

**AT HOME, WITH THE GOOD HORSES:
RELATIONALITY, ROLES, IDENTITY AND IDEOLOGY
IN IRON AGE INNER ASIA**

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ABSTRACT

As an overarching theme, this thesis is concerned with investigating archaeologically the relationships between humans and horses within the Iron Age Inner Asian society of the Pazyryk archaeological culture.

Prior archaeologies of horses in Iron Age Eurasia have approached them in a segmented fashion: in either cultural/economic, social/ideological or ritual/cosmological realms. Horses have been objectified as parts of “material culture” or the “environment,” significant only as commodities exploited for culinary or technological purposes, or as symbolic proxies for human attributes and meanings. Within these narratives, I argue, lie faulty anthropocentric meta-theoretical assumptions about both the nature of “culture” and the domination of horses by humans.

This thesis, then, challenges traditional archaeological and anthropological understandings of animals as absent referents within human societies, unidirectionally acted upon by humans. I adopt an alternate “human-animal studies” approach, which considers animals as partners in the interspecifically co-created, embodied worlds they share with humans. In doing this, I argue that a consideration of horses, themselves, and how they come together with humans, is a necessary prerequisite to investigating societies within which they were or are embedded. Pulling from ethological and ethnographic materials, including my own position within the sub-culture of “working riders,” I present a model of human-horse interactions—as phenomenologically lived—based upon academic models of human nonverbal and interpersonal communication.

From this more holistic perspective, based upon original field work at the Hermitage Museum, I reassess the Pazyryk human-horse burials. I suggest that horses were respected as individual subjects, and that human and horse roles, statuses, identities and ideology were blended, and mutually and contingently constituted as meaningful. I conclude with fresh interpretations that are quite different from previously asserted conceptions of the Pazyryk people as “fierce warriors,” and suggest that an archaeology of relationality which includes animals holds promise for future studies.

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You do not die through this, nor are you really harmed.
You go to the heavens on paths pleasant to travel.

—*Rig Veda* 1:162

(Ancient hymn of ritual horse sacrifice)

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CHAPTER ONE

STRUCTURE AND METHODOLOGY OF THE RESEARCH

Tell me the horse of a population. I'll tell you
about its customs and institutions.

—Georges Cuvier,
French zoologist and paleontologist (1769-1832)

Opening Remarks

Archaeology is by definition the study of past human animals and the things and impacts they leave behind. Here, we construct borders and boundaries—real and imagined—between cultural and natural space and being. Here, other animals conventionally are considered as kinds, calories or constructs. In the stories we tell of past societies, they are objects—set-pieces or blurred backdrops of scenery, at the least parts of the human-created soundstage, at the most walk-on extras. They are certainly not actors; they are influential to the plotline only insofar as humans use them. They are used and exploited, dominated and subjugated. It is the humans who *act upon* them.

In addition to this nature-culture dualism, the perceived distance between objective and subjective epistemologies today engages philosophers and scholars in virtually every academic discipline. Such distinctions concern opposing the real and the imagined, the essential and the culturally constructed, behaviorism and humanism, the observable and the inferred, the quantitative and the qualitative, the mind and the body, reason and emotion. This objectivity-subjectivity dualism is key to the ways scholars validate, or fail to validate, knowledge. In the archaeological realm, this tension has manifested itself in two ways: it has shaped both archaeological understandings of the types of information that may be accessed from archaeological material, and also the type of research agendas and methodologies used to approach archaeologically visible material. In other words, the dichotomy of objectivity-subjectivity concerns at a deep level both the types of questions archaeologists pose and the manner in which they are addressed.

Both the separation of nature from culture and the meta-theoretical tension between objective and subjective ways of knowing are apparent in archaeological studies exploring the horse-using societies of Iron Age Eurasia between approximately 800 BCE to CE 200.

By this time domestication already had occurred several thousand years earlier (Benecke von den Driesch 2003, Boyle *et al.* 2002; Levine 1999; Levine *et al.* 2003; Olsen 2008; Outram *et al.* 2009; Stiff *et al.* 2006). Riding and horsekeeping over those millennia had developed to an advanced level of expertise, and the horse had permeated many spheres of everyday life. Iron Age Eurasian burial mounds, or *kurgans*, more often than not include one or more sacrificed horses, often outfitted for riding, and certain burials have yielded great numbers of horses—nearly 140 in the early Iron Age Arzhan 1 kurgan in Tuva, South Siberia alone (Piggott 1992: 112-114).

The archaeological material analyzed in this study comes from excavations in the Altai Mountains of southern Siberia begun in the 1920s. From then through the 1940s, Russian archaeologists Mikhail Gryaznov (1950, 1969; also Golomshtok and Griaznov 1933) and Sergei Rudenko (1970) excavated several Iron Age kurgans in a complex at the site of Pazyryk site on a high mountain plateau in the Ust-Ulagan Valley. These excavations yielded a wealth of artifacts: artfully designed metal-foil adornments, horse trappings, and objects of daily living were interred with the dead. Equally valuable were the bodies and clothing of those buried, both human and horse, for many were not decayed but preserved in permafrost, particularly where the early digging of looters had allowed water into the kurgans which then froze and remained frozen. Other organic materials were also preserved in this way: carpets, fur, felt, clothing, hair, tools and furniture. These particular finds are potentially extremely valuable in assessing the horse-related customs and beliefs of this society because the presumed Pazyryk leaders and everyday people were buried with horses—entire horses, richly caparisoned in fantastically detailed, ornate outfits, as exemplified in Figure 1.1. The first Pazyryk excavations gave their name to an archaeological culture which became apparent upon subsequent investigation of hundreds of coeval kurgans of similar structure and with analogous grave goods within the Altai region.¹ The richness of these burials and the potential for interpreting the archaeological material due to its degree of preservation called out for investigation and interpretation, leaving them still today highly studied, either alone or as a part of larger regional, temporal or ideological schemes.

A variety of archaeological studies of the horses and horse societies of prehistoric Inner Asia have shed considerable light on the people of Iron Age Inner Asia. These studies have varied in approach through time, with the interpretations ascribed to the material paralleling changing political and research agendas. As I shall discuss, the Pazyryk archaeological culture has been explored using a variety of theoretical approaches—from more objectively scientific to more subjectively humanistic approaches, from culture-historical and ethnogenetic formats, to Marxist and neo-Marxist economic and political frameworks—each with

¹ “Pazyryk” is an Altaian word that has been used as the name for this archaeological culture. Pazyryk is not rendered plural, thus its use is similar to that of “deer” or “sheep”—it can be both plural and singular.



Figure 1.1. *Reconstruction of a Pazyryk horse's outfit from Kurgan 11, Berel cemetery, Kazakhstan (Chang and Guroff 2007, vi).*

its own set of underlying assumptions. However, there is one thing they all share: in all of these cases the horses have been, and continue to be, viewed and studied as objects, and/or as proxies for attributes of human subjects. In archaeological explorations of prehistoric human-horse relationships in Eurasia, the horse has been approached—like animals in general in archaeological studies—as “sustenance or symbol” (Shanklin 1985). The focus has been on the uses to which humans have put horses, with inherent assumptions about the domination and subjugation of horses by people. Whether viewed as as food, transportation, artifact, motif, catalyst for social change, or representation of social power, the horse is not considered to have been an active participant in human activities. As I shall show, studies of the Pazyryk burials which view animals as objects or subjugated subalterns—relevant only through their functional, economic or symbolic importance—belie other crucial ways they can be considered.

Development of Research Topic and Questions

The structure and content of this thesis have changed considerably from the time I developed my first questions, and ultimately came to include three sets of research ques-

tions about Pazyryk funerary materials. Thinking through these questions led also to a set of broader theoretical issues, and a series of several dominant sub-themes and concepts which are developed in the thesis. I outline these in turn.

First Question—Horses as Objects

In the early stages of this work, I had set out to examine the horses within the Pazyryk funerary context as they, to date, have been discussed within archaeological discourse: as objects, groups and sets, deposited grave goods, and items of material culture. In response to the conventional archaeological approach, I identified the primary research question of this thesis as:

- What did the horse mean to the people of the Pazyryk archaeological culture?

My interest was in assessing the Pazyryk funerary materials in terms of what they could reveal about the roles horses played in the lives of the people. Yet as I proceeded along this trajectory, something about this approach worried insistently at me as highly discordant. Viewing horses as objects was not consistent with my subjective experience of living with them. As a rider, breeder and caretaker, I have lived with horses from the time I was 12, and spent the last 15 years observing and interacting with up to 12 horses at once, including stallions, mares, and geldings. I have participated with them in their births, lifespans and deaths, and have raised, socialized and schooled many to be ridden. I share this context with those I shall term “working riders”—riders at a level of equestrian ability and knowledge that extends beyond casual riding into the level of living with and caring for horses and schooling them to be ridden, whether they engage in these activities professionally or avocationally.

For me, a major issue raised by the classification of horses as objects stems from the fact that while we might choose academically to designate them as such, within their own realms—and the realms of those humans who live and work with them—they remain, distinctly and separately, beings. Horses represent more than mere implements of human use or metaphors of human making. At a level more fundamental than that of human classification, use, or representational significance by or for humans, horses are not human constructions. They simply are; they are beings. As stated about dogs, but equally applicable to horses, “Dogs are not surrogates for theory; they are not just here to think with. They are here to live with” (Haraway 2003: 5).

A second, converging, problem with viewing horses as objects is foregrounded in the Pazyryk burials, where we have not just bones of horses, but their bodies. Archaeological

and anthropological scholars have problematized the dichotomous nature of studying bodies as either artifacts or persons, from science-based approaches or as social constructions, as nature or culture (e.g., Downes and Pollard 1999; Hamilakis *et al.* 2002; Sofaer 2006; Weiss and Haber 1999). These thoughts coalesced in a powerful manner for me when I conducted my field research in 2005. I spent three weeks analyzing the Pazyryk burial materials, a part of the Altai Collection, at the Hermitage Museum in St. Petersburg, Russian Federation. There I was able to examine not only the artifacts from the original Gryaznov and Rudenko expeditions, but also the bodies of two mummified humans and two horses. This profoundly affected me, in that I was no longer dealing with photographs, drawings or descriptions, but with bodies of beings who once had been alive. Archaeologists Lucy Kirk and Helen Start (1999: 208) have discussed their reactions of unease while excavating a subrecent cemetery, part of which they attribute to the fact that the bodies belonged to named individuals, and the remains included soft tissue: “We concluded that death does provoke emotional reactions and these need to be considered when we are attempting to interpret past funerary practices.” Anthropologist Maruska Svasek (2007: 229) argues that human remains are “able to evoke strong and often contradictory emotions, partly because they problematize the ‘subject-object’ divide.” Under her view, the emotional reactions we feel when encountering bodies stem in part from the fact that corpses are actively involved in emotional processes. They elicit from us emotions because we recognize that they were emotional beings. “Human remains—as former thinking and feeling bodies—possess a past of emotional subjectivity. As such, they are radically different from subject-like objects that have never cried, blushed or run away in fear” (Svasek 2007: 231).

In other words, these scholars point out that it is less difficult for some people to objectify—and stay objective about—remains of bodies when they are more abstracted, like skeletons. Being in the presence of human bodies so concretely *of* themselves is difficult, and it is difficult at a level that falls outside of the realm of scholarly training. When I viewed the Pazyryk human bodies during my fieldwork, I dealt with similar emotions. Animals’ bodies have not been included in such discussions, but for me the same feelings arose when viewing the bodies of the horses. My experience living with horses meant that at a level of visceral logic there was simply no way I *could* see them as anything other than individuals. While at that point I could only generally infer the lives of these individual horses, I could see, feel and be moved by their distinct deaths. This was a compelling motivation for me to explore whether or not I could find a way to look at these horses beyond their biological bodies, as the biographical individuals they were some 2,500 years ago (see Ray and Thomas 2003).

Second Questions—Horses as Individuals

Beyond these elements of my personal experience, a particular aspect of the Pazyryk horse burials calls out for an approach which acknowledges the horses in the burials as individuals: that the horses appear to have been ridden in particularly dangerous situations. This is a significant point which I explore in various places in this thesis. At this point it is relevant to state only that all horses are not the same. Each has unique strengths and weaknesses that must be acknowledged in order to deal with them effectively and safely. At a very practical level, working riders like myself must *necessarily* view particular horses as individuals in order to deal with them safely. Might not the people of Pazyryk—who apparently rode their horses in various dangerous situations—have viewed them in a similar manner? If we accept that this might be the case, and if we view the horses not as objects but as individuals with whom the Pazyryk people shared environmental and functional space, a more nuanced set of questions can be directed at the archaeologically visible funerary material:

- Why were these particular horses inhumed with this particular human?
- Why was *this* horse, but not *that* horse, caparisoned in this manner? Did the Pazyryk society perceive differences in individual horses that caused them to outfit them differently?
- What does the manner in which the horses were treated in the burials suggest about human interactions with particular horses?

With these questions in place, I felt closer to being able to explore the Pazyryk horses as an equestrian might do, as individuals. But even beginning with this more-focused assumption of the horses as individuals, they are still viewed as objects, albeit distinctive objects. They are still objectified, and because of my experiences this still felt incomplete and stilted. This view did not seem to capture either the quality or importance of the connection that develops between rider and ridden horse. This is because, as working riders know, over the course of the process of schooling a horse to be safe when ridden—which takes many years in order for the horse to be utterly reliable—the bi-directional communication between the two individuals develops into a rich, unique and multifaceted relationship. What might an exploration of those relationships add to understandings of Pazyryk society?

It is important to note that within the body of archaeological work exploring humans and horses as they interact, the term “relationship” is usually used to denote associations, often quantitatively assessed, between and among different inert, objectively defined variables. Indeed, every article in the edited volume *Horses and Humans: The Evolution of*

Human-Equine Relationship (Olsen *et al.* 2006) deals with the horse in this manner. Within that volume, even Kosintsev's (2006) article "The Human-Horse Relationship on the European-Asian Border in the Neolithic and Early Iron Age" deals with quantitative analysis of mortality patterns: the numbers of horse bones within burials relative to other variables. In another piece, Hanks (2003: 60) uses the term "relationship" to explore horses' symbolic importance, to "underscore the active means by which animals were utilized across a variety of symbolic fields within socio-cultural interaction and discourse." Studies exploring these types of associations have fruitfully enlightened many aspects of horses in prehistoric communities. Of course, these are not the only possible definitions of the term. Rather than an association or connection between inanimate variables, the type of relationship that concerns me is "a state of affairs between those having relations or dealings" (Gove, 2002: 1916). I am concerned with the manner in which two living beings "relate" or interact with one another, with how they communicate such interactions. I am further interested in the implications fostered by those lived interactions in a generally Meadian interactionist sense (Mead 1967), whereby it is through relationships that one's sense of self is developed and maintained. In other words, my interest lies in ultimately in how communication and relationships fund individual and group identities.

It is crucial to understand how humans and animals, here horses, come together; especially within the realms of the subjective and the intersubjective. The assumed divide between humans and other animals prevalent and underlying many Euro-American archaeological analyses ignores the potential for the porousness of that constructed, artificial boundary. The dynamic between what we consider natural and what we treat as cultural has not held static throughout time.

Furthermore, the emphasis on power, control and domination inherent within many interpretive archaeological studies also concerns division rather than union (e.g., Parker Pearson 1982; Miller and Tilley 1984; Shanks and Tilley 1982; Shanks and Tilley 1992; Tilley 1996). Marxist-based perspectives also pervade influential anthropological studies of human-animal "relationships" which continue to feed back into archaeological discourse (e.g., Ingold 1998b, 1994, 2000; Tapper 1998). This approach presents several problems for exploring humans' relationships—both with other humans and with other animals. Primary among these problems, which I discuss in detail later, is that the focus on the controlled manipulation of one class of people, or species of animal, by another yields a skewed picture of both human nature and past societies. This is because it discounts the importance of other, pro-social needs that draw humans and other social animals together, and which serve to create and maintain social cohesion and identities. Moreover, while this type of work brings human agency into the picture, it is an agency in which "the main protagonists depicted are social classes, and the main dynamic forces are the social and ideological concomitants of

economic change” (Johnson 2000: 214-215). People are dehumanized, animals are objectified; amorphous groups carry out the action. My concern with relationships, rather, deals with how both the manner of relating and the interactions themselves can be seen to feed into social realities and senses of identity—from the bottom up rather than the top down. In this thesis, then, I follow other researchers who have explored a relational approach to archaeological material (Brück 2004; Jones 2005; Jones and Richards 2003; Tarlow 1999, 2000), expanding the focus to explicitly include animal others, here horses.

Third Questions—Intersubjectivity between Humans and Horses

To begin to explore relationships between people and horses, I have taken the notion of horse-as-individual one step further and consider the subjective experience and mental processes of both people and horses in their interactions with each other. This is necessary because there is volition associated with both parties in any relationship, as I have defined the term. In relationships, whether intra- or inter-specific, both parties participate. At the species level, the agency of animals has been explored as it relates to domestication (see Budiansky 1992; Coppinger and Coppinger 2001; O'Connor 1997). I propose that it is fruitful to take this notion down in scale to an individual level, where intersubjectivity is crucial to understanding everything from what the horse “meant” to prehistoric people, to how such interactions might have impacted broader issues of personal and group identity and ideology. Therefore it is necessary to explore both humans’ and horses’ subjective experience, as agents, when they come together. Incorporating this type of knowledge from this angle can ground deeper explanations of the Pazyryk and their horses, and allows a further, more nuanced, set of questions to be asked:

- What can a deeper understanding of the manner in which horses can and do come together with humans lend to interpretations of the Pazyryk material?
- From the opposite angle, what can we infer from the funerary material about the nature of the relationships between the people and horses of Pazyryk?

Tacking back and forth between the archaeological data and the questions at hand allows investigation of both what the archaeologically visible material from the Pazyryk burials can reveal about the historically particular nature of the relationship between these people and these horses, and how viewing the data with more thorough knowledge about horses and their interactions with people leads to a different set of assumptions, and can provide different and more nuanced interpretations of the Pazyryk people’s notions of identity and ideology. Using this approach, I explore the questions:

- How does a person come to ride a horse; how are they schooled for different activities?
- What types of relationships, as I have defined them, occur when humans partner with horses in these ways?
- How might these people and these horses, from this particular prehistoric community, have perceived each other? and
- How might such human-horse interactions inform our understanding of Pazyryk perceptions of ideology and identity? How might living so closely with horses have fed back into human meanings, understandings and actions?

I have now descended through three levels of research questions, depending upon how we choose to classify the Pazyryk horses: as objects (as has conventionally been done), as individuals (but still, individual “objects”), or as individual beings, with their own agency, with whom people interact(ed) intersubjectively. It is this latter area that conventional academic epistemologies and ways of writing find problematic; yet this severely limits us from understanding what those who live with animals have to offer. Although there have been calls for viewing domesticated animals as individuals (e.g., Clutton-Brock 1994: 33), if not subjects with agency of their own (Knight 2005), theorizing *how* to do this has proved difficult. The following introduces how I will approach this problem.

Theoretical Concerns, Dominant Concepts and Methodological Approach

Theoretical Concerns

This study began as a reassessment of the Pazyryk funerary materials using conventional archaeological approaches. I have outlined here the problems this presented in terms of answering the questions I wanted to address. During the process of identifying and working through these limitations, this thesis became a much more theoretical exploration of the ways in which we do—and might differently—conceptualize, constitute and conventionalize nonhuman animals in archaeological studies, with the Pazyryk material as a very rich case study. The Pazyryk material, then, is the catalyst to thinking through these issues, and also makes it possible to test grounded explanations and interpretations by working through specific material.

The Pazyryk funerary material to date has been analyzed using concepts and paradigms that can be seen to be distinctly Western in nature. As I shall bring out, significant problems relating to this scholarship include:

- The application of Western concepts concerning the stadial, hierarchical, and evolutionary nature of social structures, statuses and roles, and the assumed division of nature from culture;
- The heavy and often sole reliance—within Soviet and Euro-American Marxist, and many interpretive archaeologies—on paradigms which focus upon dominance and power in categorizing both human-human and human-animal drives and interactions in archaeological interpretations; and
- The application of over-generalized and unidimensional models of social organization, identity and ideology—often stemming from culture-historical and ethnogenetic approaches which use material culture as a means of temporally, physically and culturally classifying groups of people into homogenized, bounded, and human-only cultures.

In many cases, these paradigms have been applied in a top-down manner, attempting to fit Pazyryk archaeological materials into preconceived typologies. A large part of the theoretical aspect of this thesis consists of attempting to step back from the assumptions which have characterized these approaches and interpretations, or to apply a different set of assumptions, in reassessing the Pazyryk funerary material. Exploring it in this way addresses these larger theoretical concerns.

Dominant Themes and Concepts

I have noted that at a meta-theoretical level, questions of objectivity-subjectivity arise and are discussed throughout this study. Approaching the Pazyryk funerary data in the manner I have chosen means that this study crosses beyond a mere assessment of the relationships between the Pazyryk horses and humans, into other areas of archaeological and anthropological concern. Therefore, in addition to the sets of research questions already elucidated, several broader sub-themes and concepts come up and are explored in this study.

