of the western steppe (Anthony 2007; Askarov et al. 1992; Chochorowski and Skoryi 1997; Crubézy et al. 1996; Cugunov et al. 2003; Davis-Kimball et al. 1995; Jisl 1997; Rudenko 1970), the horses associated with Bronze Age burials in Mongolia are easily interpreted as precious objects put into graves or sacrificed in large events to demonstrate the wealth and power of a chief and the loyalty that chief commanded in life. This interpretation is a compelling one because horses are often associated with a militaristic Bronze Age elite. In historically known periods such as the Uighur and Mongol Empires, rulers controlled huge herds of horses for aesthetic and political reasons (Cleaves 1982; Mackerras 1973). Horses are also key to elite ritual in the early history of Central Asia (Anthony 1995; Mallory 1989).

Horses consumed in monuments are often interpreted the same way, as rare and exotic preciosities or objects requiring large amounts of labor to produce. But there are fundamental differences if we consider analogies between ethnohistoric, modern and Bronze Age horse-riding nomadic pastoralists. In

<table>
<thead>
<tr>
<th>Survey Region</th>
<th>Average Satellites per Khirigsuur</th>
<th>Khirigsuurs with Satellites</th>
<th>Total Khirigsuurs</th>
<th>Maximum Satellites Mounds</th>
<th>Total Satellites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egiin Gol</td>
<td>4.9</td>
<td>121</td>
<td>238</td>
<td>33</td>
<td>588</td>
</tr>
<tr>
<td>Baga Gazayn</td>
<td>6.3</td>
<td>140</td>
<td>318</td>
<td>40</td>
<td>887</td>
</tr>
</tbody>
</table>

**Table 13.1** The range of khirigsuur satellites from two intensive survey areas in Mongolia.
ethnohistoric cases, horses are also common, quotidian tools—everyone has
access to them. Horses are sources of metaphor, foundations for many types of
social rhetoric, and vehicles for social action. To own many horses gives power
to an individual and that individual’s associates through secondary products,
acclaim through exceptional animals, and the possibility of charity and largesse.
But they are not really wealth in the sense of the possessions or trappings of
the elite that we see in other Central Asian mortuary traditions. Economically,
horses were household resources for everyone, producing primary and second-
ary products (milk, meat, bone, etc.) familiar from the Neolithic and Eneolithic
of Central Asia (Benecke and Driesch 2003; Olsen 2003, 2006; Outram et al.
2009). They are also useful for the production of wealth through the herding
and scouting that is required to maintain large herds of sheep, goat, and cattle
(Anthony 1998, 2007), and they are central for the everyday mobility that holds
together Inner Asian nomadic pastoralist society.

Following these more egalitarian examples of horse usage, in which they
are considered as a central element of everyday social and economic exis-
tence, and not a form of alienable wealth, what do we see in the Bronze
Age archaeological record? In Bronze Age slab burials, horse crania occur in
small numbers, and there are no burials directly accompanied by exceptional
numbers of horses. Furthermore, most horses in Bronze Age monumental
groups are not hidden within the monuments but are arranged visibly as part
of the monumental group. Unlike most other mortuary traditions in Eurasia,
these arrangements make the horses cognitively accessible to people using
the monuments and offer a model of social order in which horses are a central
and active part.

Arguing that horses are not wealth but are instead common, valued, and
central parts of everyday experience is not to suggest that horses were not
sacrificed as an important action related to cosmological views and models
of mortuary order. This view of order was not one centered on hierarchy
but on the affirmation of common experience in a mobile world in which
humans and animals interact within a landscape made up of subsistence
resources and monumental structures. In the domesticated sphere, only
horses and humans move freely around this world; when the people gather,
horses gather with them.

KHIRIGSUURS AS INDICATORS OF COMMUNAL ACTIVITY

Khirigsuurs with only a few horses buried with them are clearly locales
where groups of people, perhaps extended families, could have gathered to
build a monument and demonstrate their commitment to the social and cosmic order represented by that monument. In the process they gave up some of their livestock. The many thousands of these structures throughout Mongolia and southern Siberia suggest that this was a common experience of the Bronze Age.

