Metaphorical projection and integrated cognitive systems: The Samburu in North Central Kenya

Shinya Konaka

Graduate School of International Relations, University of Shizuoka, Japan

ABSTRACT

Characteristics of the cognitive systems in the Samburu pastoral people in North Central Kenya, in East Africa were investigated with special attention to their metaphorical way of thinking. This revealed that their perceptions of livestock, humans, and wild animals are an integrated system, reinforcing the social significance of animals. The cognitive system of the Samburu does not separate these categories, but instead perceives them as parts of an integrated system that is loosely and flexibly connected by the logic of metaphor. Moreover, myths and customs of the Samburu indicate that even the shift from livestock to wild animals and from human beings to wild animals can happen in the imagined world of the Samburu. The distinctions between the three categories are vague, permeable, and even convertible. Therefore, the dichotomy of “wild animal versus livestock” or even “humans versus animals” needs reevaluation; instead, the cognitive system should be analyzed as an integrated system in which objects are metaphorically interrelated. Investigations also suggested that the dichotomy between small versus large stock should be viewed with fresh eyes. The idea of a transition between hunting and herding was also supported, because wild animals and livestock are metaphorically connected even in totally pastoral African societies.

Keywords: Samburu, pastoralism, metaphor, anthropomorphism, integrated cognitive system

INTRODUCTION

Close examination of several characteristics of the cognitive systems of the Samburu pastoral people in North Central Kenya in East Africa, with special reference to the metaphorical way of thinking, reveals perceptions of livestock, human, and wild animals as an integrated system, reinforcing the social significance of animals.

There is a long and rich anthropological tradition of examining the cognition of people in various cultures. As Ohnuki-Tierney (1981) summarized, the tradition of these studies until early 1980s can be classified as either European “symbolic classification” (Durkheim & Mauss 1963; Lévi-Strauss 1966; Needham 1979) or American “cognitive anthropology” (Conklin 1955; Goodenough 1956; Tylor 1969). Although both traditions undoubtedly helped to relativize the Western notion of cognition to great extent, they omitted examination of the dualistic character of nature and cul-
ture, human being and animal.

Anthropological studies after the 1990s, which tended to regard the dichotomy as more debatable, questioned whether the Western notion of cognition was adequate. For example, Bird-David (1999) criticizes Lévi-Strauss’ analysis of totemism, reviewing the history of animism theory. She points out that “Lévi-Strauss did not question the authority of the Western objectivist view of reality, which accepted a priori the nature/society dualism” (1999: 70). Descola (1996: 98) also criticizes the dichotomies: nature-culture, nature-supernature, nature-art, nature-history, nature-mind, etc. He suggests, “Once the ancient nature-culture orthogonal grid has been disposed of, a new multi-dimensional anthropological landscape may emerge” (1996: 99).

Thus, if such dichotomies are discarded, what are the characteristics of a non-dualistic relationship between nature and culture, humans and non-humans? Since the 1980s, cognitive scientists have helped to answer this question through the study of metaphor. For example, Lakoff and Johnson (1980: 3) suggest that “the way we think, what we experience, and what we do every day is very much a matter of metaphor.” Guthrie (1993) gave us another clue. He focuses on “anthropomorphism” in human cognition. He explains that “scanning the world for what most concerns us—living things are especially humans—we find many apparent cases. Some of these prove illusory. When they do, we are animating (attributing life to the nonliving) or anthropomorphizing (attributing human characteristics to the nonhuman)” (1993: 62). The examination of metaphor and anthropomorphism allows more flexibility than rigid dualism. Thus, the ethnography of non-dualistic perception may be described in terms of metaphor and anthropomorphism.

Certainly, since the classic ethnography of Evans-Pritchard (1940), anthropologists have been focusing on the cognitive system of pastoral people. However, most of the research has limited attention to the pastoralist’s cognitive system for livestock, typically shown by the classification of livestock based on the color and pattern of an animal’s body (e.g., Fukui 1979).