- The importance of the everyday, the interactional, and the relational as opposed to larger-scale political motives in affecting issues of individual and group identity;
- The limits of conventional economic and dominance models of domestication to characterize all cases of human-animal, here human-horse, interactions;
- The possibility of accessing communication and relationships, and their outcomes, in the archaeological record; and

- Boundaries and transformations between culture and nature, between humans and animals, and between the worlds of the living and the dead.

Methodological Approach and Types of Data Utilized

I chose the Pazyryk horse burials of Ust-Ulagan, the original finds of Gryaznov and Rudenko, for primary analysis for three reasons: because the degree of preservation of the horse and human bodies and grave goods allows for a detailed analysis; because the descriptive reports are well-written, thorough and accessible; and because, while finds from other Iron Age Inner Asian sites are scattered and in many cases inaccessible, the artifacts and bodies reside at the Hermitage Museum and were available for assessment. Selected mortuary materials from reports about other kurgan complexes associated with the Pazyryk culture, described in the following chapter, also are presented, where they can illuminate broader patterns within the Pazyryk culture.

Working backwards from my ultimate concern of how the horse might have influenced issues of identity and ideology for the Pazyryk people (Chapter 7) has provided the core structure, methodological approach and types of data used in this thesis. I argue that we cannot begin to address this final concern before we have assessed the type and nature of the historically particular relationships between the Pazyryk humans and their horses, as evidenced through the archaeological materials (Chapter 6). Moving backwards still, these relationships cannot be assessed without an understanding of the nature and types of communication and relationships that *can* occur between humans and horses which, again, must be preceded by first having a sense of what horses, themselves, are capable of in this regard (Chapter 5).

The means by which to investigate human-animal relationships, as I have defined them, in archaeological settings have not been explored. The question that presents relative to this is: How can we begin to study inter-species relationships and intersubjectivity in the present, much less the past? Because there is no appropriate model through which to do this, a large part of this thesis consists of theorizing such a model. To accomplish these goals, it was necessary to reach beyond traditional archaeological sources, making this thesis highly multidisciplinary.

Where they can enlarge understandings of meaning, interpretive archaeologies pull concepts and frameworks from other disciplines, as evidenced by the wide use of linguistics- and literary-based analytical frameworks, such as structuralism, semiotics and metaphoric analysis (see Bapty and Yates 1990; Conkey 2001; Hodder 1982a, 1982c; Shanks and Tilley 1982, 1992; Tilley 1990, 1999; Wylie 2002). As with this example, those producing interpretive archaeologies are open to a search for new, relevant theory through which to make sense of mortuary evidence left by past communities. Toward this end, they have employed and adapted a variety of methods culled from philosophical, sociological, psychological,

literary and linguistic analyses, and related them to the interpretation of the archaeological record. In seeking to understand the social and cultural phenomena of past societies in rich context—as a “relational whole” (Shanks and Tilley 1992: 119)—archaeology overlaps with essentially all social science fields and many fields of the humanities and sciences generally. As Shanks and Tilley (1992: 245) have noted, “there are not essentially archaeological ramifications of geographical, psychological or sociological conceptual structures. These should be commonly shared by all the social sciences and worked through in various ways in relations to different bodies of evidence.” Furthermore, interpretive archaeologies pull from “anthropology, philosophy, sociology, cultural studies, art history, technology studies, performance studies, and so on” (Thomas 2000: 2). It is within this understanding that I have proposed as a means of analyzing the Pazyryk horse burial material an approach that generally draws upon a variety of disciplines.

I assess the Pazyryk funerary assemblage using information from three primary bodies of theory and data. First, to explore human-horse relationships in the Pazyryk burials, I have chosen to cross-pollinate this study with models and theories of communication and relationships, as studied and understood within the academic discipline of (human) communication studies. The importance of acknowledging communication in mortuary and landscape studies has been noted, as has the fact that different communication modes occur in such settings (Trinkhaus 1984: 675; also Bradley 1992; Edmonds 1999; Last 1998). In these instances, however, the modes of communication are discussed as they relate to humans only. Relationships—whether human-human or human-nonhuman—are developed and maintained through communication. While scholars from various disciplines have described the nature of the human-horse relationship (e.g., Birke *et. al* 2004; Birke and Parisi 1999; Brandt 2004, 2005; Brown 2007; Hearne 2007; Sharpe 2005), none has developed a rigorous model through which to do so. Theorizing a more structured and rigorous cross-species “relational” model of human-horse communication, I use theories and models developed for understanding human communication. Comparing these with ethological understandings of horses as social animals brings to light both similarities and differences between human and equine modes of communication. From this, I develop an academically informed and viable model concerning how such interactions arise, the relationships that develop, and the nature of the bonding that can and does occur between humans and ridden horses.

Second, a discussion of the nature of human-horse relationships necessitates an understanding of the characteristics of horses, generally. To provide this background, I call upon conventional ethological and physiological studies of horses. These studies use scientific or behavioristic methodology to assess the species-level attributes of horses: their physical and sensory capabilities, and their social structures and ways of interacting with one another.

This category of studies is not without limitations, upon which I elaborate in Chapter 3. Social anthropologist Barbara Noske, for instance, here discussing studies of foal handling, argues that this type of study is:

... representative of a mechanistic and behaviouristic approach to the horse. Horses appear as stimulus-response models and as objects with measurable properties, some of which may be manipulated, in order to better serve the purposes of horse owners, breeders and traders (2005: 38).

She proposes instead an “intersubjective alternative” which concentrates “not on the results of handling, but on the handling itself... where the ‘social’ between the horse and human takes place” (Noske 2005: 38, 42). Another perspective on this proposes two types of academic narrative used to analyze animal behavior: “externalistic” which “objectify nature and remove references to subjectivity” and “internalistic,” which view animals as active subjects, phenomenologically describe the animals’ world, and in which the observer is present and writes about their observations and interactions with the animals (Birke *et al.* 2004: 171, attributed to Crist 1999). Traditional ethological studies are inherently “externalistic” narratives, useful for what they are, but limited in providing insight into relationships. I have therefore chosen to use also an internalistic, intersubjective approach to studying horses and their relationships with humans.

This leads to my third set of information. It has been suggested that our understandings of nonhuman animals can be informed by those who live closely with the animals in question (Coy 1988: 77-83; Midgely 1988: 35-46). Anthropologist Tim Ingold (2000: 76) suggests that “those who are ‘with’ animals in their day-to-day lives, most notably hunters and herdsman, can offer us some of the best possible indications of how we might proceed” to write about animals. I take these scholars to mean doing this through assessing how people from other cultures perceive and construct the animals important to them. Ethnographies of past or other horse-using peoples, where they exist, can inform our general understandings of human-horse communication and relationships, and are used throughout this thesis. Along these lines, I expand the third set of knowledge to include those within my current context who deal with the actual day-to-day workings of the human-horse relationship, those I have termed “working riders.” Here I pull from the knowledge of horse people generally (often derogatorily referred to as “folk knowledge”), and the understandings of specific individuals who live with and write about horses—some scholars, some horse trainers, some both. This can be viewed as essentially ethnographic information from the subculture of Euro-American “horse people.”

However, as with the externalistic ethological studies, what we are not getting from this type of information is a sense of the actual nature and quality of the relationships between the people and the animals in question. How can we begin to understand, except at the most general and highly abstracted of levels, another animal being as a subject without relating to them, ourselves, *as* subjects? Without the direct experience of relating to animals on their own terms, we are left with ethnographic reports of how this or that community or subculture perceives their relationships with animals—which is one very important tier removed from the experience itself. Without an understanding of the nature of these mutually constituted relationships, we cannot begin to explore how such relationships might fund human perceptions about humans, animals and the world. Moreover, with prehistoric communities we do not have the luxury of asking or observing the nature of these relationships, and must look to material culture for indications of what those encounters might have entailed. When attempting to discover the types and nature of human-horse relationships within a prehistoric community by analogizing them to those of other horse-using peoples, as I do here, such analogies can only be strengthened by the researcher having participated in a first-order experience of similar texture and quality. Therefore, within the category of information from working riders, I also utilize my own critical observations and understanding of horses, their abilities and their senses of being.

Bringing my own understandings of horses to this thesis ties back to the objectivity-subjectivity concerns discussed earlier, and can be understood in several ways. On one hand, this could be seen as a form of ethnoarchaeological inquiry, where “in attempting to identify prehistoric ideology and social structure from surviving material remains many researchers [employ] some kind of presently or ethnographically-known framework...” (Jordan 2001a: 25); as a specific example, see Anthony’s (1986) comparison of the socioeconomic impacts of horse exploitation of subrecent North American Native peoples with the “Kurgan culture” of prehistoric western Eurasia (also, e.g., Jordan 2001a, 2001b; Zvelebil and Fewster 2001). Within this understanding, I explore the technologies associated with horse equipment and the practices and relationships they imply in the present as a tool for inferring techniques, practices and relationships in the past. In doing so I hold in mind that “analogies between ethnographic and archaeological data should be judged by the degree of congruence and compatibility between relevant aspects of those societies past and present... they should be appropriately chosen and not forced on to the archaeological context” (Pearson 2002: 65).

On another level, employing my own observations about horses can be seen within the context of social scientific enquiry as “inside auto-ethnography” which “refers to researchers who study situations where they have preexisting personal ties with participants” (Arluke

and Sanders 1996: 29). Here, I call on my experience as a “participant observer” within the subculture of working riders.

Regarding my subjective experience, it has been allowed that the study of subjectivity is not the same as “being subjective,” any more than “the study of folly must be a foolish study, or the study of evil conduct an evil one” (Midgley 1988: 41). In other words, one can try objectively to approach subjective experience. Contrary to this, “Some investigators of the human-animal relationship have advocated the use of interpretive, phenomenologically sensitive, qualitative approaches to acquire such understanding of animals” (Arluke and Sanders 1996: 43). Recognizing that relationships *are* subjective, studies of animals have come to include “internalistic” analyses, where “descriptive and introspective accounts detailing intellectual and emotional experiences” are as much a part of the narrative as attempts at objectivity (Arluke and Sanders 1996: 29). Such “double writing” is accepted and applied by sociologists and scholars from other disciplines who in writing about animals call critically on their own experiential observations of their own animals (Game 2002; Haraway 2003, 2008; Hearne 1994, 2007; Patton 2003; Sanders 2003; Shapiro 1990, 1997; Smuts 2006). Doing this, Barbara Smuts, for instance, experiences her “subjects,” her dogs, “from the ‘outside, objective’ perspective of a scientist, and the ‘inside, subjective’ perspective of a human interacting daily with beloved companions” (2006: 116).

Such an internalistic approach can be seen as distinctly phenomenological. Because I am deeply familiar with horses, I can move beyond relating *beliefs* about how horses and people come together; I can provide an emic account of what it is like to actually deal with them in a shared world. This approach embraces phenomenological subjective experience, where “... classical science is a form of perception that loses sight of its origins and believes itself complete. The first philosophical act [is] to return to world of actual experience which is prior to the objective world...” (Merleau-Ponty 1962: 66; also Thomas 1995).

Exploring interspecies intersubjectivity in this manner necessitates drilling down one final level in the meta-theoretical objectivity-subjectivity discussion. This is because in this thesis I not only rely upon my subjective experiences in living with horses, I also attempt to critically describe and explain horses’ subjective experiences. In doing so, I consider that relationships, as I have defined them, contain important emotional aspects. Further, this often takes the form of anecdotes about my horses. Because of these two factors—exploring animals’ emotions and the use of anecdotes—this approach is potentially open to criticism of anthropomorphizing. I shall show later that the validity of anthropomorphism has been greatly debated, with a number of scholars contending that it is a “useful heuristic device” (Sanders and Arluke 2007: 67). Under this view “introspection, reasoning by analogy, interpretive analysis, and intuition should not be discarded simply because they are not currently in favor in certain scientific circles” (Sanders and Arluke 2007: 67). I would like to spend a

few brief moments on these two topics, as I bring in my understandings of horses this way throughout the thesis, beginning with the following chapter, rather than as a discrete chunk of material.

Some interpretive archaeologies acknowledge the importance of emotion: “To construct fully and adequately an understanding of the past, a humanist position might hold, it must include some empathic cognizance of whomever we aim to study, such as prehistoric peoples” (Whitley 1998: 13; also see Tarlow 2000). In other words, “feelings matter” (Whitley 1998: 13) when we are dealing with past peoples. Similarly, under a “post-humanist” (e.g., Haraway 2003, 2008) view feelings also matter when the “whomever we aim to study” is animals. Moreover, “critical” anthropomorphism, including the use of anecdotes, has come to be recognized as a valid tool for understanding animals (e.g., Bates and Byrne 2007) when it takes the form of “perspective taking... the desire to take the animal’s viewpoint, rather than confer a human one” (Mitchell 2008: 377; also Bekoff 2006: 95). From an archaeological standpoint, it should also be clear that in past societies lacking the Western socio-cultural framework which dichotomizes humans from animals and venerates scientific method, anthropomorphism, with its focus on emotionality, as a way of “knowing” animals may well have been a valid and prevailing epistemology. From this standpoint, it is not only allowable, but also desirable, to interrogate animals’ subjective experience.

Attempting to perceive the horse’s side of things raises the question: Is it possible to access nonhuman others’ ontologies in any meaningful way? Countering the notion that we can never empathically “know” what it is like to be another—human or nonhuman—psychologist Robert Mitchell (2008: 383) notes: “Being female, gay, black, or human does not necessarily preclude understanding uniquely male, heterosexual, Asian, or bat experiences. (Remember, non-echolocating scientists discovered echolocation.)” As sociologists Sanders and Arluke note, allowing that animals are validly:

... minded, emotional and intentional—and *whose orientations and interests can be spoken for with some degree of validity*—has the practical utility of allowing for the construction of effective and mutually rewarding patterns of [inter-specific] social interaction (2007: 68, my emphasis).

Specific to horses, trainer Rick Lamb (2008: 47) notes, “Can you really know what it’s like to be a horse? Not really. But as a human, you have the ability to think in the abstract, to imagine what it might be like, and that gets you close enough.” I contend that to varying degrees, humans can understand what it is like to be, and live life as, a horse. Such “horse instinct” is “the commitment to seeing the world through the horse’s eyes, to understanding what makes him tick and to operating within the framework of what is important to

him....” (Lamb 2006: 15). It is this crucial ability to openly, intuitively and empathically get “close enough” that distinguishes someone who studies or even rides horses from a true horseman or horsewoman. This is not something that can be proved. But then, relationships can be neither adequately defined nor described from an epistemological stance that only sets out to prove.

Additional Sources of Information

Continuing with the interdisciplinary approach, furthermore, I employ information from several other disciplinary sources tangentially. Contextualized and used critically in this thesis are:

- formats and insights from the developing academic sub-disciplines of “animal studies” and “human-animal studies,” which provide theoretical groundings and methodological models for the latter half of this thesis;
- ethnographies of horse-using societies, which can open our minds to how other cultures perceive horses and the culture-nature divide;
- proto-historical, historical and literary sources, which also provide insights into how animals have been and are perceived outside of the Euro-American context;
- the social sciences, particularly sociology, which enhance understandings of how animals serve as significant others and co-create and validate identities;
- phenomenological philosophy, performance theory, dance and music theory, and ethnomusicology, which inform the means through which embodied communication and relationships are carried out; and
- psychology, Gestalt psychology, religious studies, and neurobiology, which provide additional ways of understanding connections and bondings between humans and horses.

Thus, in order to find a means to answer the questions at hand, throughout this thesis I move dynamically backwards and forwards between theory, intuitive reasoning and experience, and multiple sources of quantitative and qualitative data.

Disclaimers, Potential Problems and Language Choices

Disclaimers

Interpretive archaeologies recognize the contextual nature of both archaeological evidence and the researcher. We are all to some degree inclined to focus, consciously or subconsciously, upon evidence that supports our beliefs. It is therefore appropriate to interrogate my particular life trajectory as it has shaped my ideological stance and influenced the interpretations set out in this thesis. This deals with my approach to animals generally, and my focus on cooperation and individuality.

Both my father and mother were raised in the early part of the 20th century with various types of animals on working farms, and their beliefs about animals carried through to me. Pre-factory farming, there was for them an immediacy of shared space with animals, of lives and deaths that touched one another. For my parents in their childhoods, animals worked and worked hard, but so did people. There was for them a sense of the importance of individual lives that transcended species barriers, a sense that life was an interspecies, co-operative venture. I recall, for instance, my father's statement when I was ten years old and we heard one night the screams of a dog and the screech of tires as the car who had hit her sped away. We brought the mangled pup—clearly a stray and in need of more medical attention than we could provide—inside and my parents debated her fate. Money was tight and she would need extensive veterinary care, but the decision was made based upon my father's statement, "It's a life."

At the same time, for them there was exploitation and a recognized hierarchy of species; all animal's lives may have been equal but in an Orwellian sense, some were more equal than others. My mother milked the cows, who had names, but she also wrung the necks of chickens and ate pigs. She grew up with large draft horses who helped till the fields, other horses for pulling wagons, and a pony she rode to school. It is clear that horses ranked high up in this hierarchy. The fading family photo albums hold many pictures of my mother and paternal grandmother as girls on the back of their horses (Figs. 2.2 and 2.3). On the backs of the photos are written in smudged pencil not only the names of the girls, but also those of the horses upon whom they sit. They are dual portraits, but seem to represent more than the girls and their horses; they call up the importance of the relationships between them.

Thus, my approach to animals stems from a set of beliefs conveyed through my parents, combined with my particular personality. From the time I was a child, it was recognized that I had a "way" with animals, and I have always lived with them in my life: cats and dogs, budgies and parrots, horses and goats, turtles and fish. What matters to me in my relationships with them is what we mean to each other, not what species they are. At an essential

level I have never subscribed to the belief that there is a distinct line drawn between animals and humans. Today, such a perspective might be termed ecocentric, animistic, or even Taoist, but I did not know these terms when I was a child. Then, as now, I viewed animals as “creatures like us” (cf. Sharpe 2005), minded individuals with whom it was possible to share meanings of assorted qualities through various means.

In this thesis, I challenge what I see as the over-emphasis in many archaeological studies on issues of power, domination and exploitation. This, too, can be seen to track to my context. Although I was too young to participate in the civil rights movement in any meaningful way, I joined in many of the social movements—particularly feminism and environmentalism—which subsequently swept through the United States in the 1960s and 1970s. Many people who came of age during that time, myself included, retain the belief that in coming together nonviolently with common intent, individuals can positively impact social structures. At one level, the concerns of those movements dealt with challenging power structures. Yet they were also about empathy for those oppressed, and the belief that challenging social inequality was not only possible but also the moral thing to do. Of course such endeavors were possible due to the relative affluence of the society, and in this regard it is important



Figure 1.2. “Helen and Nell.”



Figure 1.3. “Zelfha and Ben.”

to recognize that the concerns of those living in the Pazyryk community some 2500 years ago—as indeed had those of my parents’ generation—might have been focused on other matters entirely. Certainly my beliefs about animals as more than material culture or “the environment,” as beings worthy of moral consideration, reflect my involvement with these social movements and their approach of challenging established power structures in order to give political voice to the oppressed. Thus the “othering” of animals is for me as relevant a topic of research as post-colonial studies might be for another archaeologist.

Considering both the Pazyryk humans and horses as minded individuals also raises the notion of the contextual nature of individuality. Archaeological scholars have recently and rightly challenged the application of Western notions of self, personhood and the individual to the past as potentially anachronistic (e.g., Brück 2001a, 2001b; Fowler 2004a, 2004b; Jones 2005; Thomas 2001). These issues are certainly relevant to this thesis, particularly concerning the relational nature of human conceptions of the self and identity. We have no way of knowing whether modern views of the self and individual were those held by prehistoric societies. However, both the ethnographic literature of other horse-using societies (e.g., Ewers 1955; Pony Boy 1998) and my own experience raising and training horses point to the wisdom of considering horses as individuals, and to the cooperative interspecies relationships that can develop through this process.

Challenging what I view as the archaeological over-focus on power relations in past societies also points to my personal research agenda concerning cooperation, connections and relationships. In addition to my upbringing and hands-on background with horses, I come to these topics academically as well. Both my Bachelor and Master of Arts degrees are in human Communication Studies, and much focus within that academic field concerns interpersonal, connections and relationships. Within that discipline, power relations are considered, but they are seen as a part of human relations, not as the sole driver of human interactions. Thus, my perhaps seemingly vehement criticism in this work of solely power-based archaeological analyses and interpretations should be seen more as a response to the certainty with which I perceive they are presented as fact, rather than a suggestion for their eradication. It is not that power schemes in social interaction are not worthy of study. It is, rather, that I see this focus as incomplete, and offer a relational, interpersonal, pro-social, communications-based model of human-human and human-animal interactions as a potential counterweight to this imbalance.