However, there are a few much larger monuments that required the consumption of many more horses than the average, and these monuments form the center of the argument for a hierarchical organization in Bronze Age Mongolia (Allard and Erdenebaatar 2005; Houle 2009; Houle and Erdenebaatar 2009). To approach the largest monuments, we must first discuss more ordinary khirigsuurs in some detail. The form and potential on-the-ground experience of a khirigsuur shows us the place that horses held in the uses of these monuments. Khirigsuurs are the most common locus in which horse remains are found and most are similar in their general components. Across the region there are tens of thousands of them; studies of different scales have been carried out in the lower Egiin Gol and Baga Gazaryn Chuluu in Mongolia, as well as in Hovsgol Aimag (Fitzhugh 2009; Frohlich et al. 2009; Takahama et al. 2004; Takahama and Hayashi 2003), the Middle Ider Valley and the Khanuy Valley in Mongolia (Allard and Erdenebaatar 2005; Houle 2009; Houle and Erdenebaatar 2009), and the Altai Mountains and Tuva (Mandelshtam 1983; Tsybiktarov 1995) (Figure 13.1).

Figure 13.4 shows the plans of three khirigsuurs that illustrate how they divide space and structure experiences around them. In all examples, the monument is focused on a central mound that is surrounded by an array of ground-level alignments and small mounds of stone. Of primary importance here is the fence that surrounds the mound, creating an enclosed space. The area within the fence is frequently empty, but there may be features within it that connect the exterior space to the central mound. Outside the fence is an array of satellite features—mounds, or pavement areas, sometimes haphazardly clustered and sometimes organized and creating another sort of surrounding ring or satellite zone. It is clear from these layouts that there are mechanisms here for highlighting and maintaining social difference, but, more important, also for bringing people together through a focused and common experience of movement through a space.

Khirigsuur monuments are designed: their plans are made up of regular components added in systematic ways (Wright 2007), and horses are also added to the monuments in specific ways. Horses enter these monuments in the satellite features outside the fence. If the patterns of movement at a contemporary social gathering around an active monument were mapped onto
a khirigsuur plan, living horses would be found outside of the fence. There are clearly two patterns of satellite arrangement. First, and most common, is a haphazard style, in which the satellites are the only elements that do not have a regular or symmetrical relationship to the central mound. There is also a second pattern in which the satellites are part of distinctive asymmetric arrays (Figure 13.4). This second arrangement includes cases in which most or all of the satellites may contain horse remains. Haphazard satellite arrays, with overlapping rings and mounds, and disparate radiocarbon dates (Figure 13.4; see Hall et al. 1999; Fitzhugh and Bayarsaikhan 2008; Torbot et al. 2003), suggest that these were not built as part of a single event but during repeated visits to the monument. Even systematic arrays are rarely complete, offering room for extension.

Dead horses are part of the social world around a khirigsuur, just as they were part of the social world when they were living animals. The horses that we find in monuments could easily have served in roles as catalysts for interaction, sources of historical and political rhetoric, and a measure of the importance of an event. The bottom line is that khirigsuurs can be social monuments in

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**Figure 13.4.** Three typical khirigsuurs: (a) with a circular fence and a symmetric array of satellites, (b) with a square fence, and (c) a complex example with a circular fence, interior elaboration, and a haphazard array of satellites. (Scale bars each 10 m.)
which the form suggests that they were built to be actively used and they did not promote a sort of individualizing ideology, but one that was participatory, event-centered, and temporal, and the horses were sacrificed there to mark the scale and importance of the event. In this case, the answer to the question of “who caused the horses to be sacrificed at these monuments” is that those who gathered there did. They did so not by the command of one person, living or dead, but by the will of the group.

COMMON PRACTICE AT DIFFERENT SCALES

The exceptionally large, megamonuments of central and western Mongolia, mentioned above as the exceptions used to argue the case for monumental hierarchy in Bronze Age Mongolia, are huge khirigsuurs, several orders of magnitude larger than anything else on the landscape and comparable in size with the largest kurgans from Central Asia. In some cases, they also consumed hundreds of times as many horses as other monuments. The exceptional nature of these monuments speaks to their exceptional social functions.