Despite the great contribution of this research to the study of the cognitive system of pastoralists, such research presupposes that cognition of livestock is separate from the cognition of humans and of wild animals. In addition, a prerequisite to this supposition is that a dichotomy distinguishes the human world from the natural world, an idea which is deeply rooted in the thinking of the non-pastoral modern world. Therefore, a reexamination is warranted of the cognition of pastoralists from the viewpoint of a non-dualistic perception of livestock, humans, and wild animals.

Certainly, pastoralists do not confuse livestock with humans or livestock with wild animals. They clearly recognize each category independently. However, the metaphorical connection of these categories in the imagined world view may offer an important clue to understanding pastoral culture.

Distinguishing the indigenous point of view from an analytical point of view is one of the difficulties in the study of metaphor. Ethnographic data may not reflect the indigenous point of view that is completely free of bias. Furthermore, the analytical point of view may be useful to clarify the cognitive system of a people.
Therefore, a sort of analytical model of the characteristics of the cognition of pastoral people may be developed that incorporates the non-dualistic paradigm, which is extracted and abstracted from the daily lives of the pastoralists, and ethnographic cases to a certain extent.

**THE SAMBURU AND METAPHOR**

The Samburu (self-professed *Ilokip*) are semi-nomadic pastoralists who occupy the Samburu District in a region of semi-desert in the north central area of the Republic of Kenya. They speak the north Maa dialect of the Maa language and belong to the greater family of Eastern Nilotic peoples (Sommer & Vossen 1993). The total population of the Samburu was 143,547 in 1999 (Republic of Kenya 2001). Samburu society may be characterized as a gerontocracy with complicated age systems (Spencer 1965).

Most of the Samburu raise cattle, sheep, and goats. Although some of the population practice agriculture and labor for wages, pastoralism is still the major source of subsistence for the Samburu. Hunter-gatherers and blacksmiths are despised. Food staples include mainly milk and milk products, such as yogurt and butter, which the Samburu augment with boiled and roasted meat.

Metaphor is the keynote of the daily life of the Samburu. Metaphorical expressions and similes are commonly used in daily conversation: for example, “X is like Y” (X *kotwana* Y) and “X, like Y” (X *atwana* Y). Metaphor also is reflected in the Samburu culture; it is used in the naming system (Konaka 2000), material culture (Konaka 2006a), myth, legend, rumor, and ritual.

**THE INTEGRATED COGNITIVE SYSTEM OF THE SAMBURU:**

**COMMON EXPRESSIONS AND SIMILES**

The Samburu clearly distinguish the categories of livestock, humans, and wild animals as each category is identified with a different folk term: *sowom* for livestock, *oltungana* for human, and *ngweshi* for wild animals. The general folk term *nkweni* means bird. To refer to animals that are unfamiliar, the Samburu borrow Swahili language, which is the *lingua franca* of East Africa. For example, fishes are called *sanaki*, from the Swahili.

From 1992 to 2002, I collected ethnographic data at Lorroki Division, the Samburu District, in north central Kenya. Additional supplementary research was carried out afterwards. Each ethnographic case represents the collection and extraction of language from each moment of daily life and daily conversations of the Samburu. The data is also supplemented by further interviews of several Samburu informants. The informants were of various genders, ages, and socio-economic status. The Samburu elders demonstrated a much greater knowledge of common expressions than younger people, including older women who tended to have much more knowledge than younger men. However, in general, men appeared to have more knowledge of language than women.

Each case is linked to daily life and situated in a particular socio-cultural context. For the sake of brevity, however, specific contextual descriptions of the background information in each case were omitted. Data associated with ritual, myth, and folk
tales of the Samburu are noted, but the focus of this study is limited to the pastoral perception of livestock, human, and wild animals.

There are many common similes found in the daily conversation of the Samburu. For example, similes including comparisons with plants and livestock include the following:

He is [as] tall as a euphorbia (scientific name: Euphorbia candelabrum).
(Keiudo atwana serui).

He is [as] lanky as a galingale (scientific name: Cyperus schimperianus).
(Keisas atwana loperria).

He is [as] short as a sheep of the Meru [the name of ethnic group].
(Keidorop atwana nker ee limero).