Potential Problems

I see four potential pitfalls and/or problems with my approach, outline below.

Firstly, applying such a human communication-based theories and methods derived in the present upon past people is not without potential difficulty. One question concerns the

degree to which elements of communication—such as human needs and motivations—can be seen as universal as opposed to those that are culturally determined and specific. Fortunately, a good deal of human psychological and communication research focuses on uncovering such intercultural variation in the present. The question then concerns the viability of applying such knowledge to people of the past and to other creatures.

Secondly, my particular way of conceptualizing and dealing with horses certainly derives from my temporo-spatial context. As I live in the United States, my perspective is one from that subculture. Unlike common perceptions of horse ridership and ownership in the United Kingdom, where such activities may convey class connotations, in the United States people from virtually every socioeconomic demographic can and do ride and own horses. Throughout my time with them, I have lived on property with them rather than boarding them at stables, and have kept them in small bands in which they could interact rather than in separate stalls. I was thus able to observe their interactions with each other in a somewhat natural setting. This has allowed me to recognize them as individuals who exist in structured social communities, needing to form bonds with others and capable of forming such bonds with humans. I do not perceive them anthropomorphically, as horses as people in horse bodies, with human-like emotions, thoughts or behaviors. Rather, based on my experience and knowledge of them, I acknowledge that their horses' cognitive abilities and emotional range far exceed that which is generally held true today (see Hanggi 2005; Kiley-Worthington 2004, 2005).

While this can work in my favor in that I already acknowledge ways of viewing human-horse relations outside of the predominant Western, 21st century academic context, I recognize that I cannot expect to understand the full range of beliefs held about horses by any past people. It would not, for instance, fit into my frame of reference to kill a sound horse, much less multiple horses, for deposition as grave goods—or indeed for any purpose other than to ease their suffering if death was imminent or recovery impossible. Here, it is important to hold in mind an awareness that our current understandings of death are most likely not those shared by the individuals and communities under observation (Downes and Pollard 1999: xi), and recognize that “the archaeology of death...can no longer hope to capture the total image, structure or ideological formation of any given historical moment” (Barrett 1992: 161). Neither of these caveats, however, should preclude one from attempting to critically do so.

A third potential problem lies with the highly historically particular nature, and small dataset of the archaeological material assessed. I look at only funerary data and only from a limited set of “elite” barrows, with the burials falling within a rather fine timeframe. Here, I recognize that this dataset is highly selective and partial in nature, and may not yield a full

picture of Pazyryk society. It is, however appropriate to my needs. This study is as much about the Pazyryk funerary material and society as it is about exploring a means of accessing interspecies intersubjectivity in the archaeologically visible material, and the insights such a view can bring to archaeological material. Therefore, I am not tightly focussed on presenting an in-depth analysis of the entire structure of Pazyryk society, but rather on how and why the horse might have been differently conceived—stepping outside of Western assumptions about the separation of nature from culture.

As a fourth potential problem, I will argue that archaeological research agendas have been influenced by embedded assumptions about human superiority and animals' (usually lack of human) abilities—which can be traced to both Western intellectual and religious traditions which posit a hierarchy of species—that are so deeply embedded as to be invisible. While I attempt to step outside these traditions I can only do so to a certain extent, because as self-critical and analytical as I can be, I am still a product of those traditions. As stated by animal studies scholar, Boria Sax:

We have come to feel the claim of human superiority as a burden, yet we are not sure how to discard it. All of our various perspectives, however 'biocentric' or 'animal friendly' we want them to be, show themselves on close examination to be pervaded with anthropocentric assumptions.... This is not fundamentally because we are stupid, callous, or arrogant. It is because anthropocentric bias pervades all of our traditions without exception. We are struggling to overcome habits of thought that have developed over millennia, and [we] all have very a long way to go (Sax 2008).

Language Choices

I employ particular idiosyncratic language choices within this thesis. With regard to the attribution of meaning to the ambiguous term "animal," I recognize that humans are but one animal among other nonhuman animals. My use of the shortened reference is one of parsimony rather than exclusion. Similarly, when referring to the class, "animals," I keep in mind that this homogenization is linguistic rather than actual: the life of an octopus is very different from the life of a horse. Furthermore, I refer to the process of working with horses as they learn to live with humans and be ridden as "schooling" or "teaching" rather than "training" (cf. Hunt and Hunt 1978: 70) because the behavioristic connotations of the latter term which track back to the Cartesian construction of animals as machines (Sanders and Arluke 2007: 68). Rather, the emphasis on teaching horses "is more on the mental approach to... understanding" (Wynmalen 1952: 19). Additionally, having spent a good deal of time with and admired many equine individuals, I have consciously chosen to shift away,

where possible, from the conventional objectifying pronouns used refer to them: from “it” to “he” or “she,” and from “that” to “who.” Likewise, when I refer to “my” horses, I am not implying they are mine because I own them, because I do not perceive my relationship with them in that manner. Rather, I use the term as I would to identify a close and ongoing connection of co-acknowledged belonging, as I would to describe “my” colleague, “my” friend, or “my” son.

Organization of the Thesis

This thesis is non-traditionally structured in that each chapter includes critique, theoretical and methodological elements, and interpretations. Each chapter ends with a conclusions and implications section, which build toward a discussion in Chapter 7 of identity and ideology. This is necessary because of the contextual, holistic, heuristic approach I apply.

Chapter 2 introduces the Pazyryk material in archaeological context, frames the ecological conditions, chronology, and physical attributes and contents of the burials, and concludes with contextualizing the Pazyryk community as distinct from the broader pan-Scytho-Siberian megaculture to which it is so often attached.

Chapter 3 critically assesses the changing research agendas—and the assumptions behind them—that have fostered particular interpretations of the Iron Age Inner Asia societies and Pazyryk funerary materials. I deal with how issues of alterity have been approached and with typologies through which the Pazyryk materials have been viewed in Euro-American scholarship. I conclude by pointing out several prevailing interpretations that have taken on the nature of unquestioned beliefs in archaeologies of the region, which I shall later challenge.

Chapter 4 explores the nature and historiography of Euro-American beliefs about humans, animals, and the relationships between the two. I here introduce approaches from the emerging interdisciplinary fields of “animal studies” and “human-animal studies,” the latter of which defines the structure of the remainder of the thesis.

Chapter 5 offers a species-level exploration of horses’ social structures and sensory and cognitive capabilities, proposes a cross-species intersubjective “relational” model of human-horse interactions, and concludes by addressing how human-horses interactions can and do meet psychological and social needs for members of both species.

Chapter 6 describes in detail the horse-related funerary data, specifically the “clothing” of both the humans and horses, and provides inferences about roles, statuses, and social and cosmological meanings within Pazyryk society.

Chapter 7 discusses the implications of the material for issues of group identity and ideology within Pazyryk society, and raises issues about the implications of this work for archaeological ethics as they relate to the study of nonhumans.

Conclusion and Implications

More than 20 years ago Archaeologist Peter Ucko stated:

Once we move beyond the normal level of trying to ascertain from any excavation simply what animals were eaten or used for transportation, we are bound to look again at the nature of the relationships and interactions between human groups and the animals in their environments (1988: xi).

Yet in terms of relationships as I have defined them, little has been done in this regard. I shall argue this is not due to lack of interest, but to the limitations of the paradigms through which animals have been conventionally viewed. This thesis attempts to both expose and step outside of conventional beliefs embedded in Western scholarship, beliefs about animals which have fed into the means by they have been studied in archaeological settings. This is necessary, among other reasons, because it is unlikely that many of these beliefs were held by past societies. When we approach the data using models and paradigms that can be seen to be Western in nature, we are simply allowing our beliefs to shape our interpretations of the data, rather than the other way around. I have chosen a converse approach; I have defined my research goals in terms of what I actually want to know, and have set out to find a way to achieve them.

In this thesis, I use my personal experience with the day-to-day interactions I have had with horses to argue that some elements of human-horse relations might be significantly analogous today with those in Iron Age Inner Asia. This brings us back squarely to the meta-theoretical objectivity-subjectivity discussion with which I opened this chapter. Thirty years ago, subjectivity—of the researcher, of animals, and of animals and humans as they live together—was not a topic that was explored within archaeological discourse. Since that time, some interpretive archaeologies now view the division between the subject and object, the subjective and the objective, as limiting distinctions (Shanks and Tilley 1992: 103; see also). This thesis, in large part, is an attempt to move beyond this dichotomy. As such, I pose questions which are themselves neither dichotomously objective nor subjective, and I approach them using both objective and subjective means and methods. I interrogate the Pazyryk materials incorporating data from sources using scientific-behavioristic, humanistic and posthumanistic approaches, and explore the subjective ontologies of humans and horses separately, and as they come together with each other. This thesis, then, applies a broad, contextual, holistic, communication-grounded, relational approach to the Pazyryk burials, and in doing so allows fresh interpretations of complex facets of the Pazyryk community's identity and ideology to emerge.

CHAPTER TWO

SITUATING THE PAZYRYK BURIALS: THE PHYSICAL AND ARCHAEOLOGICAL CONTEXT

Introduction

Currently, evidence indicates that sometime during the 4th millennium BCE horses were corralled and used for meat and milk (Benecke von den Driesch 2003, Boyle *et al.* 2002; Levine 1999; Levine *et al.* 2003; Olsen 2008; Outram *et al.* 2009; Stiff *et al.* 2006). To be so utilized, obviously they first had to be if not “domesticated,” then at least brought into close contact with humans: “tamed.” A great deal of valuable scholarly attention—and contention—has been expended attempting to identify the time, place and method of horse domestication in Eurasia, and many questions remain unresolved (Anthony 2007: 196-222 provides a good historiography of this debate; see also Anthony 1986, 1996; Anthony and Brown 2000, 2003; Clutton-Brock 1989, 1992, 1999; Jansen *et al.* 2002; Levine 1998, 1999, 2006; Levine *et al.* 2000; generally Davis Kimball *et al.* 1995, 2000; Levine *et al.* 2003; Mair 1998a; Olsen 1996, 2008; Olsen *et al.* 2006; Outram *et al.* 2009; Stiff *et al.* 2006).

These valuable and fascinating discussions of the origins of horse domestication in Eurasia are, however, unnecessary to contextualize the Pazyryk burials as the funerary data clearly show that horses were “domesticated” and a major part of the Pazyryk archaeological culture. By the Iron Age, domestication of the horse had opened up:

... new worlds—both physically and mentally—for those who tamed them and shared their power. Because of their acknowledged importance to human life and society, strong affective bonds with horses developed, and the animals took on meaning in the spiritual, aesthetic, and utilitarian realms of society (Lawrence 2004: 57).

This complex conception of their value is evidenced in the Pazyryk burials, where horses were not only interred in their entirety, they were richly costumed and adorned. Because of the incredible degree of preservation of the organic material within the frozen Pazyryk burials, they provide an excellent means of studying the particular connections and interactions between these people and these horses as materialized through the objects the people used to connect with and outfit their horses.

In order to contextualize the Pazyryk human-horse inhumations as a preface to a later more in-depth analysis of certain elements of the burials, I here provide some preliminary information about them. This chapter introduces the Pazyryk materials in archaeological context by framing the ecological conditions, chronology and cultural aspects of the Eurasian Iron Age, and the physical attributes and contents of the Pazyryk burials. I further differentiate the Pazyryk community as distinct from the broader pan-Scytho-Siberian archaeological mega-culture to which it is so often attached. Because they are necessary to frame points I bring up prior to the detailed archaeological analysis in Chapter 6, at this early point I also include some preliminary interpretations of the archaeological material regarding the human-horse relationship within the Pazyryk community.

Geography, Climate and Ecozones

Central Asia's topography and climate are defined by its mountains, culminating in the peak of 14,625 feet at Mount Belukha in the Altai Mountains. The Altai range stretches over 1200 miles, from the northwest to southeast across the point where today's political boundaries of western Mongolia, eastern Kazakhstan, northwestern China, and southwestern Russian Siberia touch (Fig. 2.1). Known also as the "Golden Mountains," the area is rich in supplies of precious metals, mined and used to craft both functional and decorative objects by ancient peoples. The tallest and most remote of the Altai Mountains are situated in the territory known during Soviet times as the Gorno-Altai (mountain-Altai) Autonomous Region in southern Siberia. Since the break-up of the Soviet Union it has become the Altai Republic, one of many republics within the Russian Federation. The region today has short, hot summers and long, extremely cold winters—the average January temperature in the Altai Mountains is -16°C and many of its major rivers are frozen for six to nine months of the year.

To the east, the Altai Mountains gradate into the Sayan Mountains, which border the northern boundary of the present-day Tyva Republic (Tuva) in the Russian Federation, falling off to the north to the Minusinsk Basin. To the southwest rise the formidable Tien Shan Mountains—now encompassing the political boundaries of most of Kyrgyzstan, a part of the Xinjiang Uyghur Autonomous Region, China and the southern part of Kazakhstan.

To the west, the Altai mountains slope down to the broad Eurasian steppe, so conducive to horse-rearing, which then stretches west 5500 miles to the Danube River in eastern Europe. This lush grassland greatly influenced the development of pastoral societies of the region, which in turn ultimately shaped the social and political landscape of the region and beyond. The steppe provided not only fodder for animals; it also served as a highway for the transmission of communications, as a zone of conflict and as a migration route (Liu 2001: 262).



Figure 2.1. *Political map with study area (after Francfort 1998, fig. 17.1).*

Radiating west and south from the Altai Mountains lies Central Asia. This region is rich and diverse in geography and climate, which ranges from uninhabitable desert to richly forested taiga (sub-alpine coniferous forest), to high, glacier-scoured mountains with snow-melt meadows. But for the vertical influence of the mountains, the region is broadly defined latitudinally by five main biomes: to the north, taiga (coniferous forest), forest, and forest-steppe; in the middle, steppe; and to the south, desert (Fig. 2.2). The Altai Mountains are divided into four vertical climactic zones and biomes: steppe, taiga, Alpine meadows and mountainous tundra and glaciers (Bokovenko 1995b: 285). Here, pasture areas are found in high hollows at various elevations between ranges, but are not contiguous as they are in the steppes (Bokovenko 1995b: 285), a significant point that defined the type of pastoralism practiced. This also influenced the manner of travel: mountain trails connected the pasture areas. Additionally, the differences between the steppe and mountain biomes of Central Asia play into the different types of riding one does on the flatland or in the mountains.

In this thesis I will be moving over numerous geographical territories. The Eurasian steppes refer to the expanse of land extending from Eastern Europe to the far eastern edges of Mongolia. Within this expanse is Central Asia, which covers the territories from the east of the Caspian Sea to the current boundaries of Xinjiang—including the republics of Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan and the southern part of Kazakhstan. Central

Asia can be further characterized as that area in the center of Asia which is “surrounded by the civilizations of Europe, the Middle East, India and China” (Baldick 2000: 1). The focus area of this study is centered in the Altai Mountains, with peripheral mention of the Sayan Mountains to the northeast. This area includes parts of the political regions of southern Siberia (Altai and Tyva Republics), northern Xinjiang, China, northeastern Kazakhstan and

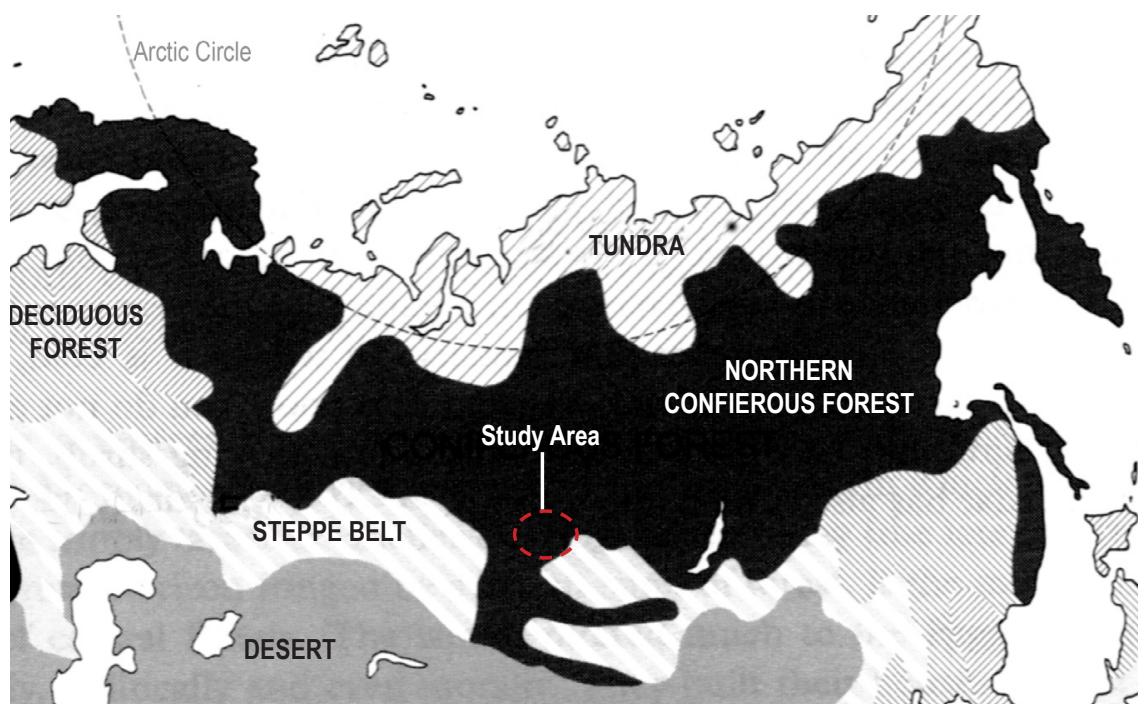


Figure 2.2. *Latitudinal map with study area (after Christian 1998, map 1.2).*

northwestern Mongolia. To differentiate Central Asia from the more focused study area, I will refer to these mountainous areas as “Inner Asia.” Inner Asia, as I define it, has unique ecological characteristics based upon its mountainous nature and differs significantly from the steppe biome, as can be noted on Figure 2.3, which also shows the locations of the sites discussed in this study.

The Wider Archaeological Context of the Pazyryk Burials

Before moving on to an archaeological overview of the Pazyryk burials, it is worthwhile to provide a brief sketch of the broader Bronze Age and Iron Age Eurasian chronological and cultural context from which the Pazyryk society emerged and within which it was situated, respectively. Because this thesis deals in large part with the manner in which horses have been approached archaeologically, I have chosen to focus in more detail in the following chapter (Ch. 3) on the various ways that the Pazyryk and surrounding Iron Age societies have been explored archaeologically, and how the horse is viewed within those studies.

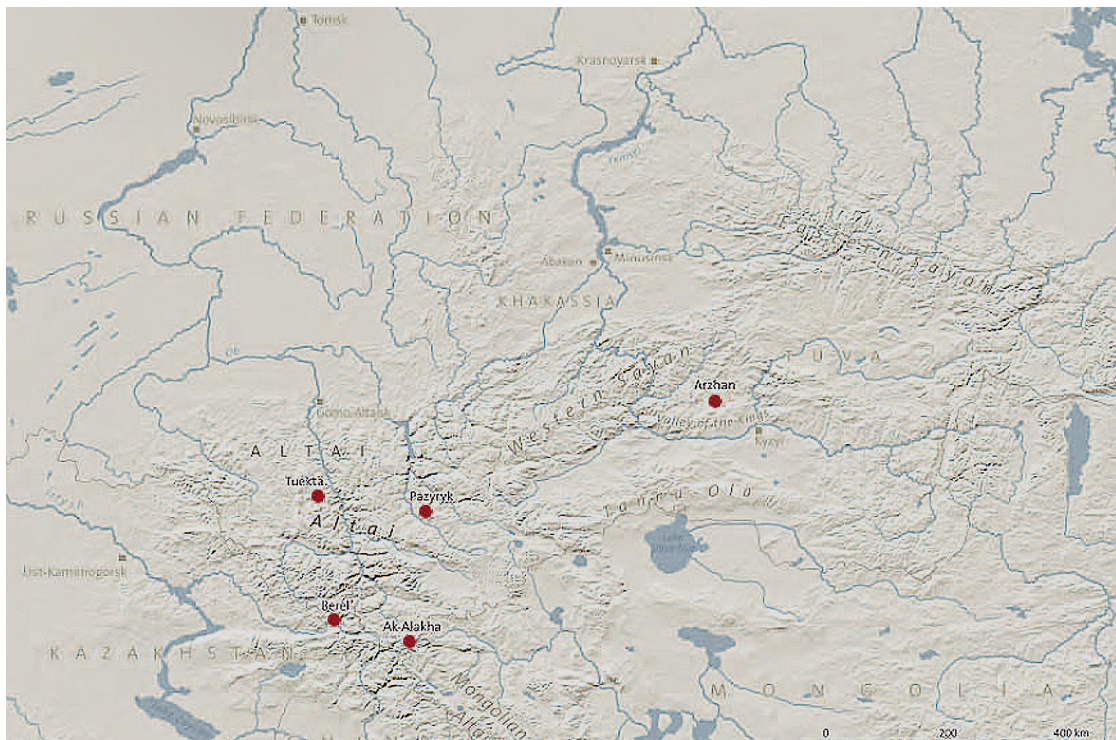


Figure 2.3. Topographic map showing locations of the sites discussed in this study (after UNESCO 2008, 17).