Here I argue that these huge monuments are not a measure of individual status and hierarchical position. Because of their position in an economic landscape characterized by a seasonal nomadic round, large monuments can also be interpreted as a form of signaling of group size and cohesion in a seasonally uninhabited landscape (compare Roscoe 2000). In this case, does scalar variation matter in how a monument might function or could be experienced, or are there paradoxes in possible interpretations between the huge and the normal khirigsuur monuments?

Figure 13.5 shows plan views of two megamonuments: one in the Khanuy Valley of the Northern Khangai, and the other in the Middle Ider Valley of the Southwestern Khangai. The central mound, the fence, and the satellite zone are all clearly present. These large monuments are almost identical to their smaller counterparts (compare Figure 13.5b and Figure 13.4a). Based on their similarities to smaller monuments, I contend that these big monuments work the same way as the smaller ones. Their larger size means that they include more people, more stone, and more horses. But because of the similarities in form and structure of the monuments, individuals with previous experience at smaller monuments would know how to move around them, where they can or cannot go, who should be where in the monumental space, and where their horses should stand and move. This shows us a shared ideology from the smallest groups, building little monuments, to the biggest gatherings. Even if an elite manager inspired the building of a huge monument, the conservative
formal similarity to smaller ones demonstrates a strong leveling element in Bronze Age Inner Asian society.

In addition to the conservative form showing a leveling tendency among Bronze Age Mongolian monument builders, the sacrifice of horses within monuments, especially in larger numbers, also provides a leveling function. Individuals with more horses to give up may do so to demonstrate their commitment to the communal endeavor and also possibly to bring them to a level closer to their peers.

How are horses incorporated into these large monuments? In some khirigsuurs, like those in the Middle Ider, they are arrayed just like they would be for a smaller monument and the number of horses interred is no greater than anywhere else. At sites like Urt Balagyn in Khanuy, however, as many as 1,700 horses were sacrificed in only a few events, giving this monument its cachet (Allard and Erdenebaatar 2005). Is this number of horses so extreme that it must reflect a society in which paramount chiefs organize monument construction? There would have been a huge economic price for building this
monument, along with the smaller ones surrounding it in the valley, but a single wealthy individual need not have paid the whole bill. Instead, it is more likely that scores of individual herders provided horses themselves.

The number of horses can carry an exceptional meaning—as individual horses are participants in the social world, so can masses of horses be catalysts for large events and long-remembered experiences. If these huge monuments are not built at the command of an individual leader, the conclusion is that they mark some form of major event and would provoke future respect and appreciation of the power of place, and the cohesive action of a community. When a huge sacrifice of horses is part of this event, these animals are more than treasures buried in stone mounds; they become remembered and active elements in the use of the monument. Economically and socially important animals are therefore killed and become temporal and spatial anchors—chronotopes (Bakhtin 1981; Ingold 1993)—for a community for generations to come.

AN ALTERNATIVE MODEL

This chapter leaves us with an alternative model of animals and inequality in Bronze Age Inner Asian society, one in which horses incorporated into monumental structures, and usually considered to be sacrificed wealth deposited in graves, can be seen not as vehicles of inequality but as sacrifices acting as leveling mechanisms to maintain social cohesion. These monuments can exist and function as social mechanisms without the need for a chiefly elite to command their construction; as the sheer number of ordinary monuments help to show, it is the need for integrating activities over the short and long term that drives their construction. Social cohesion is critical to survival during the time of the adoption of nomadic pastoralism, which included new mobility practices. Building on documented historic and modern nomadic pastoralist practices, it is clear that community-based pasture management arrangements, long-range social networks, confederations that protect isolated herding groups, and the ability to move away from an unfavorable social situation are critical to success as a nomadic pastoralist, and appropriate social mechanisms must have been developed very early in the adoption of nomadic pastoralism in Bronze Age Mongolia. In this region, the power of an emerging elite to organize people and build monuments was overshadowed by the ability of the people of a community to communicate their own solidarity and their willingness to work, and to sacrifice the most important animals in their world within enduring stone monuments.
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