She is [as] beautiful as a cow. He is [as] handsome as a cow.
(Keisupat teembene atwana nketeri).

Similes including comparisons with wild animals include the following:

He is [as] huge as an elephant.
(Keisapuk atwana ntomme).

He is [as] fat as a hippopotamus.
(Kepirr atwana turka)

He is [as] clever as a Black-backed jackal.
(Keigem atwana nbarie).

He is [as] gluttonous as a hyena.
(Kelibo atwana nkonoi).

The Samburu also produce traditional beadwork. The colors of the beads are expressed as similes including the following:

It is [as] green as the pasture.
(Keinyori atwana nkojel).

It is [as] blue as the sky.
(Keisurwa atwana nkai).

It is [as] white as milk.
(Kebor atwana kule).

It is [as] red as blood.
(Kenyuki atwana lolo).

It is [as] yellow as egg yolk.
(Keidarei atwana nkepsi).

THE LIVESTOCK-HUMAN METAPHOR

There are several instances of metaphors comparing livestock and humans; indeed, such metaphors are common in pastoral societies (Tani 1976). Among the Samburu, the world of livestock is likened to the world of human beings, and vice verse. For example, children are likened to young goats. For example, a mother may address her son, “Lukuo lai,” which means “my young he-goat.” A daughter may be addressed as a “Nkwo ai,” which means “my young she-goat.”

During typical rites of passage, the Samburu themselves recognize and explain the similarity between livestock affairs and human affairs. Unmarried girls are
compared to heifers. When a bridegroom proposes a marriage, he says, "Katodiwa utawo tankan lino," which means, "I saw a heifer at your settlement." Circumcised youths are likened to oxen. The reason is that although they are circumcised, they are not yet allowed to marry and procreate, just as oxen are castrated and cannot procreate. In several rites of passage called "Ilmugiet" youths slaughter oxen, their symbolic metaphor. Old men are likened to bulls because, like bulls, they are allowed to procreate. At the time of death, bulls, bull-goats and bull-rams are slaughtered to symbolize the end of the procreation for the old man. These examples also suggest the importance of fertility in the Samburu view of human life (Konaka 1997: 151).

Additional metaphors among the Samburu liken the tooth extraction in children to cutting the ears of small goats and sheep. Circumcising a boy is comparable to castrating a lamb.

The livestock-human metaphor of a Samburu male may be summarized as follows (Table 1):

- A baby calf is likened to an infant.
- A male calf is likened to a boy.
- An ox is likened to a youth.
- A bull is likened to an old man.
- The same kind of livestock-human metaphor is applicable to females (Table 2):
- A baby calf is likened to an infant.
- A female calf is likened to girl.
- A heifer is likened to a circumcised girl.
- A cow is likened to a mother.

### Table 1. Livestock-human Metaphor (Male)

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Human</th>
<th>Transition</th>
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<tbody>
<tr>
<td>baby calf</td>
<td>infant</td>
<td>tooth extraction</td>
</tr>
<tr>
<td>lashe nkini</td>
<td>(nkorai nkini)</td>
<td>ear cutting</td>
</tr>
<tr>
<td>male calf</td>
<td>boy</td>
<td>circumcision</td>
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<tr>
<td>lashe sitimaan</td>
<td>(laieni)</td>
<td>rite of passage (Ilmugiet)</td>
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<td>ox</td>
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<td>tmongo</td>
<td>(olmurrur)</td>
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<tr>
<td>bull</td>
<td>old man</td>
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<td>laingoni</td>
<td>(olpaiyani)</td>
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### Table 2. Livestock-human Metaphor (Female)

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Human</th>
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<tbody>
<tr>
<td>baby calf</td>
<td>infant</td>
<td>tooth extraction</td>
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<tr>
<td>lashe nkini</td>
<td>(nkorai nkini)</td>
<td>ear cutting</td>
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<tr>
<td>female calf</td>
<td>girl</td>
<td>circumcision</td>
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<td>lashe lipong</td>
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<tr>
<td>heifer</td>
<td>circumcised girl</td>
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<tr>
<td>utawo</td>
<td>(surnorei)</td>
<td></td>
</tr>
<tr>
<td>cow</td>
<td>mother</td>
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<tr>
<td>nketeng</td>
<td>(siruunki)</td>
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METAPHORS FOR WILD ANIMALS

The anthropomorphism of wild animals is commonly found in several contexts of the Samburu culture. For example, the Samburu found kinship relationships between various wild animal species. They say, “An African elephant is the maternal uncle of an African hare” and “A black-backed jackal and a dog are sisters.”