Thus, this very brief overview situating the Pazyryk archaeological culture within the wider chronological and cultural context of Iron Age Eurasia is not meant to be exhaustive, but rather to serve as a prelude to the discussion of the materiality of the Pazyryk burials in this chapter, and to the more in-depth historiography in Chapter 3.

The Eurasian Bronze Age

The Eurasian Bronze Age (c. 2500 to 700 BCE) is characterized by the development of several key features: (1) pastoral economies; (2) horse riding technology; (3) metallurgical technology; and (4) the widespread transfer of these technologies and ideas across the Central Asian steppe zone, which has been called the “Eurasian technocultural network” (Koryakova and Epimakhov 2007: 43; see also Anthony 2007; Boyle *et al.* 2002; Davis-Kimball *et al.* 1995, 2000; Franchetti, 2004; Levine *et al.* 2003; Mair 2003; Parsinger 2008).

The Middle Bronze Age (first half of the second millennium BCE) is dominated by the “Andronovo Culture,” an archaeological cultural zone, which spread south and eastward to occupy an enormous section of western Asia from the Ural Mountains to the Altai Mountains, and south to the deserts of Uzbekistan and Tajikistan (Fig. 2.4) (Franchetti 2008; Parsinger, H., 2008). This diverse “family of cultures” (Koryakova and Epimakhov 2007: 123) is identified archaeologically by specific pottery; metallurgical activities including mining, the smelting and processing of ores, and the first large-scale production of jewelry and



Figure 2.4. Range of Andronovoculture and its spread south and eastward (Parsinger 2008: Fig.2).

weapons; settlements with large (200-300 m²) rectangular houses dug into the ground with wooden log or stone tops; various domesticated animal bones at settlements (primarily horses, cattle and sheep); burials by cremation or inhumation, in the latter the bodies were typically laid on the left side with the head to the west, and the graves were delineated by stone fences or kurgan mounds (Koryakova and Epimakhov 2007; Franchetti 2008; Waugh 2008). Trade was widespread and was conducted through the many paths, tracks and trails that would later come to be called the Silk Roads (Parsinger 2008), contributing to a “globalization” within the region (Franchetti 2004).

Into the Late Bronze Age (from the later second to early first millennium BCE), the north-south migrations cannot be detected archaeologically and are thus assumed to have become less intensive. Various cultural pockets take on distinctive and more varied cultural and technological traits (Fig. 2.5) and to the south and east, settlements developed into urban-like oases in the deserts and valleys of southern Central Asia. As evidenced by artifactual material, trade and cultural connections over vast distances continued and the archaeological material gives the sense of a group of diverse yet highly connected communities (Parsinger 2008). Remarkable to this timeframe was the archaeological discovery of various mummies excavated on the southern edge of the Tien Shan Mountains (Kamberi 1998; Kangxin 1998; Kuz'mina 1998; Mallory and Mair 2000; Renfrew 1998b). These Tarim Basin mummies attest to inhabitation of the region by people with diverse racial characteristics: Caucasian, Mongoloid and various admixtures, and have provoked a great deal of speculation about Indo-European migrations, a point I pick up in the following chapter.

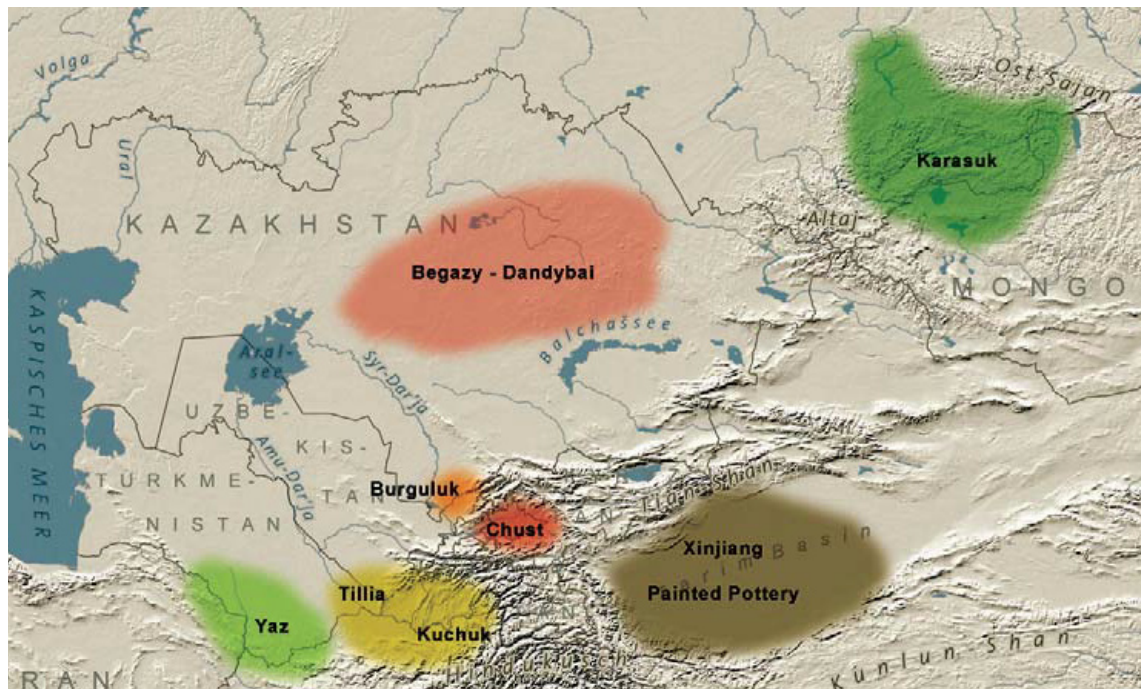


Figure 2.5. Late Bronze Age cultures in Central Asia in the late second and early first millennium BCE (Parsinger 2008: Fig. 5).

Iron Age Chronologies and Characteristics

Historians divide the Central Asian Iron Age between the Scythic era, 1000-200 BCE, when Scythian-like cultures prevailed widely across Eurasia, and the Hunnic era, c. 200 BCE–500 CE, when the region came under the occupation and influence of the expansionist Xiongnu culture north of China (Christian 1998: 432).

As identified historically or proto-historically, within the early Scythic era, by 900 BCE in the Near East, Assyrian had a mounted cavalry and mounted nomadism was spreading from and around the steppes. In 707 BCE the earliest-known mounted warriors, the Cimmerians, defeated the kingdom of Urartu in the Near East, and were replaced within ten years by Scythian horsemen in the steppe regions and in and around Persia. By 500 BCE, the Chinese had adopted nomadic clothing style, and learned to ride horses. Around 450 BCE, Herodotus wrote about the Scythians and other peoples around the Black Sea, and the Chinese in the latter part of the millennium documented the inhabitants along their northern borders. In other parts of Eurasia complex and literate societies and empires were developing and shifting: the Achaemenid empire (559-330 BCE) expanded by Darius (c. 512 BCE) and the Parthian empire (247 BCE–224 CE) were established; Alexander the Great swept into Asia (336-323 BCE) after which the Greco-Bactrian kingdom arose in Central Asia (250-175 BCE); and the first centralized, unified, multi-ethnic state developed in China under the Qin Dynasty (221-207 BCE), with standardized script, currencies,

and weights and measures. (Barclay 1980; Christian 1998; Hildinger 1997; Hulsewe 1979; Grousset 1999; Narain 1990; Sinor 1990.)

Archaeological chronologies place the start of the Eurasian Iron Age at about 800 BCE, overlapping the Bronze Age. (Mallory and Mair 2000: 146; Franchetti 2004). Although burial practices vary across the region, the primary archaeological signature that defines Iron Age Eurasia is the “Scythian triad” of grave goods: (1) horses, parts of horses, and/or horse riding equipment, (2) weaponry, and (3) artifacts decorated in the “animal style” or “Scythian animal-style” (e.g., Yablonsky 2000). This latter term can refer to two aspects of the genre: the stylized representations of animals with their hind legs twisted 180 degrees from the forelegs, in an “S”-shaped, or reverse spiral, and two or more animals engaged in predator-prey battles (although they sometimes are depicted alone). Another prevalent motif is the theriomorphic crested griffin, which is widely found across Inner Asia during this period. Figure 2.6, shows all of these elements, on a saddle cover from Pazyryk 1. Here, a crested griffin attacks a mountain sheep, whose hindquarters are twisted in the reverse spiral.

The Scythian triad of grave goods was first noted in burials unearthed by Russian archaeologists above the Black Sea in the late 19th century (Yablonsky 2000: 3-8). At that point, the mortuary goods pattern was attributed to the Scythians because the region was described by Herodotus as being inhabited by a group of people he so named. Broadly, this group of societies was called by the Chinese the *Sai*, and in Old Persian written sources,

Saca or *Saka*.

(Grousset xxiii; Gryaznov 1969: 133.)

As more similarly constructed kurgans were excavated across the Eurasian steppe which included the Scythian triad of grave goods, early Russian archaeologists noted that from the



Figure 2.6. Typical animal style artwork, a reconstructed felt appliqué on a saddle cover from Pazyryk 1 (Rudenko 1970, pl. 170).

beginning of the first millennium BCE, societies from the Altai to eastern Europe appeared to share a “similar livelihood” with “one material culture and to some extent at the same social level, and with similar customs” (Rudenko, 1970: xxxiv). Thus, based upon material remains, a very broad ethnocultural zone—with assumed shared cultural traits and beliefs—has been identified as consisting of Iron Age “Scythian-Saka” cultures, incorporating the Altai and Tien Shan, and covering: from the Black Sea in the east; to the Sayan Mountains and Minusinsk Basin in the northeast; to western Mongolia and western Xinjiang, China to the south; to the Pamir Mountains in the southwest (Davis-Kimball 1998: 258; see also, 1997-1998: 27; 2000a: 90). It was assumed that the Black Sea region was the ethno-political center for these “Scythian” Eurasian nomads, and that Scythian culture spread eastwards through the steppe to the more remote mountainous regions. More recent excavations of Arzhan I and II in Tyva have yielded the earliest examples of the Scythian triad, dated between the end of the ninth and beginning of the eighth centuries BCE. This points to the development of an initial Scythian period at the furthest eastern, rather than western, region of the Scythian ethnocultural zone (Bokovenko 2006: 861; Chugunov, et al. 2002; Edwards 2003; L. Marsadolov, pers. comm.)

The sociocultural aspects of the Bronze Age transition into the Early Iron Age identified through a wide base of archaeological studies has been defined as including the following key cultural components: (1) the completion of the nascent shift from pastoral-agricultural economies to fully nomadic pastoralism; (2) a refinement of horse riding technology; (3) the emergence of mounted warfare, with the first development of militaristic state society in the western regions (e.g., Anthony 2007; Anthony and Brown 2000; Basilov 1989; Barfield 1993; Benecke and von den Driesch 2003; Bokovenko 1995a, 1995b; Bower 2003; Bley-Jones, K., 2000; Boyle et al. 2002; Chang et al. 2003, 2007; Chang and Guroff 2007; Chang and Tourtellotte 1998; Davis-Kimball et al. 1995, 1998; Di Cosmo 1994; Franchetti 2004, 2007, 2008; Francfort et al. 2000, 2006; Golomshtok and Griaznov 1933; Gryaznov 1969; Hanks 2000, 2002, 2003; Heibert 1992; Jettmar 1967; Khazanov 1994; Koryakova 2000; Koryakova and Epimakhov 2007; Kuzmina 2000, 2008; Levine 1998; Levine et al. 2000, 2003; Mair 1998a; Mallory 1981; Mallory and Adams 1997; Minayev a and b n.d.; Molodin et al. 2004; Olsen 2000, 2008; Parsinger 2008; Polosmak 1994a, 1994b, 1994c, 1995, 1997, 1998, 2000; Renfrew 2002; Rolle 1989, 2006; Rudenko 1970; Samashev 2007; Samashev et al. 2000, Berel; Seleznev 2005; Van Noten and Polosmak 1995; Waugh 2008; Yablonsky 1995b; Zakharov 1925).

The horse was a factor which contributed to all of the sociocultural aspects of the Bronze to Iron Age shift (Anthony 2007; Creel 1965; Drews 2004; Franchetti 2004; Hildigger 1997; Kuzmina 2008; Liu 2001; Mair 1998a, 2003; Piggott 1992; Renfrew 2002; Torday

1997; Yetts 1934). By the Central and Inner Asian Iron Age, horses were used for milk, meat and clothing; as trade commodities; for locomotion through both traction and riding; for herding and scouting new pastures; and for militarism associated with migrations, expansions, and plundering (e.g., Anthony 2007; Kuzmin 1939; Kuzmina 2003, 2008; Levine 1998; Mair 2003; Rudenko 1970; Yablonsky 2000).

The Central Asian societies exhibiting this early Iron Age shift are often termed “early nomads,” and include the Scythians and Sauro-Sarmatians from the western Eurasian steppe around the Black Sea, the Saka of northern Tien Shan, the Xiongnu of northern Mongolia, and the Pazyryk of the Altai. (e.g., Anthony 1986; Anthony and Brown 2000; Belenitskiy 1978; Bokovenko 1995a: 288, 2000; Davis-Kimball 1998: 239-241; Davis-Kimball *et al.* 2000; Doniger 1990; Francfort *et al.* 2006; Hanks 2002, 2003; Kuz'mina 1977, 2006; Levine 1998; Levine *et al.* 2003; Mair 2003; Mallory 1981; Olsen *et al.* 2006; Polos'mak 1994a, 1994b, 1997; Puhvel 1970b; Renfrew 2002: 1; Samashev *et al.* 2000, *Bereĭ*).

In identifying these groups some archaeologists have relied upon proto-historical texts of the Chinese and Greeks to culture-historically both date and identify the various societies within the region. For instance, it is noted that in the Tien Shan by the 8th century BCE lived a group of Europoid people with a culture “identical with the Sakas of the antique tradition” (Davis-Kimball, 2000: 242-243; also Gryaznov, 1969; Jettmar, 1951: 150-156; Rudenko 1970). The culture-historical approach to the region remains widely used by Russian (Bokovenko 1995a; Devlet and Devlet 2000; Yablonsky 1995a, 1995b) and some Western archaeologists (e.g., Anthony 2007), particularly those concerned with identifying the movement of Indo-European languages (e.g., Anthony 1995, 1998; Jones 2002; Kuzmina 1997, 2003; Mair 1998c; Mallory 1981, 1989; Mallory and Adams 1997; Mallory and Mair 2000; Renfrew 1987, 1998b, 2002.) I consider the problems with the culture-historical approach in Chapter 3.

With regard to the Pazyryk archaeological culture, that similar funerary assemblages were found in subsequent excavations of Pazyryk burials meant they were included within this Scythian construct, at the easternmost edge of the broader Scythian territory. This led to the Pazyryk culture being called “Scythians of the Altai” (Gryaznov 1969: 133), and later “Scytho-Siberians.” Because the ethnocultural “center” of the Scythian world was thought to reside in the earlier-excavated Black Sea region, Pazyryk innovations were assumed to have been obtained through diffusion from those more western Scythian societies (Bashilov and Yablonsky 1995; Davis-Kimball 1997-1998: 27; 1998: 241; Gryaznov 1969: 133; Jettmar 1951: 206; Yablonsky 2000). Viewing “material cultural remains... as static indicators of ethnicity, cultural affiliation, and demographic movements” (Hanks 2002: 185) is problematic, a point I pick up in detail in the following chapter.

Additionally, as discussed in the following chapter, the finding of the “Scythian triad” of grave goods in the Pazyryk burials is used to attribute other “Scythian” traits: economy/subsistence (“wandering nomads”); social structure (hierarchical); cosmology (Indo-European) and political ideology (“fierce warriors”). As I shall show, many of these simply may not be valid assumptions about the Pazyryk community.

Pazyryk Chronologies

The Pazyryk burials initially were dated art-historically, based upon the stylistic analysis of grave goods displaying iconography or technology thought to be imported, and of Iranian (Achaemenid), Chinese or Greek origin. Innovations and cultural exchange—technology, iconography, religious beliefs, knowledge about the horse, and indeed the horses themselves—were presumed to have diffused unidirectionally into the Altai, which was perceived as a “backward and poor, forgotten place” (Okladnikov 1959: 39; also Bokovenko 1995b: 288; Bunker 1970; Francfort *et al.* 2006; Golomshtok and Griaznov 1933; Griaznov 1969; Kawami 1991, Kuz'mina 1977, 2003; Lerner 1991; Rudenko 1970). This assumption charts how ideas about social and cultural aspects of the Pazyryk peoples relate to underlying beliefs about alterity (see Chapter 3).

The absolute chronology of this period remains unresolved (Bonani *et al.* 2000; Chang *et al.* 2003; Hajdas *et al.* 2005; Hall 1997; Hall 1997; Hiebert 1992; Mallory *et al.* 2002; Vasiliev *et al.* 2001; Zaitzeva *et al.* 1998). The accepted internal floating chronology of the first five Pazyryk tombs based upon dendrochronology was developed by Leonid Marsadolov at the Hermitage (Mallory *et al.* 2002: 204) and places them within 50 years of one another. Kurgans 1 and 2 precede kurgans 5 by 48–50 years, kurgan 3 by 11 years, and kurgan 4 by 41 years.

Dendrochronological analyses proved initially problematic for absolute dating because there was no sequence for the region, and because of the potential of the “old-wood effect” to add up to 150 years to analyses of the beams used in the graves (Hiebert 1992: 121; Mallory *et al.* 2002: 205). Later studies using material from burials in the Altai and Tuva regions used both radiocarbon and dendrochronological analyses, and placed the timbers at the mid-4th to mid-3rd centuries BCE (Bonani *et al.* 2000), and found Pazyryk-2 dated to 290–287 BCE (Vasiliev *et al.* 2001), 301–282 BCE (Mallory *et al.* 2002: 210), and Pazyryk 5 at 252–235. However, ¹⁴C dates obtained from Arzhan 1, Tuekta 1 and Pazyryk 5 have placed these burials at the 9th, and late 5th–4th centuries respectively (Zaitzeva *et al.* 1998), some years older. Absolute dating is not particularly relevant to the arguments I develop in this thesis, and it is sufficient therefore to discuss the original Pazyryk burials as having occurred from the 5th through 3rd centuries BCE. Appendix 1 shows Marsadolov's floating

chronology and these general dates as applied to the originally excavated Pazyryk kurgan complex, and provides key characteristics of selected Pazyryk-era burials.

Three Iron Age phases are identified for Altai burials: Maiemir (8th-6th c. BCE), Pazyryk (5th-3rd centuries BC) and Shibe (3rd century BCE - 1st century CE) (Hiebert 1992; Vasiliev *et al.* 2001). These phases are also described as early, middle and late (Bokovenko 1995a: 258). The main focus of this study is the Pazyryk or middle period, which can thus be dated, recognizing that the dating is not absolute, to the 5th-3rd centuries BCE. This second half of the first millennium BCE—the Middle to Late Eurasian Iron Age—has been noted as the “Golden Age” of the southern Siberia (Koryakova and Epimakhov 2007: 292).

Changes Leading into the Pazyryk Period

Before moving into a discussion of the Pazyryk burials, I mention here a few changes in the funerary practices leading into the period. In addition to the broad Eurasian Bronze-Iron Age shift within which the “early nomads” have been identified, specific to the Altai there is a significant shift in burial style in the middle of the first millennium BCE, leading into the Pazyryk period, as noted in Table 2.1.

Timeframe Attribute	End of 9th-7th centuries BCE	6th-3rd centuries BCE
Way of burial	On the surface or in a superficial hole	In a deep hole
Ground construction	Various designs	Hemispherical embankment
Burial chamber construction	Stone box, rarely wooden	Wooden frequently; rarely stone box
Human pose	On one side, supine, and others	On one side with legs drawn up, supine, and others
Human orientation	Primarily northwest	Primarily east, less often west
Horse burials	Separately from the human(s)	Together with the human(s) in one hole
Placement of horses	To the south or the east of the human	To the north of the human
Bit material	Horn to bronze	Bronze to iron
Bridle/bit characteristics	Highly variable	Fixed

Table 2.1. *Changes in burial characteristics in the Altai from early to middle Iron Age (data from Marsadolov, pers. comm.; Bokovenko 2000).*

There are two points of note to hold in mind relative to these changes in burial practice, as related to the horses. Firstly, the 11th to 7th centuries BCE were a time of intense experimentation in the Altai-Sayan in the production of bits and bridles. This is evidenced by the extreme variability—no less than 37 variants of bridles—of those found from this period (Bokovenko 2000). Considerable time, thought and effort were spent finding the best ways to communicate with the horse. The Altai-Sayan populations were seeking designs that not only worked, but also worked best. By the 7th century, the Altai bridles and bits are stylistically fixed, implying that functionality of design had been satisfactorily achieved (Bokovenko 2000). By this time, the “Pazyryk-style” bridles are found from Mongolia to Hungary (Bokovenko 2000). So accurately functional were they that the type of jointed bit created at that time, termed “snaffle” bits, are still widely used today. Secondly, it is during this time that the horses are brought into the human graves.