Characteristics of wild animals are likened to those of humans. A Samburu folk tale illustrates the metamorphosis from human to wild animal: “Side-striped jackals are former initiates to the age set who did not come back to the settlement as expected before dark.” This case shows that both humans and wild animals share characteristics, and the categories of humans and wild animals are permeable and transformable in the Samburu culture.

Wild animals are likened not only to human beings but also to livestock. Therefore, a sort of “livestock-morphism” can be found in the Samburu culture (the word “morphism” is used as in “anthropomorphism” or “zoomorphism”). A Samburu myth, which was collected on August 30, 1999, at the Lorroi Division, Samburu District, provides a good example:

Once upon a time, all wild animals were livestock. Women keep elands as if they were cows and buffaloes. Women also kept Thomson’s gazelles, Grant’s gazelles, and impalas as if they were small stock (goats and sheep). Elephants helped women to gather firewood. Lions were watchdogs for women. One day, all those animals ran away to become the wild animals that we know today. Women came to be married to men and were presented with livestock from the men.

Contrary to our archeological knowledge that wild animals are domesticated to become livestock, this Samburu myth suggests that livestock preexisted wild animals. A sort of “livestock-morphism” is also reflected in the Samburu taxonomy of wild animals (Table 3).

The Samburu have five categories of wild animals as follows: Eland, buffalo, and greater kudu belong to the group of cow (ungulates), a sort of Samburu Bovidae. Thomson’s gazelle, Grant’s gazelle, the impala, and the gerenuk belong to the group of goat, roughly a sort of Samburu Capra. The common warthog belongs to the

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**Table 3. Samburu Taxonomy of Wild Animals**

<table>
<thead>
<tr>
<th>Group</th>
<th>Species</th>
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<tbody>
<tr>
<td>Group of cow</td>
<td>Eland <em>(Suria)</em>, Buffalo <em>(olosowan)</em>, and Greater kudu <em>(Innaalo)</em></td>
</tr>
<tr>
<td>(The Samburu “Bovidae”)</td>
<td></td>
</tr>
<tr>
<td>Group of goat</td>
<td>Thomson’s gazelle <em>(nkoipela)</em>, Grant’s gazelle <em>(nqoli)</em>, Impala <em>(nitarwe)</em>, and Gerenuk <em>(irriko)</em></td>
</tr>
<tr>
<td>(The Samburu “Capra”)</td>
<td></td>
</tr>
<tr>
<td>Group of sheep</td>
<td>Common warthog <em>(lituur)</em></td>
</tr>
<tr>
<td>(The Samburu “Ovis”)</td>
<td></td>
</tr>
<tr>
<td>Group of camel</td>
<td>Giraffe <em>(Inrot)</em></td>
</tr>
<tr>
<td>(The Samburu “Camelidae”)</td>
<td></td>
</tr>
<tr>
<td>Group of donkey</td>
<td>Common zebra <em>(sokotiko)</em> and Gravy’s zebra <em>(loitiko)</em></td>
</tr>
<tr>
<td>(The Samburu “Asinus”)</td>
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</table>
group of sheep. Therefore, it is a sort of Samburu Ovis. The giraffe belongs to the group of camel, a sort of Samburu Camelidae. The common zebra and Gravey’s zebra belong to the group of donkey, a sort of Samburu Asinus.

The Samburu eat beef, mutton and camel meat, but they do not eat donkey meat. This pattern of food preferences also correlates to equivalent wild animal categories. The meat of animals belonging to the groups of cow, goat, sheep, or camel is edible for the Samburu with one exception. Warthogs are not considered edible by the Samburu, although warthogs are classified in the same category as sheep. The Samburu commonly say, “Buffalo meat tastes just like beef” or “Thomson’s gazelle meat tastes just like mutton.”

A sort of “livestock-morphism” is also reflected in Samburu culture. Several kinds of wild animals are deemed sacred animals, just because they have characteristics similar to those of livestock. The aardvark is an example. The Samburu say, “A man who kills an aardvark with one thrust will get lucky.” After the kill, the man is supposed to slaughter a male sheep. Then, he must roast both the aardvark meat and the mutton, side by side. The shape of an aardvark from rump to tail is said to resemble that of a sheep.

On the contrary, several kinds of wild animals are religiously avoided, just because they have characteristics different from those of livestock. The common zebra is an example. The Samburu say that a zebra is not like livestock because it has teeth on both its upper and lower jaws and because the hooves are closed. Therefore, the Samburu have a strong aversion to the zebra meat. If a boy eats a single piece of zebra meat, he is forbidden to enter his house for some days.

The Samburu view of birds also reveals “livestock-morphism.” For instance, several kinds of birds are considered sacred because they share characteristics with livestock. One example is the East African bird, Somali Fiscal (Lanius somalensis). Its local name, Ikeriketeng means “a pattern of the cow.” That is, the coloration of the Somali Fiscal, white with black spots, resembles the color and pattern of coloration in local cows (Figure 1). Young men search for the bird to find feathers they can use in a headdress to be worn after circumcision.

The Green Winged Pytilia (Pytilia melba) is also a sacred bird. Its local name, Ikine, means a goat. Its awkward manner of walking resembles a goat’s gait. Samburu youths also use the feathers of this bird for headdresses.

The Yellow Wagtail (Motacilla flava), whose local name, Nchokut, means herdboy, is also a sacred bird. Like a herdboy, the Yellow Wagtail is always found in the vicinity of the cattle herd upon which it depends for ticks to eat. As with the other sacred birds, its feathers are also sought for headdresses.
DISCUSSION

The cognitive systems of the Samburu can be characterized by a focus on livestock. Several kinds of wild animals are perceived through metaphoric comparisons with livestock. Human beings, in accordance with age and gender, are also perceived through metaphors with livestock.

The classic theory of anomaly and ambiguity proposed by Douglas (1966) is partly applicable also to the Samburu case. For example, eating the meat of a common zebra is avoided because the common zebra has some anomalous characteristics from the livestock category. However, more importantly for the Samburu, livestock forms the center of their sense of normality quite strongly. That is, the Samburu evaluate animals in accordance with the similarity to the characteristics of livestock. The Samburu do not question whether something is normal or abnormal to the order, but ask in what way it is similar to livestock. Therefore, an analysis of the Samburu cognitive system requires that we discard the overall application of the anomaly theory of structural anthropology and instead shift to a theory that emphasizes similarities.

Cognitive scientists have developed the theory of base and target domain (e.g., Holyoak & Thagard 1995) based on the metaphor and similarities. Presumably, base domain may be projected to the target domain. Livestock form a base domain of the cognitive systems of the Samburu. This base domain, based on livestock, is projected to other objects, like human beings and wild animals, as target domains. Therefore, the meat of a wild animal that is considered similar to livestock is considered edible. A bird with coloration similar color to that of a cow is sacred. In this respect, Samburu cognition can be characterized by not only anthropomorphism but also “livestock-morphism.” Of course, the reverse is also true in several instances. Nonetheless, the Samburu place a strong emphasis on livestock, and metaphor is quite ubiquitous in Samburu pastoral culture.

Perhaps livestock offers good raw material for a metaphorical way of thinking. It is “good to think,” as Lévi-Strauss (1965: 89) pointed out in his work on totemism. In a sense, livestock is the starting point of metaphor. Livestock generates metaphor and culture. Clearly, in order to understand pastoral societies, it is important to recognize the social significance of animals, as generators of metaphor.

Needless to say, the logic of metaphors is based on similarity. If we adopt the logic of sameness, “X is equal to Y,” both objects are totally identical. If we adopt the logic of difference, “X is not equal to Y,” both objects are totally divergent. Therefore, both kinds of logic provide only a strict cognitive framework.