The florescence of bit and bridle making in the Altai leading into the Pazyryk period indicates that these people were astute observers of both equine behavior and biomechanics. They were also apparently better at these things than those to whom they exported their horse-related designs and products. This was clearly a dynamic transitional period in many respects, with the funerary material evidencing a significant moment of cultural and personal change in which horses played many pivotal roles. This change probably included a shift in economy and the development of various specialties related to horsekeeping, and certainly accompanied an increased perception of the importance of the horse. The horses were wound into and through this human society in a way that probably no animal had been before. In addition to significant changes in barrow construction and the posing and orientation of bodies, it is notable that by the Pazyryk era, the horses are brought *into* the burials. The horse was brought *closer*, in death as in life.

The Pazyryk Burials

The Pazyryk Excavations

The first frozen graves in the Altai were found by explorer V.V. Radloff (1884) in 1864 with his excavations of the tombs of Berel and Katanda (Samashev *et al.* 2000, Le kourgane; Zakharov 1925). This was followed by Gryaznov’s (1950, 1969; Golomshtok and Griaznov 1933) investigation of the first Pazyryk kurgan in the early 20th century. The significance of the Pazyryk archaeological culture was not fully realized until Rudenko’s (1970) excavations in the late 1940s of other kurgans within the first cemetery, and excavations of other cemeteries since then have broadened understandings of the Pazyryk archaeological culture. Ongoing excavations begun in 1991 by V.I. Molodin and N.V. Polosmak included several medium to small Pazyryk-era kurgans from the Ak-Alakha (Polosmak 1994a, 1994b,

1994c, 1995, 1997, 1998, 2000; Van Noten and Polosmak 1995; also Levine *et al.* 2000) and Verkh-Kaldzhin (Molodin *et al.* 2004, also Bogucki 1996; Cheremisin 2009) complexes, both located in the flat, treeless Ukok Plateau, in the Kosh-Agash District of the Altai Republic, at a 2200-meter elevation. In 1998-1999, Zainolla Samashev, Henry-Paul Francfort and a French-Italian-Kazakh team excavated several larger Pazyryk-era burials in a cemetery at Berel in the Bukhtarma Valley of the Altai Mountains, over the Kazakhstan border (Clisson *et al.* 2002; Francfort *et al.* 2000, 2006; Keyser-Tracqui, *et al.* 2005; Samashev 2007; Samashev and Francfort 2002; Samashev *et al.* 1999, 2000, *Berel and Le kourgane*).

While the main focus of this study is the original Pazyryk excavations, I adjunctly discuss several more recent excavations from four cemeteries. First is the Ak-Alakha cemetery, where among others was found a frozen, tattooed, and elaborately costumed female mummy buried with horses (Ak-Alakha 3-1) who became known as the “princess” or “ice maiden.” Second, also on the Ukok plateau, is the cemetery of Verh-Kaldzhin, where a blond man nicknamed the “warrior” was buried with one horse (Verh-Kaldzhin 2-1). Third is the burial at Berel, kurgan 11. Finally, at various places throughout this thesis I make mention of the Early Iron Age kurgan from the Tyva Republic, Arzhan 1, to date the oldest Scythian-era burial (Bokovenko 1995a, 1995c; Chugunov *et al.* 2002; Piggott 1992).

With the exception of a few artifacts at a small local museum in Kosh-Agash, Altai Republic, objects and horses from the original Pazyryk excavations all reside at the Hermitage Museum in St. Petersburg, as a part of the “Altai Collection,” as do the Tuekta and Arzhan finds. The Ukok finds are at the Institute of Archaeology and Ethnography in Novosibirsk; the Berel finds are in Almaty, Kazakhstan. Because of their accessibility and degree of preservation, the Hermitage’s Altai Collection was chosen for original, primary analysis, with supportive comparisons with the funerary materials from the other sites mentioned.

That the original Pazyryk excavations gave name to the broader Pazyryk spatio-temporal culture gives rise to potential confusion in terminology. To avoid this I describe the burials from the original Pazyryk cemetery by only kurgan number, i.e., Pazyryk 1. As the Berel excavations are from one cemetery, they are similarly ordered. Other Pazyryk-era burials where there are different cemeteries at one location are numbered first by the cemetery/excavation, then by the particular grave, e.g., Ak-Alakha 3-1. When discussing characteristics of the broader culture, I will use the term “Pazyryk-era” or simply Pazyryk.

Location, Physical Attributes and Grave Goods

The Pazyryk kurgans have been classified into three types, ranging in size from 2-80 meters: large (50+ meters), medium (15-30 meters), and small (2-10 meters). Twelve barrows from Pazyryk-era cemeteries with large graves—Tuekta, Berel, Katanda, Bashadar, Pazyryk, and Shibe—and over 800 barrows in over 100 cemeteries with medium to small graves have been subsequently surveyed or excavated in the present-day Russian Altai, and in Kazakhstan and Mongolia (L. Marsadolov, pers. comm.).

The originally excavated Pazyryk cemetery is located at 5280 feet (2000-2500 meters) in elevation. The large cemeteries are similarly situated: they sit on high valley-plateaus surrounded by treeless mountains—rugged alpine

steppe where vegetation is not continuous—above the headwaters of large river tributaries. Pazyryk-era kurgan strings run north-south, canted to the north-northwest, with no special spatial clustering apparent to separate the differently sized burials. Figure 2.7 shows the situation of the burials within the Pazyryk cemetery, as excavated and as chronologically sequenced. There are no settlements nearby; indeed no Iron Age settlements have been found in the high Altai.

Some Pazyryk kurgans had rings of standing stones, 1-3 meters tall, surrounding the kurgans and/or stones extending in lines eastward from the burial mounds. These possibly reflect precursors of the later stele of the Turkic period (7-10th centuries CE) known as *balbals* found throughout southern Siberia (Hiebert 1992: 125). At both Arzhan 1 and the recently excavated Arzhan II such stones were engraved with petroglyphs. During the excavation of the initial Pazyryk kurgans, it was not noted whether or not there were images on the stones, and unfortunately they were not assessed upon excavation. Probably they are still at the site, but the standing stones are no longer apparent in recent photographs; Figure 2.8 shows the area in

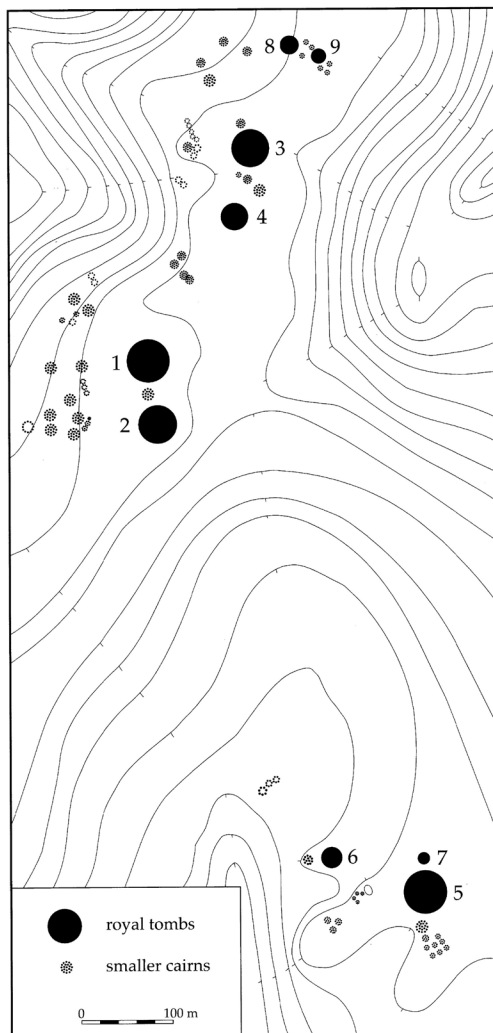


Figure 2.7. Pazyryk kurgan string, numbered by excavation order. The floating chronology places them in this chronological order: 2, 1, 4, 3, 5. (Mallory et al. 2002, fig. 13.2).

2000. Although current research interest has focused on these stones at other sites (Leonid Marsadolov, pers. comm.), it is possible they were used for backfilling the barrows at the Pazyryk site (Ludmilla Barkova, pers. comm.).

The large Pazyryk-era kurgan burials are of consistent structure and plan, but with idiosyncrasies. Each consists of a square or rectangular pit, four to seven meters deep, dug into the ground and oriented generally east-west. Situated in the southern part of the pit was a smaller inside chamber with rectangular floor dimensions from three to five meters. The chamber walls consisted of four to ten dressed larch (*Larix siberica*) logs (Pazyryk 1-5) or planks (e.g., Berel 11), notched and interlocked. When stacked, all rooms were too low to



Figure 2.8. *The Pazyryk burial site (photo: Tamara Lobanova).*

stand in, but the more complex and larger-diameter kurgans had rooms that were higher. These timbers came from trees from lower elevations, and were probably fitted and assembled elsewhere and reassembled at the burial site, as they were marked for reassembly. Inside the southern-most part of each chamber running east-west were one or two coffins, each carved from a single, old larch log.

The northern or northwestern end of the pit held the bodies of several sacrificed horses (ranging from 7 to 22), but the height of their placement varied from the level of the floor (as shown to the right in Figure 2.9) to above the ceiling height (e.g., Pazyryk 2) of the inner chamber. While all of the original Pazyryk burials had been looted, many in subsequent excavations were not. Even in most of the looted burials, the horse portions were left alone by robbers.

In most larger tombs, over this chamber was built another box made of logs, with loose stones between the two chambers. In the upper part of the southern end of the pit, a system of posts and beams supported a many-rowed placement of logs on the southern end; over 300 logs covered the inner chamber of Pazyryk 1 in this way. These were probably an at-

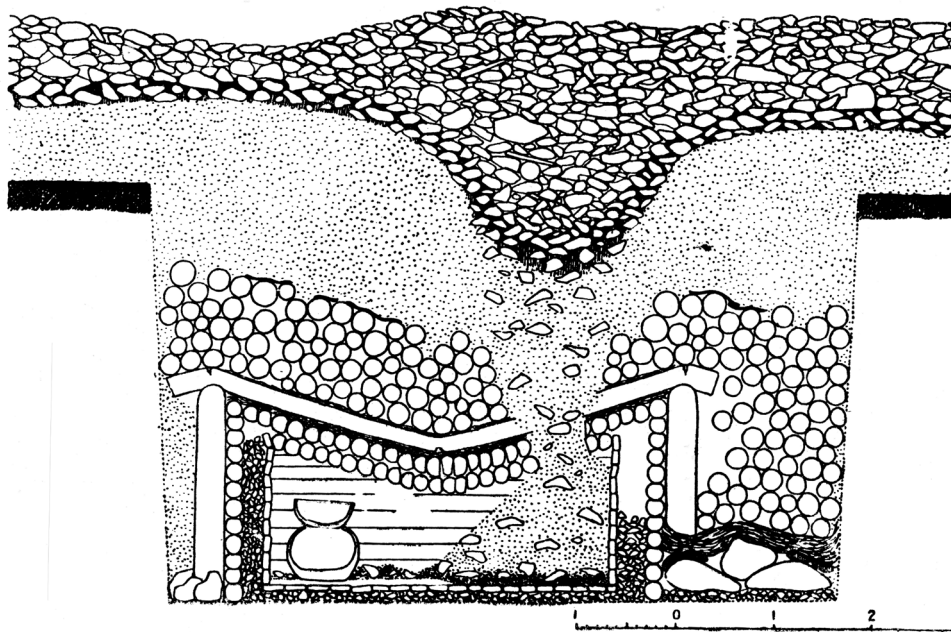


Figure 2.9. *Pazyryk 1 section showing construction and robbers' tunnel, S-N. (Gryaznov 1950, fig. 4).*

tempt to deter looters (Golomshtok and Griaznov 1933: 34), as all burials but the smallest, Pazyryk 8, had been looted. This happened not long after the interment, allowing rain water and cold air to intrude into the burial and form a permafrost lens which preserved the organic materials. It is not clear that freezing was intended as a method of preservation, however, because permafrost is not consistent in the Altai (today) so the preservation was accidental and at least partly attributed to the looting (Van Noten and Polosmak 1995: 82).

Numerous tools and wooden implements—wooden shovels, wedges, trolleys, mallets, poles—were found outside the top of the chambers in many of the burials, and were probably used during the excavation and burial process and discarded. On top of this was piled dirt topped with large stones, shaped into a round mound tapering in height towards the edges.

In the Pazyryk burials, all but Pazyryk 7 had later interments within the barrows, dated by Rudenko (1970: 311 f.n. 1, see also Bourgeois *et al.* 1999) to the 6th to 18th centuries CE. Polosmak (1998: 125-126) also notes secondary burials in the Ak-Alakha cemeteries, although she attributes them to late Iron Age peoples. These secondary burials were placed above the wooden chambers of the burials. This is not anomalous. Across Eurasia “many, if not most, kurgans found throughout... contained secondary burials... [where] the kurgan acts more like a cemetery than a single tomb” (Bley-Jones 2000: 128).

In the inner chamber, outside the coffins near the heads of the people, were left drinking vessels—cups, mugs and jars with diverse decorations. These, along with food were often

placed on convex tables with carved or turned legs which probably served as both tables and bowls (Rudenko 1970: 67). Food offerings most often included sheep's caudal vertebrae, probably a delicacy, often accompanied by knives (Samashev 2007). Goat and horse caudal vertebrae are also found more rarely.

The Ak-Alakha burials are representative of the medium-sized barrows which are simpler in construction and less rigid in cardinal placement of the human and horse bodies compared to the larger kurgans. They were erected around a lower log burial chamber with the dead placed in coffins, as exemplified in the section of the double inhumation Ak-Alakha 1-1 (Fig. 2.10). Above or beside the burial chambers are the remains of one to nine riding horses, with their saddles and bridles.

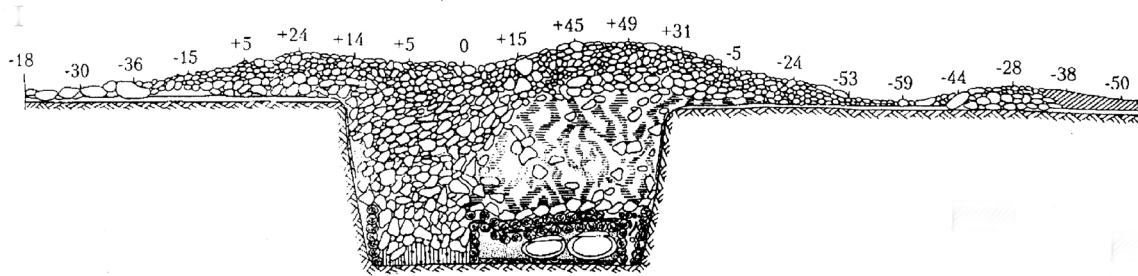


Figure 2.10. *Medium-sized Pazyryk-era burial, Ak-Alakha 1-1 (after Molodin et al. 2004, fig. 103).*

The smaller barrows retained further pared-down structural elements, lacking the internal coffin, with only a small chamber floored and roofed with timbers. Most smaller kurgans include the co-burial of one-four horses; only one of five of the fifth Ak-Alakha cemetery (Ak-Alakha 5-2), had no horses. Figure 2.11, the plan of a single, female burial, Ak-Alakha 1-2, exemplifies the smaller burials.

The Human Bodies and Personal Artifacts

Most Pazyryk-era burials held a single body, but double, male-female inhumations are found as well, usually with two caskets (e.g., Pazyryk 4 and 5, Ak-Alakha 1-1, 3-1), but sometimes with both bodies resting in a single coffin in the case of the large and medium burials (e.g., Pazyryk 2), or wooden burial chamber in the case of the smaller burials (e.g., Ak-Alakha 5-4).

The human bodies were usually placed on their sides with legs slightly contracted, with heads to the east and oriented with their faces to the east or canted to the north-northeast,

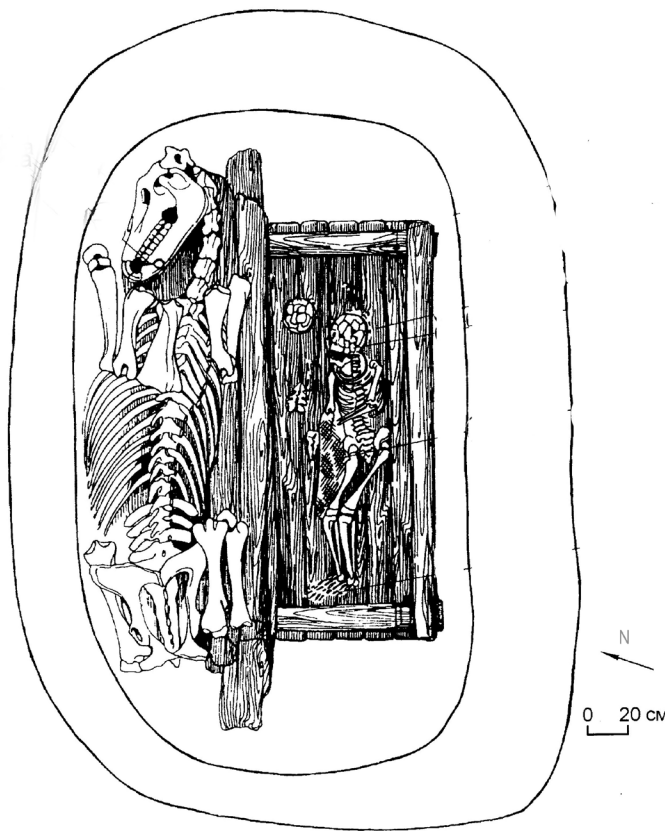


Figure 2.11. *A small Pazyryk-era burial, Ak-Alakha 1-2 (after Molodin et al. 2004, fig. 105).*

less commonly facing west. In other burials the people were supine, with heads to the east. It is clear that bodies were important, as in some instances they had been eviscerated, trepanned and embalmed, stuffed with grasses and plant matter (Fig. 2.12). It is assumed that the bodies were preserved so that they could be buried in specific burial grounds high in the mountains (Van Noten and Polosmak 1995: 80). This would imply that the deaths of the embalmed people occurred when they were either temporally or spatially removed from the burial grounds,

and they were embalmed in order to allow the bodies to reach the burial grounds in a better state of preservation. It is possible, for instance, that winter weather might preclude burial until the earth had thawed, or that a death in summer, but far away from the burial ground, necessitated embalming (Van Noten and Polosmak 1995: 80).