However, if we adopt the logic of similarity, “X is nearly equal to Y,” both objects are loosely and flexibly connected. Of course, the Samburu certainly do not confuse these types of logic. They never confuse livestock and wild animals nor livestock and humans. They totally understand such differences. But at the same time, they feel these different objects share some similarities. Therefore, what they recognize is the similarities among objects belonging to different categories. This is totally different from mere confusion of categories.

Therefore, metaphor connects different objects loosely and flexibly with the logic
of similarity.

To sum up, in the cognitive system of the Samburu, livestock, wild animals, and human beings are not separated, but form an integrated system that is loosely and flexibly connected by the logic of metaphor. To be sure, similarities are no more important than differences, however, because any classification systems require both.

Several myths and customs of the Samburu indicate that even the shift from livestock to wild animals and from human beings to wild animals can happen in the imagined world of the people. The distinctions between livestock, wild animals, and human beings are vague, permeable, and even convertible, because they are loosely tied with the logic of metaphor.

Therefore, given a more fundamental examination of the worldview of pastoralists, the dichotomy of “wild animal versus livestock” or even “humans versus animals” should be reevaluated. Researchers of pastoral society should not presuppose a separation of animals from livestock and humans from livestock. Rather, the cognitive system should be analyzed as an integrated system in which objects are metaphorically interrelated.

Lastly, there are implications for the comparative studies of pastoral societies. In addition to the reconsideration of the dichotomy of wild animal versus livestock and humans versus animals, the dichotomy of small stock versus large stock should also be viewed with fresh eyes. For example, in Samburu society, a person may go to the market to sell large stock and, in turn, purchase small stock with the proceeds (Konaka 1997, 2001, 2006b) or the reverse. Therefore, large stock and small stock are convertible in the market economy.

At several rites of passage, it is required for a Samburu initiate to slaughter an ox, a large stock animal. But, some initiates slaughter a male goat, a small stock animal, instead of an ox. The reason is that it is difficult for an impoverished Samburu to slaughter a large stock animal, which can be sold at a high price, especially after the incessant drought. Furthermore, some poor Samburu do not own any large stock at all. Therefore, at least recently, replacing small stock animals for large stock in rituals is not regarded as a violation of custom. In fact, it is socially approved because the drought and impoverishment are problems that all herders share.

Of course, large stock and small stock have different meanings in terms of social prestige. However, we should not overemphasize the difference, since both are convertible and connected loosely and flexibly with the logic of metaphor.

From this point of view, several assumptions proposed by Stammel and Takakura (see the introduction of this book) are interesting. My research outcome tends to support Stammel’s opinion that we should include the significance of non-pastoral animals in our analyses of pastoralists. Introduction of this volume (Stammel and Takakura) notes that among Arctic hunter-herder societies the significance of small stock is partly replaced by game and fish. I can also support the argument on the transition between hunting and gathering and herding and cultivation (Layton et al. 1991) since my research shows that wild animals and livestock are metaphorically connected even in purely pastoral African societies, where hunter-gatherers are socially despised by pastoralists. Although my evidence does not
necessarily substantiate the historical convertibility between hunter-gathers and pastoralists in African pastoral societies, other Sambaru researchers (Fumagalli 1977; 71–72; Sperling 1987: 48–49) have also suggested the convertibility between hunter-gathers and herders. Nonetheless, my evidence shows the cognitive premise of the convertibility.

Regardless of whether or not my theory of metaphorical objection and integrated cognitive system may be generalized to other pastoral societies of the Arctic, Africa and Central Asia, metaphor perhaps offers a clue to understanding characteristics of the pastoral society. The fact that objects in the pastoral societies may be connected loosely and flexibly with the logic of metaphor allows us to broaden our comparative perspective.

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Florian Stammler
Arctic Centre, University of Lapland, Finland &
Scott Polar Research Institute, University of Cambridge, UK

Hiroki Takakura
Center for Northeast Asian Studies,
Tohoku University, Japan

Center for Northeast Asian Studies
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