In keeping with Soviet and post-Soviet Russian concerns with ethnogenesis and race, where ethnos is often equated with physical type (e.g., Bokovenko 1995b; Malaspina *et al.* 2002; Yablonsky 1995c), a point I pick up in more detail later, Rudenko (1970: 52-53) noted that the physical type of the Pazyryk populations possessed “unusual variety,” with both Europoid and diluted Mongoloid physical types found in the graves. Rudenko also noted that men’s hair varied among shaved, bright chestnut, dark blond and soft, black and curly (1970: 47). Two studies highlight the assortment of human genetic material found in the burials. In 1998, mitochondrial DNA (mtDNA) analysis was conducted by Russian scientists on three sets of Pazyryk-era human remains, subject 1 from an Ak-Alakha-5 burial and subjects 2 and 3 from another site (Voevoda *et al.* 1998). Mitotypes were compared to available Eurasian representatives. The findings indicated in subject 1 a correlation with western-Siberian Finno-Ugric peoples; subject 2 with Paleosiberian, North-Asian Mongol-

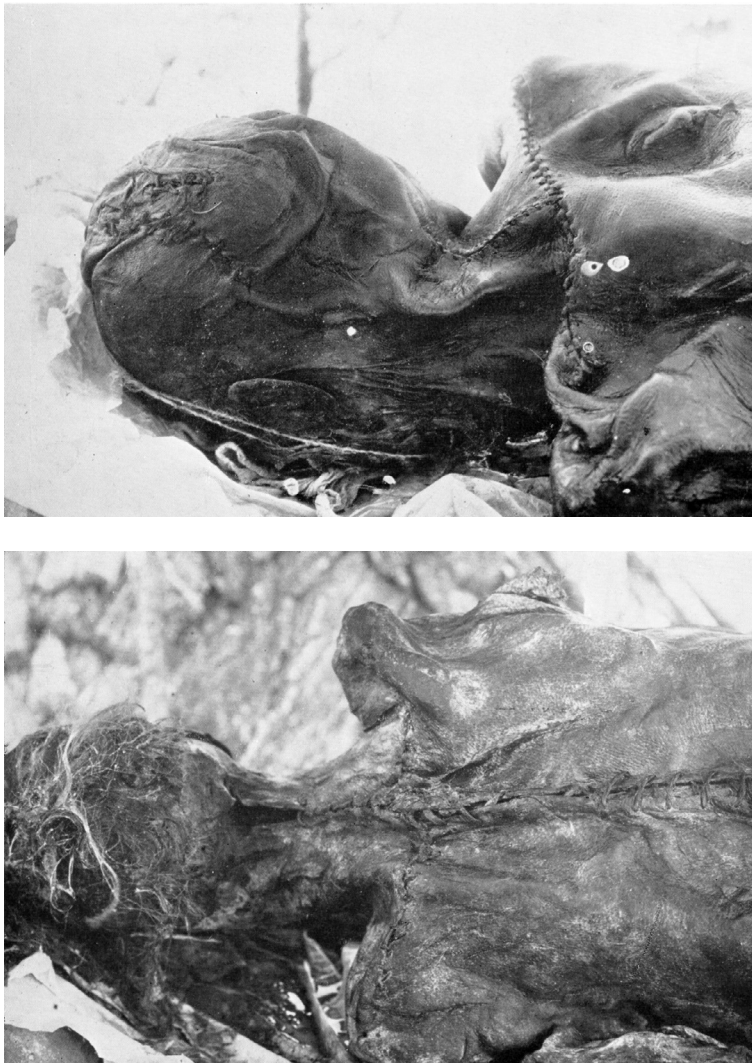


Figure 2.12. *Pazyryk 5 female and male mummies, upper and lower, showing embalming* (Rudenko 1970, pl. 45, 46).

oid types, “the aboriginal population of Northern Asia and America”; and subject 3 with European populations. A similar analysis was conducted (Clisson *et al.* 2002) on the man and woman found in Berel kurgan 11. Although not conclusive, the mtDNA data suggest that the reference sequence of the man is most frequent in Central Asia (21%) and Europe (16%), while the woman had a sequence suggestive of east Asian origins (Clisson *et al.* 2002: 306-307). The man and woman were related, and buried at different times (Samashev *et al.* 2000, Le kourgane). These studies point to the fact that the broader Pazyryk community consisted of multiple physical types, perhaps not

of the “unusual variety” for the region as noted by Rudenko (1970: 52-53), but of variety nonetheless.

The people varied both in size and physical type. Women ranged from 149-164 cm (5'-5'6"). In the large barrows, men, presumed to be tribal leaders, were as tall as 176-181 cm (5'9" - 6'), while in the smaller graves they were shorter, averaging 164 cm (5'6") (Rudenko 1970: 52). The height variability of the men raises the interesting question of whether or not size mattered in Pazyryk social norms. Did height grant some social advantage, or did social advantage lead to better nourishment and thus greater height?

Personal belongings—mirrors, beads, pouches, jewelry, weaponry and cutlery—were placed within the coffins. Typical Pazyryk weaponry or cutlery includes knives, daggers, arrowheads and fighting axes. Clothing, where preserved, was made of felt, leather, fur

and woven fabric, and are all diverse in style and decoration. Women wore skirts and men trousers. Where not looted, often there are ornaments from clothing and jewelry. Pazyryk women wore two earrings, men one in the left ear only. Decorative elements were carved, appliquéd and embroidered, and were incorporated into clothing, jewelry, tattoos on the human bodies, and on horse outfits. Representations include animals, plants, and repetitive decorative patterns.

Remarkable finds include the following: The original Pazyryk 2, often termed the “shaman’s burial,” held a stringed wooden musical instrument, and a small tambourine or drum, wild hemp (*Cannabis* sp.), and pouches with human hair and fingernails. In Pazyryk 5 was placed a four-wheeled wooden wagon with a canopy (Fig. 2.13). Although it was decorated finely, it was rather fragile, suggesting it was special to the funerary context. This is also supported by the fact that the shafts are not moveable; the wheels do not turn. Accompanying the wagon were four carriage horses, smaller than the five riding horses also interred (Ludmilla Barkova, pers. comm.). Also in this kurgan were two fabulous carpets, one felt and one pile, that have received much attention. In the medium-sized burials, Ak-Alakha 1-1 contained two coffins—one holding a middle-aged man with his knife, battle-axe and bow and arrows, and a young woman, dressed somewhat as a man and with her own weaponry similar to the man’s, but with a mirror, usually associated with female burials—and nine horses. Ak-Alakha 3.1, the ice maiden, was buried with six horses. Her clothes were well preserved, as was her fantastic headdress. Among her personal belongings were a horn vessel and stir-stick for making *koumiss*, fermented mare’s milk.

The Pazyryk Horses

Between seven to 14 horses were interred with saddles, bridles and elaborate decorations in the original Pazyryk burials, with up to 22 in other Pazyryk-era large burials. They were killed by blows to the mid-forehead with a battleaxe (Golomshtok and Griaznov 1933: 318). Multiple fractures to some of the horses attest that some did not die with the



Figure 2.13. Carriage from Pazyryk 5.

first blow, as shown in Figure 2.14. Their manner of killing, "honourably... with a military weapon, the battle-axe" (Gryaznov 1969: 155), and several other pieces of evidence point to the fact that some of the horses may have been ridden in battle. These include that some horses were buried with shields as a part of their trappings, and that some humans interred within the complex may have died of battle wounds (as noted in Appendix 1).



Figure 2.14. *Pazyryk horse showing multiple battleaxe wounds.*

Attempts were made to place the horses in the burials with their heads facing to the east, the same ways as the people. Where this could not be accomplished due to space constraints, attempts were made at patterning the deposited bodies, as in Figure 2.15. The "main horse"—the one with the most ornate decorations—was put into the grave first (Polosmak 1994b: 72), and easternmost.

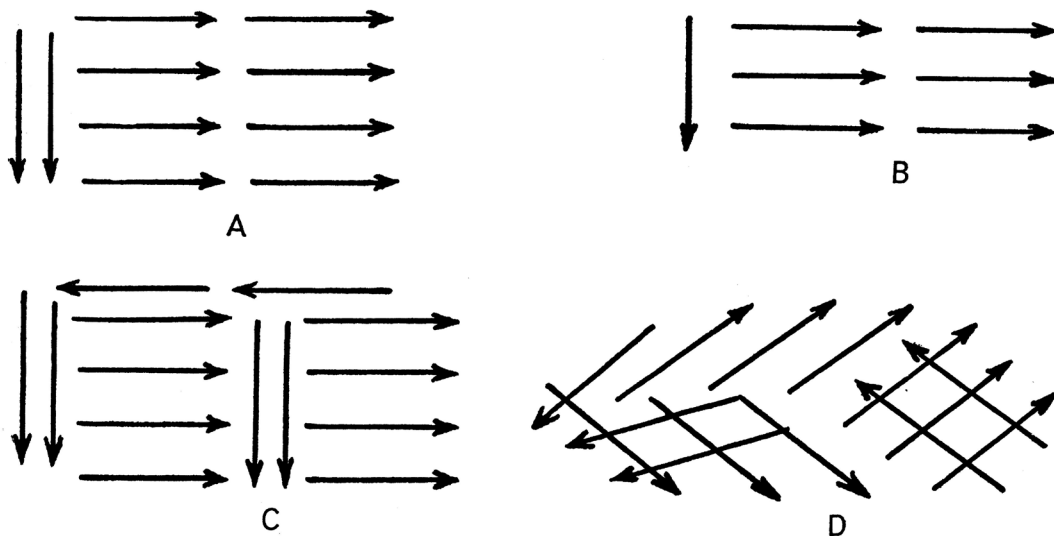


Figure 2.15. *Patterning of horses within the first four Pazyryk burials, ABCD = kurgans 4, 2, 3, and 1. (Rudenko 1970, fig. 16).*

There appear to have been two “types” of horses in the Pazyryk tombs. The size of the larger horses, close to 150 cm. tall as measured at the withers, surprised the original archaeologists, as they seemed larger than the horses that were known in the region at that time (Rudenko 1970: 56-57). They were thus assumed to be imports, a point I pick up in the following chapter.

The horses’ bodies had been modified. Their ears had been slitted with designs (Fig. 2.16), with seven different ear marks on the ten horses in Pazyryk 1 (Rudenko 1970: 223). These markings have been interpreted as ownership marks (Rudenko 1970: 117, 119). Also, all unearthed Pazyryk-era horses were geldings, castrated males.

Gryaznov (1950) noted the ages of the horses in Pazyryk 1 ranged from 10 to over 20 years, while Rudenko, after further kurgan excavations, notes that some horses were as young as two years old. (1970: 119). All horses in the large and medium burials were interred with their riding equipment—saddles, bridles and bits—intricately detailed as costumes with adornments. These points raise the question: Why were these particular horses inhumed with this particular human? If the fact of their burial equipment was not enough to make clear that they were indeed riding horses, paleopathological abnormalities found in the vertebra of six Pazyryk horses clearly show injuries consistent with being ridden, although not enough to render them unsound for riding (Levine 1999). I agree with Levine *et al.* (2000: 132) following Rudenko (1970: 118-119) in arguing—*contra* Bökönyi (1968) and others who believed the horses were sacrificed because they were old and/or lame—that they were riding horses.

There is a great amount of variability in the costumes—each horse was decorated and dressed differently. Furthermore, on each horse, the iconography on the saddle and bridle contained generally consistently represented motifs (Samashev *et al.* 2000, *Berel*: 42).

Within each grave, the most elaborately dressed horses—none to two in most of the large single burials, but four in Berel 11 (Fig. 2.17)—also wore elaborate masks and



Figure 2.16. Earmarks on one of the Pazyryk horses, upper left.



Figure 2.17. *Berel kurgan 11, reconstructed, showing the patterning and costumes of the bottom row of buried horses (Samashev et al. 2000 Berel, 13).*

headdresses. This variability of the horse costumes raises some of the most intriguing questions regarding the Pazyryk horse burials. The horses in the burials were treated differently, and they were treated differently because of something. Why was *this* horse, but not *that* horse, caparisoned in this manner? Why do we see the variation we do? These questions are core to this thesis, and various explanations have been offered for this variability, which I discuss in the following chapter.

The functional aspects of the Pazyryk horse equipment are discussed in Chapter 6. The point I would like to make here is that while elaborateness of the decoration varied widely, the functional horse tack is consistent in design, and the *placement* of decorations is also consistent. As can be noted in Figure 2.17, all saddles have breast and crupper straps off the front and back respectively, to hold the saddle in place, with carved wooden decorations at particular places. Pazyryk bridles are decorated with carved wooden plaques, sometimes with remains of gold or other metal foil covering them, some with leather inserts as a part of the design (Fig. 2.18). The plaques are always located in the same places on the bridles. As the size and complexity of each horse's decorations increases, so does the number of these decorations, which are then placed between these plaques, they never drop below this minimum number.

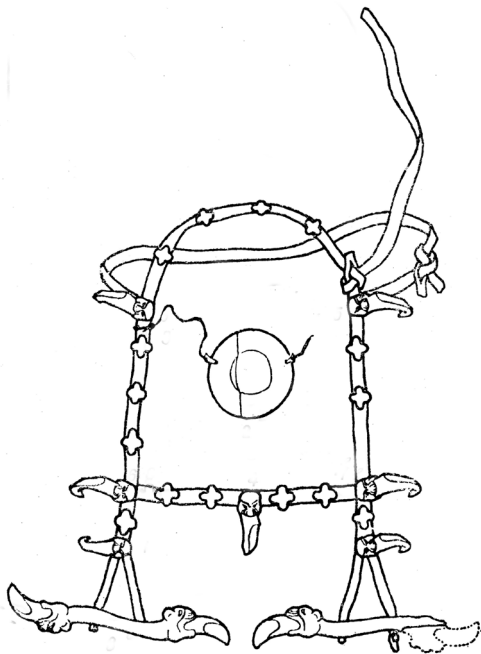


Figure 2.18. *The bridle from horse #2, Pazyryk 1 (after Gryaznov 1950, fig. 21).*

Diverse materials were used to create the Pazyryk horse costumes, including leather, felt, fur, wood, and horse hair, and birch bark. Some carved decorations were covered with tin or gold foil.

The Pazyryk-era representations are flat, in bas relief, or three-dimensional. They are often expressive and stylized, exuding a sense of action which shows an understanding of animal anatomy and the biomechanics of movement. But for a few plant motifs and repetitive abstract designs, representations on the decorations consist mostly of wild animals. These include both predatory animals—wolves, felines including lions and leopards, eagles—and prey animals—mountain goats, mountain sheep, elk, moose, birds and fish. These animals are most often depicted in the “animal-style” or “Scythian animal-style.”

Space does not permit more than this brief overview of the intriguing finds preserved by ice in the Pazyryk burials. Of particular interest to this thesis are the tattoos incised upon the human bodies, the iconography associated with clothing, and the functional and decorative elements of the Pazyryk horse outfits (Ch. 6).

Preliminary Observations

Within the Pazyryk burials, it appears that both placement and orientation held significance. The narrative ascribed to the place of location of the cemeteries is that the dead were buried in the “pastures of heaven,” close to the Otherworld in the sky where souls go upon death (e.g., Polosmak 1994b: 9; Samashev *et al.* 2000, *Berel*: 10). It is possible these were winter pasturing grounds, as in the winter the snow does not collect there as it does in the lower valleys (Polosmak 1994b: 122; Van Noten and Polosmak 1995: 80). There is a pervasive sense of the extraordinary nature of these high valleys in the secondary burials placed within the Pazyryk kurgans. The Altai as a burial area remained important through time and across a broad swath of Inner Asia. Of his time with Kublai Khan (c. 1270-1295), Marco Polo noted:

You should know that all the great lords who are of the lineage of Chinghiz Khan

are conveyed for burial to a great mountain called Altai. When one of them dies, even if it be at a distance of a hundred days' journey from this mountain, he must be brought here for burial. And... when the Khan dies, they kill all his best horses, so that he may have them in the next world. (Latham 1958: 97)

The directions in which the dead are placed and face can be of spiritual importance (Ucko 1969: 272). The orientation of the barrow strings, the placement of the horse and human bodies, and their orientation within the kurgans suggests that cardinality held significance for the Pazyryk people. The changes in these attributes noted in Table 2.1 indicate that the significance was new. It is clear that the placement of things also appears to have held importance. Elements of the horse outfits—decorations, frontlets, pectorals—are consistently placed at the same position on the body.

There is also a sense that verticality was privileged, that height mattered. The kurgans were placed in the highest pastures, taller people were associated with richer burials, the larger and more complex kurgans have taller burial chambers, and the height of the horses held significance (at least for the original excavators). The horse headdresses seem designed to raise height, to elevate the boundaries of the horses' bodies. I further develop these concepts of placement and verticality as they relate phenomenological to horseback riding, (Ch. 5 & 6) and to the tattoos on the human bodies and headdresses on the human and horse bodies (Ch. 6).

The special cultural complex of the Altai and Sayan mountains in some ways was defined by geographical and ecological conditions common to the distinctive alpine-steppe biome (Seleznev 2005). The high-mountain regions of Inner Asia were distinct from the steppe in that periodic mobility over long-ranges was not necessary. They were also different from the flat, obstacle-free steppe, necessitating a different type of riding, a type of riding which implies a particular type of relationship with the horses so ridden.

As Levine (1999: 34) notes, "People can have a wide variety of different types of relationships with horses. Horses can be wild, feral, or domesticated." Those domesticated can be resources: raised for meat, for milk or body parts which are eaten or otherwise used. Their power can be harnessed for traction or riding. When ridden, they can be acclimated for riding to the "stage of plain usefulness" (Wynmalen 1952: 20). They can also be schooled and socialized to a higher degree where, as I shall show, the horse looks out for the human in difficult or dangerous circumstances.

It does not take much training, or indeed cooperation on the horse's part, for a horse to be driven or ridden across relatively flat grassland. Indeed, this is probably the safest place to ride an untrained horse; one can let him run until he tires; one does not need control to turn as there is nothing to run into; and there is nothing scary to spook him, it all looks the

same. It is not so in the mountains, where a misstep on a mountain trail can mean death for horse and rider. I live and ride in the mountains, and one simply does not set out on the three-foot wide trails with a vertical rock face on one side and a 500-foot drop-off on the other —trails my neighbor has termed “no-coma” trails (because if you lose footing, you surely will not have to worry about being in a coma; you will be dead)—on a horse unresponsive to very subtle commands, i.e., an untrained or untrustworthy horse. Riding on the flat steppe, moving livestock and transporting people and supplies, does not require a horse into whom one has invested a lot of time and energy to develop such a trusting relationship; riding in the mountains does. This points to a large difference in perception of horses between steppe and mountain peoples, the latter where topography would seem to mandate a higher degree of training, more time and effort, and consequently a closer and more empathetic relationship. This is not to argue for environmental determinism, but merely to suggest that the mountain peoples made use of the environment by adapting in effective ways, and that the environment ultimately influenced to some degree the manner in which horses were utilized, understood and treated.

Conclusion and Implications

In addition to discussing here the ecological and archaeological characteristics of the Pazyryk burials, this discussion has shown that the culture-history method has been widely applied to understandings of pre- and proto-historic Inner Asia. This approach often labels these societies as bounded regional groups. Furthermore, scholarship of the Iron Age Altai populations has often tended to identify the Pazyryk with the broader Scythian culture, when there are significant differences between the two, as evidenced archaeologically, particularly as they relate to issues where there is human-horse interface.

That they were ridden in rough terrain, their manner of killing, and that they may have been used for battle, suggests that the Pazyryk horses carried their humans in quite dangerous situations. For a horse to be a safe partner in these contexts implies many years of schooling, over which a particular form of relationship between the horse and the rider is developed. This relationship requires the highest degree of mutual trust, understanding and responsiveness (Littauer 1934; McTaggart c. 1913); I shall elaborate upon the nature of this relationship throughout this thesis. Therefore, it is now time to re-examine the manner in which humans, animals and horses have been approached in archaeological discourses about Iron Age Inner Asia.

CHAPTER THREE

HUMANS AND HORSES IN IRON AGE INNER ASIA: CONVENTIONAL APPROACHES AND PROBLEMS

All the same, it must be borne in mind that the level of social and cultural development of the Altai mountain tribes was below that of their western neighbors.... Thus at the time under discussion the population of the High Altai had a social structure not yet far removed from that of primitive society. For even at the October Revolution the population of this region in no way differed from tribes and folks who, as Comrade Stalin has shown, ‘retained in the majority of cases a pastoral economy and patriarchal clan way of life’....

—Sergei Rudenko (1970: 225, 227)

It’s hard to imagine that these fine pieces were made by nomads living in tents.

—Hermann Parzinger (Edwards 2003: 129)

Introduction

As the passages opening this chapter make clear—the first applied to the Pazyryk culture, the second to the recently excavated Arzhan 2—in many instances Inner Asian Iron Age populations have been considered inferior to those investigating them. For the Pazyryk both the use of the art historical approach to date the burials and assumptions about the Scythian triad of grave goods have meant that in many regards their achievements and beliefs have been assumed to have originated from Classical or Chinese sources. As depicted in Figure. 3.1, the only thing the Pazyryk people were thought to export was their knowledge of horse-riding equipment.

The first part of this chapter addresses how social and cultural aspects of the populations of Iron Age Inner Asian have been understood, as these relate historically to underlying beliefs about racial, cultural and gender alterity. In addition to the culture-historical assumptions brought out in the previous chapter, this chronological historiography points to meta-narratives which have been, and in many cases remain, colonial and social evolution-



Figure 3.1. Map showing assumed directions of cultural exchange for particular items found in the Pazyryk burials (Hermitage display; also reproduced in English in Wilson and Pietrovsky 1978, 12).

ary. I then turn to more recent scholarship. Because of the disjunction inherent in recent studies concurrently investigating various elements of prehistoric Inner Asian life, these topics cannot be seen to follow in chronological sequence. I divide this discussion into three broad categories where horses play into human activity: subsistence, economies and settlements; ritual, religion and cosmology; and social structure, identity and ideology. This serves to further contextualize the manner in which horses are understood in relation to the Pazyryk burials. Finally, I summarize the issues and problems brought out in this chapter, and propose an additional way of approaching them.

Early Approaches to Understanding Iron Age Inner Asia

Classical and Chinese Proto-Historical Perceptions

The first accounts of the pastoral peoples of Inner Asia come from proto-historic sources associated with the literate sedentary Greek and Chinese states. In 450 BCE Herodotus visited the Greek trading colony of Olbia to gather information on Scythians, and reported on many of the “tribes” living in the region surrounding the Black Sea and beyond in his famous *Histories*. There are several problems with taking Herodotus’ writings as literal descriptions of the societies in question. First, Herodotus writes about some regions he did not visit, and these discussions must be seen as less specific and reliable. Second, because

histories are written by people with underlying assumptions, historical “fact” as written does not exist, but has to be distilled from material which is shaded by the biases of the historian. The historical record is subject to manipulation by its writers, particularly when the accounts originate within complex societies and refer to Others who are considered marginal or outside (Trinkhaus 1984: 675). In the case of Herodotus, the nomadism of the Scythians was “set up against Greek city-state patriotism which was about settledness, continuity, love of place” (Ascherson 1995: 53). As the following passage makes clear, Herodotus (*Histories* IV. 46) acknowledges his bias against their customs.

The Scythians indeed have in one respect, and that the very most important of all those that fall under man’s control, shown themselves wiser than any nation upon the face of the earth. Their customs otherwise are not such as I admire. The one thing of which I speak is the contrivance whereby they make it impossible for the enemy who invades them to escape destruction, while they themselves are entirely out of his reach, unless it please them to engage with him. Having neither cities nor forts, and carrying their dwellings with them wherever they go; accustomed, moreover, one and all of them, to shoot from horseback; and living not by husbandry but on their cattle, their wagons the only houses that they possess, how can they fail of being unconquerable, and unassailable even?

The passage also illustrates Herodotus’ focus on nomadism as a military strategy rather than a way of life (Ascherson 1995: 54), reflecting the Axial Age’s concern with warfare and conflict, a point I shall argue carries through to the present day. It is also important that he mentions the Scythian tactic of retreating to their lands and refusing to engage their enemies, a point to which I also return.

To acknowledge that historical depictions are culturally constructed and biased, however, does not imply that there is no accuracy to them. Rather, the extent to which they reflect any external reality versus the subjective perspective of the source must be substantiated by archaeological evidence. Herodotus’ reports do seem to correspond with mortuary evidence in some regards, and archaeologically visible remnants of practices described by Herodotus have been uncovered within Pazyryk burial complexes. Examples include the embalming of corpses prior to burial (IV. 71), the type of burial structures (IV. 71), and the sacrifice of horses for funerary rituals (IV. 72; on the latter, see Mallory 1981; Trinkhaus 1984). These point to the wide regional range of these practices within the “Scythian world” to which the Pazyryk community has been attached.

Highlighting the importance of critical reading and archaeological substantiation, other elements of Herodotus’ reportage have been discounted. Finds of single, female inhum-

tions, some with horses, weaponry and quite rich grave goods (Davis-Kimball 1997/1998; Polosmak 1994a, 1994c, 1997, 1998) have enabled expanded conceptions of the roles and statuses of women in Scythian, Sarmatian, Sauromatian and Pazyryk societies. These type of burials would not seem to reflect, as Herodotus reported (IV: 71), that these women were wives or concubines of powerful men; objectified, sacrificed and buried with them as grave goods (cf. Rolle 2006: 175). New research on the double, male-female inhumation at Berel 11, for instance, show that the people were genetically related, and the woman was put in later, years after the male burial (Samashev *at el.* 2000, Le kourgane). Here, the initial interpretations might well be seen as more reflective of a patriarchal, masculinist cultural ambience, its roots in the earliest beginnings of Western “civilization” and its tendrils extending to more recent archaeological interpretations.

Both geographically and through their interactions, the Chinese were closer than the Greeks to the Iron Age Inner Asian societies to their north and west, with whom they both traded and warred. This contact increased dramatically in the late Iron Age. The Chinese state was entirely sedentary and agrarian, and Chinese historical accounts of several of the populations which inhabited the region coeval to and south of the Pazyryk come from emissaries sent at various times to obtain ethnographic and demographic information for decision-making regarding trade and war, or to foster alliances.

Historians seem comfortable enough relying on Chinese sources for histories of the peoples with whom they interacted (Barfield 1992; Chen 1998; Christian 1998; Grousset 1999; Kamberi 1998; Liu 2001; Mallory and Mair 2000; Narain 1990; Yü 1990). However, the histories of nearby peoples written by the Chinese are often composed later than the events¹ and are obviously disdainful about the societies under question, realities which must be considered when assessing their accounts. As an example, an account in the *Han Shu* discusses the Wu-sun, whose origins are thought to trace to the Altai region (Jettmar 1967: 164): “The state has numerous horses, and rich persons may own as many as four or five thousand animals. The people are hard-hearted and greedy; they are unreliable and much given to robbery” (Beal 1884: 144, *Han Shu* 96B, 1B). The Chinese sources describe the Wu-sun as “having red hair, blue eyes and resembling monkeys” (Mallory 1989: 60; Mallory and Mair 2000: 93). Mallory (1989: 69) notes that the racial aspects of this description was “proudly seized upon by Western scholars as indicating a Europoid population,” a point I pick up shortly as it relates to Indo-European studies.

¹ Sima Qian (Szuma Ch'ien, 145-86 BCE) compiled first great Chinese history, the *Shiji* (*Shih Chi*, “*Historical Records*”) which covers China in the Early Han Dynasty (207 BC-8 CE). Ban Gu (Pan Ku, 32-92 CE), compiled *Han Shu*, “*Han History*,” and the *Hou-han-shu*, partly written during the 5th century CE embraces the period from 25 CE to 220 CE.

The Pazyryk populations were far removed spatially from both the Greeks and Chinese, and there is clearly no consensus on how the Pazyryk population fits into these biased descriptions. Using both proto-historical sources and the art-historical approach assessing stylistic similarities, ethnic identities have been ascribed to the Pazyryk considering them Scythians of the Altai (Gryaznov 1969: 133), Wusun or Yuezhi (Mallory *et al.* 2002: 204), Massagetae or Saka (Bokovenko 2004: 24) and Almasas (Mayor and Heaney: 1995). As Figure 3.1 shows, these types of analyses, while interesting, attempt to map “supposed

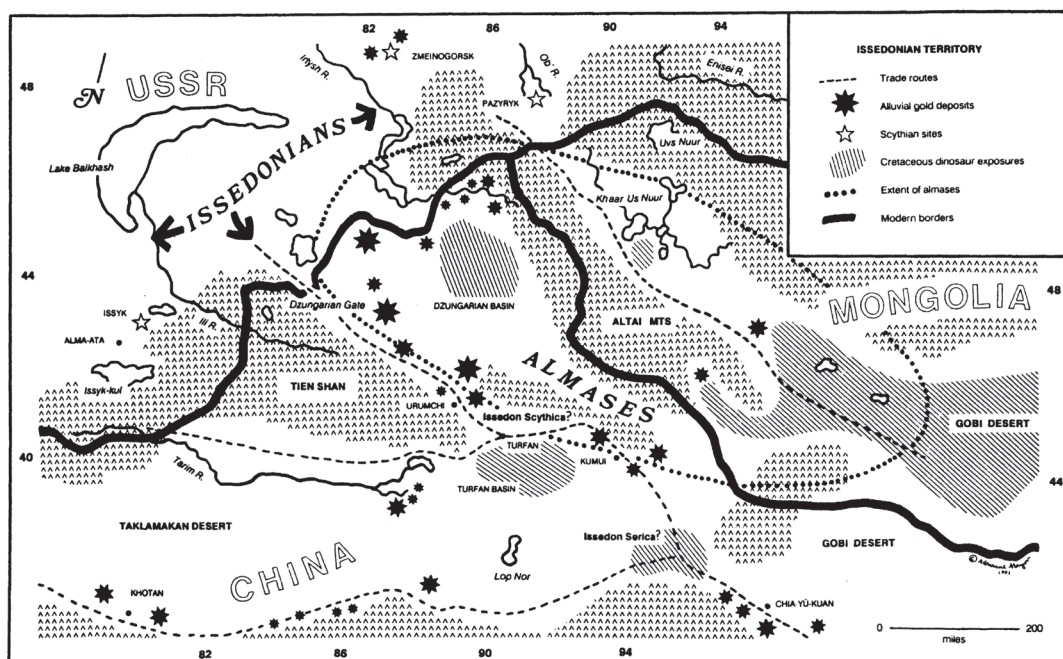


Figure 3.2. Map of Issedonian territory (Mayor and Heaney 1993, fig. 1).

ethno-cultural entities within discrete spatial geographical context... [rather than providing] interpretations of the changing patterns of ethnicity and cultural identity” (Hanks 2003: 22-23). For these reasons, using protohistorical sources to culture-historically equate origins, ethnonyms, racial types and language to particular populations proves problematic.

The Colonization of Siberia and Soviet Archaeology

Inner Asian populations operated to their own rhythms for many centuries. The earliest Western explorations into Siberia, the Altai and farther eastward to the Pacific Ocean began with Russian colonization in the 18th century. In the broadest sense, it should be recalled that it is also during this timeframe that European countries were colonizing North America

and beyond, with the two expansions paralleling each other in more than just timeframe. As with the European settlers' treatment of Native American peoples, many endeavors aimed at "Russification" of the local Asian peoples, while couched as well-meaning attempts to civilize the heathens, can be viewed differently with hindsight. For instance, with little concern for local—much less individual—identities, "in 1876 missionaries not knowing the local language [of the Khakass, a neighboring people to the Altai], simultaneously baptized 3,000 people... naming all the men Vladimir and all the women Maria" (Vahtre and Viiberg. 1991; also Forsyth 1992: 181).

Russian and European geographical expeditions continued through the 19th century, primarily identifying sites of archaeological interest, with a view that elevated the relevance and importance Western thought and culture above that of indigenous peoples, where "the progress of mankind [sic] was centered in the Western world, which alone was dynamic while Asia and Africa...were stagnant" (Iggers 1997: 79). Beliefs about the inferiority of native Central Asian peoples are apparent in the statements of early Western explorers of the region, as exemplified by traveler Kohl's 1841 (cited in Rolle 1989: 17) notation that:

From time immemorial down to the present day, [the steppe has] been the dwelling-place of savage nomads and barbaric hordes in whom no independent seed bearing the idea of the state, the building of towns or cultural development ever took root, but who attracted the attention of the rest of the world only through their activities which were hostile to and destructive of culture.

Thus, there was a belief in the hierarchical nature of subsistence patterns, with an agricultural, settled way of life following savage nomadism in the progression of Western "civilization." Here, "the suggestion that there was an important difference—technical, social, mental, moral—between pre-farming and farming societies was strongly reinforced by classically derived predispositions towards the separation of nature and culture..." (Pluciennik 2001: 746). It is clear now that rather than existing in any linear progression from hunter-gathering, to nomadism to agriculture, in many cases Central and Inner Asian agriculturalism preceded the pastoralism which was refined by the Pazyryk period. As I shall discuss further below, in areas where farmers had existed which were later dominated by larger nomadic groups, agriculture and pastoralism existed symbiotically.

Serious archaeological excavations in the Altai began in the 1920s (Bokovenko 1995b: 256-157), with the colonial outlook carrying through to Marxist dogma, albeit in a perhaps more subtle manner, into state-sponsored Soviet archaeology. Despite egalitarian proclamations to the contrary, the development of Marxist-based, state-sponsored and -controlled archaeology developed within the framework of Western intellectualism. Gosden (2004: 156)

has noted that “[c]oncepts of hierarchy, race, gender, sex, class and the primitive all acquired new meanings and force during the eighteenth and nineteenth centuries and became most rigid in the first part of the twentieth century,” and these carry over to both Euro-American and Soviet archaeological interpretations. For instance, in a logical syllogism based on assumptions certainly no longer held valid in today’s understanding of gender roles, Rudenko argues that since the Pazyryk people were stock-breeders, “It follows that as stock-rearing is a man’s affair so he must have been head of the family, which would therefore have been patriarchal” (Rudenko 1970: 211).

Methodologically, Soviet archaeology has been characterized as “history armed with a spade” whose methods “impose sociological philosophy on archaeological material” (Klejn 1993: 339). This is problematic in that “pre-defined rational method produces its object in advance” (Shanks and Tilley 1992: 48). Soviet-era archaeologies such as the reports of the Pazyryk horse burials operate under four broad assumptions in terms of social and political structures and motives. First, Soviet Marxism posited a value-laden, linear model of social evolutionism (Trigger 1989: 225; Davis 1983: 408; also generally Pluciennik 2005), apparent in Rudenko’s passage leading into this chapter, which is complete with the Soviet-era perfunctory quotations from Marx, Lenin or Stalin (Iggers 1997: 82).

Second, concern with class struggles meant that interpretations to a great degree were categorized in terms of pre-conceived vertical status hierarchies, with statuses interpreted based upon the quality and quantity of grave goods, with little interest in the diverse types of horizontal roles held by members of communities. More recent archaeological studies propose a more nuanced understanding of the complex nature and purpose of grave goods (e.g., Hanks 2000; Parker Pearson 1993).

Third, a major focus was on how technology, modes of production and economics play into constructs of power, human social behavior and societal change (see Klejn 1993). This is apparent in Rudenko’s (1970: 117) discussion of the horses as “means of locomotion,” implements of transportation—conceived under the broader structure of production. One problem with focusing solely on economics is highlighted by Hodder (1982b: 6): “The dichotomy set up between cultural form and objective functional expedience is misleading, and material items are more than tools holding survival information.” While the utilitarian function of the horses to the people of Pazyryk certainly must be acknowledged, to presume this as their only role is limiting. Material culture has come to be seen as having (at least) two meanings—a functional, denotative one and a symbolic, connotative one—each bound up with the other (Thomas 2000: 9; Hodder 1982c: 263). Connotation is not merely the more abstract, symbolic meaning of a word or symbol, but also includes the emotional,

affective elements of the message (DeVito 1999: 112). These “feelings or evaluations we associate with a word [or other symbol]... may be even more important to our understanding” than the denotative meaning (Verderber and Verderber 2002: 54). Thus, both Rudenko and, as I shall show, many later researchers pursuing functionalist studies, characterize the Pazyryk horses solely denotatively: the horse is a quadruped *used for* transportation (or food, or whatever). Under this view, we fail to grasp any potentially rich and important meanings associated with the affective elements of how horses—or “horseness,” or indeed one particular horse—might be understood by people. Moreover, as this thesis shall make clear, classifying horses as physical objects rather than social agents clearly misrepresents the reality of dealing with them on a daily basis.

This points to a final problem with the Marxist approach: its lack of focus on everyday experiences. From the perspective of everyday life “the Marxist emphasis on the central role of politics and economics as the locus of power and exploitation remained too impervious to the real interests and concerns of live human beings” (Iggers 1997: 8). Archaeological theory today would not make such a distinction; just as ritual places and objects are also places and objects encountered in daily life (Barrett 1988: 31), so is the functionality of horses bound up with other meanings. Moreover, as I bring out in Chapter 4, the focus on power and exploitation to the exclusion of other aspects of human interaction carries through to later Euro-American archaeological and anthropological discussions of domestication, and understandings of the place(s) of animals in human society.

Ultimately, the Marxist approach applied by early Russian archaeologists to the Pazyryk finds provided invaluable information about the Pazyryk community, but their interpretations were limited by the preconceived format into which they were required to fit their material.

Colonial Attitudes and Interpretations of the Pazyryk Material

There has been a desire to identify the fabulous Pazyryk finds with people like “us.” This bias runs through a



Figure 3.3. *Portion of the knotted carpet found in Pazyryk 5.*

great deal of the literature dealing with Inner Asia, about which scholars have, until very recently, sought origins of technological and artistic endeavors and in the more “advanced” cultures to the west and south. The discussions of two of the Pazyryk finds provide a good example of this bias, the famous pile carpet, and the horses themselves.

One of the finds from Pazyryk 5 was an opulent knotted-pile carpet (Fig. 3.3), the second oldest found to date, which was based upon motif was considered to be of Achaemenid origin (Rudenko 1970: 296). Up until recently it was not considered to be a local product, because, it was “not an example of primitive rug weaving. It was conceived neither by nomads nor by peasants” (Schurmann 1982: 6). Despite the fact that analysis of the dyes show them not those used in Iranian rug-making, but of a type imported to the region from another source (Bohmer and Thompson 1991: 33-34), recent scholars remain hesitant to attribute its making to the Pazyryk people: “It is also believed that there *could be a chance* that the Pazyryk people were able to manufacture them [the rugs] themselves” (Van Noten and Polosmak 1995: 82; my emphasis).

Tall and elegant as they were, the Pazyryk horses themselves were not considered local by

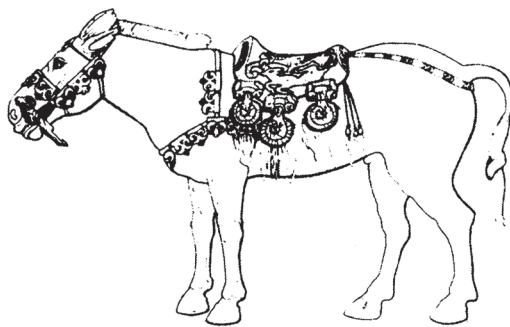


Figure 3.4. Left, early representation of a horse from Pazyryk 1 (Golomshtock and Griaznov 1933, fig. 6); right, later representation of the same horse (Rolle 1989, horse 3, n.p.).

the original excavators, but imported from western Central Asia (Barclay 1980: 87; Jettmar 1951: 173; Okladnikov 1959: 37) and identified with the Akhal-Teke breed of Turkmenistan (Bokovenko 2000: 305; Maslow 1997: 13). The assumed “breed” identification carried beyond the verbal into the visual as the myth of their western origins caught hold. As figure 3.4 highlights, while Gryaznov’s initial reconstructions of the Pazyryk kurgan 1 horse outfits were drawn on horses of the local type, later drawings featured the trappings on horses of contemporary Akhal-Teke breed phenotype.

The Akhal-Teke was developed as a breed as late as the 1800s, in Turkmenistan, much of it desert and 2000 miles to the southwest. Progenitors of the breed probably existed as a

landrace for many thousands of years, adapting to the dry, hot region by developing long, thin legs and necks. According to Stanslaus Lebedev, All-Russian Institute of Horsebreeding, Ryazan, Russia (pers. com.), in the 1930s under Stalin, failed breeding experiments were conducted in Siberia, in which Thoroughbreds (actually *less* “desert-bred” than the Akhal-Teke and thus more tolerant of colder weather) were brought in to “improve” the local Siberian breeds. They could not endure the weather, and either died or were shipped back. This argues that the same fate would have befallen any Iron Age desert-bred imports. A recent genetic study also has disproved the “import” hypothesis (Keyser-Tracqui *et al.* 2005). Researchers analyzed mitochondrial DNA from the 13 frozen horses from the Berel site, and compared the DNA to 363 breed sequences from around the world. The researchers found no matches with the Akhal-Teke, and no relationship between the ancient DNA and any particular extant breed.

With regard to descriptions of the Pazyryk horses, while it would have been, to a greater or lesser degree, unacceptably impolitic to denote glorious or derogatory attributes to people (particularly in the later descriptions, following the world’s witnessing such racial depictions through Nazi nationalism), horses were fair game (Borneman 1988: 27). When one then reads the local Altai horses described as “small shaggy heavy-boned beasts with large heads” in contrast to the long-legged, “tall animals with a lean and rather aquiline head set on a long neck” (Gryaznov 1969: 154-155), the comparison between the shorter, stockier local Altaian and the taller, leaner Caucasian Russian is not lost.

Attempts to trace a lineage between the Pazyryk horses to the origins of the Akhal-Teke horses can be seen to parallel initial and ongoing research agendas concerned with ethnogenetic studies seeking Caucasoid features in skull measurements and genetic analyses, and with ethnohistorical approaches which seek connection with Indo-Iranian peoples, which I discuss below.

I now turn to how the horse in Iron Age Inner Asia has been studied in more recent archaeological scholarship: economically/functionally, symbolically, and as proxies for human attributes. Lack of space means full discussion of these topics is impossible, but I wish to offer some pointers to relevant areas in what follows.

Contemporary Approaches to Iron Age Inner Asian Populations and Horses

Subsistence, Settlements, Economies—The Functional Roles of Horses

A great deal of scholarship has been devoted to understanding nomadic and pastoral economies and subsistence patterns, which are two distinct categories that are often erroneously bound together (Khazanov 1994; Koryakova 2000: 13). As Renfrew (2002: 4) notes:

“We should remember also that while nomadism may imply pastoralism, pastoralism does not necessarily imply nomadism.” Problems arise with characterizing Iron Age Inner Asian societies as solely nomadic pastoralists.

Pastoral migration patterns vary based upon ecological conditions. As opposed to large-scale seasonal north-south “horizontal” migration identified in the steppes; and lower to higher elevation “vertical” migration in the foothills, each with cycles ranging for these types of from 100-1000 kilometers (Barfield 1993: 141; Bokovenko 1995a: 255; Davis-Kimball 1998, 2000; Hiebert 1992; Yablonsky 1995b: 196), a third type of pattern presents in the mountains that is often overlooked in discussions of pastoral nomadism. Here, in an alpine steppe biome, “migrations over long distances were not necessary [because] the grass is so luxuriant everywhere that even the largest herds moved only over small distances...” (Rudenko 1970: 63). Seasonal migrations were vertical, with pasturing in summer in the higher mountains in summer, and in winter in the lower valleys which were more protected from snow (Bokovenko 1995b: 255), but probably not over vast distances. In the Dzungar Mountains, between the Altai and Tien Shan, an extensive study analyzed climatology, geomorphology, soils, archaeo-fauna and –flora and radiocarbon data; conducted an extensive landscape survey; and excavated a Bronze Age settlement site and three burials (Franchetti 2004). From this data, models were developed which indicate that these pastoralists did not migrate beyond a 50 km range in this mountain zone, which might be seen as representative of Altai the situation as well. In this type of scenario, animals might be shifted to nearby pastures without the entire human population moving.

Archaeological settlement studies provide deeper understandings of the region’s Iron Age populations, and three are highlighted here. In the Sayan Mountains, findings of bronze sickles, pickaxes and containers for agricultural products, as well as irrigation systems constructed in the Scythian period, point to a floodplain farming model, with stockrearing and hunter-gathering secondary to the economy (Di Cosmo 1994: 1104). Below the Altai Mountains in Mongolia, Xiongnu burials include farming tools, and one Xiongnu complex includes a large fortress, a small fortification work, a cemetery, permanent housing and evidence that the inhabitants grew millet, barley and wheat, and had grain storage capabilities (Christian, 1998: 189; Di Cosmo 1994: 1098; Minayev a and b n.d.). Finally, ongoing archaeological excavation of settlements in the northern Tien Shan valleys by Chang and Tourtellotte has yielded phytoliths showing evidence of cereal crops such as millet, wheat, barley and rice. Coupled with findings of domesticated animal bones, Chang and Tourtellotte argue that the region during the Iron Age was characterized by a “dual dependency upon sedentary farming communities and specialized nomadic confederacies.” (1998: 275;

also Chang *et al.* 2003, 2007), with a society consisting of farmers, herders and craftsmen, and a “warrior or aristocratic elite” (Chang *et al.* 2007: 32).

These studies highlight that Iron Age Inner Asian populations now are seen as possessing complex, mixed economies utilizing to a greater or lesser degree some form of nomadic pastoralism combined with—at times, or by different arms of the societies—sedentary agriculturalism (see Bower 2003: 35-36; Chang and Tourtellotte 1998; Chang *et al.* 2003). Thus, Inner Asian pastoralism-agriculturalism was not dualistic, but existed on a continuum with local variation. In terms of movements necessitated by the pastoral nature of their economies, rather than wandering aimlessly, Inner and Central Asian pastoralists’ territories were well defined, and not unlimited.

In light of these studies, it is interesting to note that no settlements have been found in the high Altai during the Pazyryk timeframe. For the Pazyryk, there is “no indication whatever for a sedentary life... no town or village, resulting from sedentary life, [has been] found in Siberia” (Van Noten and Polosmak 1995: 76, 78). The response to my often-asked questions about Pazyryk settlements to the Russian archaeologists with whom I worked was invariably similar to that told to me by Ludmilla Barkova, the curator of the Altai collection at the Hermitage, “They had no settlements; they were nomads.” According to settlement archaeologist Claudia Chang, “If they’re there, we haven’t found them yet” (pers. comm.).

The closest we come to any reference of agriculturalism within the Iron Age Altai populations is that millet was found in a high-mountain Pazyryk-era tomb at Tuekta 1. This suggests either tribute or trade interactions with lower altitude agriculturalists (Heibert 1992: 126; Jettmar 1967: 128) or that the grain was grown locally (Heibert 1992: 126). This lack of settlement data would seem to imply a completely nomadic lifestyle for the Pazyryk society—and indeed this was Gryaznov’s interpretation (1969: 132). Yet elements of the Pazyryk burials would seem to argue, as Rudenko (1970: 80) believed, that they had a “settled or semi-settled existence.” Primary among these is the manner in which the burial chambers were constructed, out of hewn logs which had been marked for reassembly (Heibert 1992: 126; Rudenko 1970: 63-66; Jettmar 1967: 92) (Fig. 3.5).

While settlement data would be useful in elucidating Pazyryk subsistence and economic elements, the funerary evidence provides some indications. Food offerings included domestic animals: fat-tailed sheep, goats, large-horned cattle and yaks (Heibert 1992: 126; who further notes this argues for a semi-sedentary lifestyle as these animals would have had to have been corralled and fed). Although no remains of wild animals were found in any of the Pazyryk tombs, wild animals and fish are widely represented, along with plants and fantastical animals, in the decorative iconography on horse and human clothing, on tattoos, and on decorative objects, arguing for the importance of hunting and fishing. What emerges from

the funerary data, then, is an economy incorporating subsistence modes of hunting, gathering, fishing, herding and horse breeding (Seleznev 2005). I assume that, where possible, horses assisted the Pazyryk people with these activities.

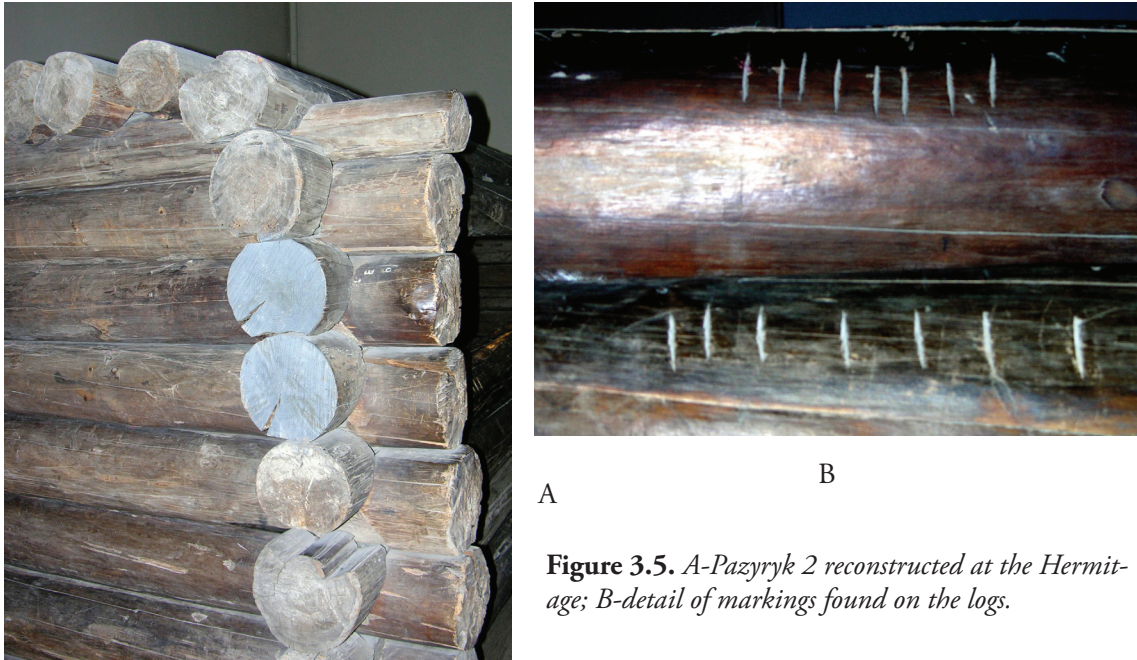


Figure 3.5. *A-Pazyryk 2 reconstructed at the Hermitage; B-detail of markings found on the logs.*

The variety of items of different material within the Pazyryk funerary assemblages indicates that the population included numerous crafts-people—carpenters, woodworkers and woodcarvers; metalworkers; tanners, felt-makers, weavers and clothiers; saddlemakers; and artists and artisans working in various and perhaps multiple of these media. Most all objects were decorated in a highly detailed and ornamented fashion. The high levels of creativity and skill used to produce these items would argue for specialization in such endeavors, and comparative analyses of Iron Age Inner Asian inventories show “localized schools of artisans” (Samashev 2007: 41)

For the Pazyryk, horses also served as raw materials; parts of their bodies were used to make objects, as evidenced by the woman’s headdress made of black colt’s fur and pouch used to hold fingernails and hair in Pazyryk 2. For the broader region, the horse’s role as food source must have been of some importance (see Anthony and Brown 2000; Benecke and von den Driesch 2003: 81; Levine 1998). However, horse flesh is only rarely found in the Pazyryk burials. As I shall discuss later, a more nuanced typology of the manner in which the roles of horses were perceived within that community suggests that “horses” were not perceived as a discrete set but, based upon their roles, in various manners. While horses from some categories were perhaps eaten, horses from others were not.

Beyond these practical uses—or perhaps because of them—the horse appears to have been accorded inherent value beyond that of other domesticated animals. Chinese chroni-

cles note extensive trade with Xiongnu and Yuezhi, for whom the horse provided currency for trade (Yü 1990: 124; also Christian 1998: 192; Goodall 1966: 137). At least, then, for the regions which bordered China, it can be said that horses were traded for agricultural and craft products. “Thus it was not any livestock that became money, but more exactly the horse” (Rudenko, 1970: 222).

The use of the horse for locomotion provided several advantages. First, it facilitated trade (Kuzmina 2008). Second, whether the horse was used to pull a chariot or ridden (Anthony 2007: 223; Hildinger 1997: 20-31; Kuz'mina 1998: 83), equine locomotion was beneficial in battle, granting a military advantage five to ten times greater than without the horse (Mallory and Adams 1997: 277). By the beginning of the first millennium BCE, across Eurasia the horse became a vehicle for aggressive military actions and invasions that often created a series of domino-effect migrations affecting the entire region and beyond (Hildinger 1997, Kuzmina 2008: 65; Piggott 1992; Torday 1997). Although the Altai pastures were rich, the shift to mobile pastoralism in itself may have provoked such military actions and forced migrations in wider Eurasia because of the need for larger pastures for larger herds (Anthony 2007: 222).

Horse locomotion brought about several crucial changes to the face of prehistoric Eurasia (Anthony 1996: 62; Kuzmina 2008: 65). The ridden horse allowed for: large-scale, long-distance movements of people, herding of other domestic animals vast distances (Mair 2003: 172) covering up to five-ten times more territory (Mallory and Adams 1997: 277), herding several times more animals (Anthony 2007: 222; Rudenko, 1970: 55), and prospecting farther for new pastures (Gryaznov 1969: 154). Thus, the shift to mobile pastoralism made possible by the horse may well have shaped the ethnic landscape of Iron Age Central Asia and beyond. The horse also has been argued to have helped spread Indo-European languages, and with them cultural attributes and beliefs, a point I pick up now.

Ritual, Religion and Cosmology—The Symbolic Roles of Horses

The conundrum of human existence is undoubtedly pondered by peoples everywhere. We seek to understanding the transformations we encounter in life and death and the differences between us and others, and between humans and the rest of the world. The questions of how we came to be, our places in the universe, where we exist before birth and go after death, and how and why we come to and go from this world, are never treated trivially.

Animals also enter into these questions. Economic explanations alone cannot answer the complex questions related to animal use in past societies (cf. Insoll 2004: 73), particularly as they relate to death. “The treatment and conceptualization of animals themselves after death is in all probability hardly a purely secular activity” and “has to be considered as much more

than the focus of economic logic” (Insoll 2004: 72). As evidenced both by their interment with humans for many millennia and their wide portrayal in iconography across a variety of media, horses can be seen in Eurasia as commanding signifiers for a variety of non-economic beliefs, a “framework of beliefs” which encompasses the supernatural (Renfrew 2007: 113). Cosmological beliefs are often acted out through ritual, “a secular or sacred, formal, solemn act, observance, or procedure in accordance with prescribed rules” (Lehmann and Myers. 2000: 414). Of course, ritual does not necessarily equate with religion (Barrett 1988: 31; Brück 1999; Hill 1995; Parker Pearson 1993), and neither religion nor ritual can be considered to consist solely of metaphysical aspects; both involve routine actions (Fogelin 2007).

Because ritual practices are often materialized and/or conducted repeatedly, they may be apparent archaeologically through structured depositions, monuments, and iconographic representations. Three elements—practices, mental representations and archaeologically visible material—all act upon one another (McCauley and Lawson 2007: 213-214), and with prehistoric societies, the latter are used in attempts to infer the former two. In the quest for deeper understandings of prehistoric Inner Asian cosmological beliefs, some archaeologists have looked to language history, mythology and ethnography to assist in interpreting material culture and landscape patterning which may imply ritual or religious activities.

The Indo-European Approach. A great amount of attention has been focused on seeking correlates between language history and archaeology, in an attempt to distil from this the original homeland of the Indo-European (IE) speakers (e.g., Anthony 1998; Jones 2002; Kuzmina 1997, 2003; Mair 1998c; Mallory 1981, 1989; Mallory and Adams 1997; Mallory and Mair 2000; Renfrew 1987, 1994, 1998b, 2002). Under this general umbrella, research has addressed the symbolic belief systems of prehistoric Inner Asia. Primarily, this type of research has focused on linguistic analysis, singly or combined with comparative mythology and funerary evidence, to reconstruct ideologies of prehistoric presumed IE-speaking societies in Central and Inner Asia. These studies operate on the assumption that long-range invasions and migrations from some location on the Eurasian steppes—the proto-IE “homeland”—to Inner Asia, Central Asia, Europe, northern India and the Iranian plateau occurred, spreading in one or more waves language, technology and ideology (see Anthony 1986, 1995, 2005, 2007; Bashilov and Yablonsky 2000; Davis-Kimball 2000; Gimbutas 1997; Jones 2002; Mallory 1989; Mallory and Adams 1997; Puhvel 1970a; Renfrew 1987, 1998b, 2002). Because these IE interlopers were thought to have developed horse-riding, and used horses in warlike incursions, several of these analyses have in part or in whole specifically addressed the cultic meanings of the horse to prehistoric Eurasian societies (Anthony 2007; Belenitskiy 1978; Doniger 1990; Kalugin 1980; Kuz'mina 1977,

2003; Mallory 1981, 1989; Mallory and Adams 1997: 273-274; Puhvel 1970a, 1970b, 1987). Others argue against such connections (Alinei 2003: 16; Clausen 1965; Janhunen 1998; Mair 2003: 179; Sinor 1965, 1998).

Space does not permit a full discussion of this fascinating topic. In the following I touch upon three lines of theoretical concern raised by IE studies: the connections between language, racial makeup, ideology and practices; the time-depth, regional breadth and origins of cosmological and ideological beliefs; and the diffusion or autochthonous development of cultural aspects of societies.

Some IE studies have sought to correlate IE language(s) with people of certain racial or physical attributes. Attempts have been made to distinguish Inner Asian racial type through craniological measurement or molecular testing studies (see, e.g., Field 1948; Kangxin 1998), and often these studies are used to infer potential ethnogenesis overtly (e.g., Gladney 1998; Keyser-Tracqui *et al.* 2005; Stetsyuk 2003; Voevoda *et al.* 1998; Yablonsky 1995c.), or embedded as a given (e.g., Bokovenko 1995c; generally Davis-Kimball *et al.* 2000). Because reconstruction of a proto-IE language is based upon similarities and differences in later languages, and those languages often are spoken by peoples more Caucasoid than others in Eurasia, the finding of bodies with Caucasoid features have been used to interpret them as IE-language speakers (see Mair 1998b: 8; Renfrew and Bahn 2000: 189). Here, “it should be remembered that IE is not a synonym for Caucasoid peoples, as contrasted with Mongolian peoples” (Frye 1996: 35; also Bamshad *et al.* 2004; Brown and Pluciennik 2001; Renfrew 1998b: 203; Serre and Pääbo 2004; Sinor 1998: 729). In terms of the multiple genetic types of the Pazyryk people, clearly issues of group identity for them were related not to physical type, but to a self-ascribed sense of ethnic community, which was bound together by shared cultural attributes, values and beliefs.

It is natural to be concerned about our presumed forebears (Chard 1963: 545). Yet despite the claims of one leading IE scholar, Victor Mair (1998c: 835), that the search for the Indo-Europeans and their homeland is “devoid of political content,” that is not always the case with ethnogenetic arguments in general (see Pluciennik 1996). The ongoing survival of the ethnogenetic concerns of primarily Russian and Eastern European scholars (Malaspina *et al.* 2002; Stetsyuk 2003; Voevoda *et al.* 1998; Yablonsky 1995c) can be traced to Lenin-era nationalism, wherein a Soviet identity was fostered, with a culturally Russian, racially Eastern Slavic, makeup; using models of diffusion and migration, and rejecting autochthonous development (Trigger 1989: 229-230). Yet if IE studies are not politically motivated, they have been argued to be rooted in core beliefs and meta-narratives ensconced within Euro-American tradition, based in 19th century motivations of colonization by force, in the belief in Aryan supremacy, and in biblical notions of catastrophe (Alinei 2003: 5).

Another branch of IE studies looks to mythology and ritual in interpreting Inner Asian iconography and practice, as evidenced in the archaeological record. These studies are based on the notion that both beliefs and symbolic motifs were brought to Inner Asia by migrating IE speakers. (Puhvel 1987: 37; also Eliade 1964: 500-501; Mallory 1981: 217-218; Doniger 1990; Kuzmina 2003: 203; Puhvel 1970b). The correlations between genetics, practices, belief systems, and archaeological evidence remain unclear, and these arguments often seem plagued by circular reasoning: “The earliest evidence for horse burial, however, has been presented as a marker for IE-speaking communities by some scholars who have emphasized the importance of the horse among the earliest Indo-Europeans which should also find a resonance in ritual” (Mallory and Adams 1997: 279). Many of these studies have come to conclusions that do not seem to hold up under scrutiny. It seems, for instance, highly unlikely that “the Saka-Scythian religion was a part of the belief system of Persian peoples” or that “horse-breeding was introduced to Siberia by the Persians” (Kuz’mina 1977). Indeed if we are looking to argue for the diffusion of horse-related knowledge, it would seem the evidence of the Altai bits and bridles discussed in the previous chapter would point to movement in the other direction.

Ultimately, it is not resolved where the Proto-IE or IE speakers dwelt or traveled in the Iron Age (or prior to it), how far into or out of Inner Asia they may have migrated, or whether they were there at that time at all. Furthermore, any connection between IE languages and the mountainous Iron Age Central populations is far from directly proven: they left no written records.

The “Shamanistic” Approach. While we cannot speak with certainty of an IE homeland or an IE racial profile, it may be possible to speak of an IE cosmological worldview that is distinct from an Inner Asian one. This is because “Inner Eurasian confederacies have constantly absorbed one another and changed their names, identities and languages, while their religious beliefs and practices have often remained very much the same” (Baldick 2000: 5). According to Baldick (2000: 12-13, 168, following Dumézil 1958), IE ideology was centered around three major concepts: religious sovereignty, force and fertility. Under this view, material culture remains, like cups, relate to sovereignty. Thus, Inner Asian horse burials interred under kurgans are argued by some scholars to be evidence for a type of IE horse sacrifice, which is tied to later IE accounts of such rituals as related to sovereignty (Doniger 1990; Mallory 1981; also Puhvel 1970b, 1987).

Baldick argues the IE ideological package stands apart from what he calls the “Inner Eurasian” ideological trilogy, which encompasses the space taken up by the sky, the space between the earth and the sky where usual human activity takes place, and the space below the earth’s surface, the underworld (Baldick 2000: 14). Such a worldview has been labelled

as “shamanistic” by numerous researchers, and is often based on ethnographic reports from Siberia that are supplemented by various types of archaeological evidence including ancient rock art depictions (e.g., Zvelebil 2003: 2; also Brentjes 2000; Devlet 2001; Devlet and Devlet 2000, 2002; Jordon 2003; Kubarev 2002, 2006; Lymer 2009; Martynov, 1991; Rozwadowski 2008).

It is recognized that shamanic practices reported in Siberian ethnographies may not be reflective of shamanism from ancient times, if such a phenomenon ever existed (Jacobson 1993: 46; Francfort and Hamayon 2001; cf. Bahn 2001). However, this “shamanistic” package of beliefs, perhaps better termed “circumpolar” or “pan-Asian,” is argued to have great time depth, and finds resonance with Zvelebil’s interpretation of the Mesolithic worldview of Boreal Eurasia, which encompassed not only a three-tiered universe (sky, earth and underworld); but also reciprocity between the human, environmental, spirit and animal worlds; ritual specialists who interceded between the worlds; and symbolism in landscape and material culture (Zvelebil 2003: 5-7). Basilov (1989) holds that the basic tenets of this shamanistic worldview developed possibly as far back as the Paleolithic, while Martynov (1991) places it as far back as the Neolithic. Regionally, imagery in northern Canada’s pre-Dorset (c. 4000 BP) and Dorset (c. 2000 BP) societies has been interpreted as shamanistic (LeMoine *et al.* 1995), and Iputiak art of the early first millennium CE on the Bering Sea has been described as “Scytho-Siberian” (Hoffecker 2005: 138).

While it is unclear just how far back, or within what broad regional scope (perhaps to before Asian migrations to North America), this pan-Asian belief system can be projected, historians widely hold that Iron Age Inner Asian ideologies were of a shamanistic nature (Barfield 1992: 65; Christian 1998: 148; Grousset 1970: 23). Others argue that the two sets of interpretations needs not be mutually exclusive, that the tempo-spatial context may well have been a point of contact, and possible conflict, between the migrating Indo-Iranians and the local peoples with shamanic beliefs (Rozwadowski 2004: 75, 119, 2001: 77; Francfort 1998, 2001).

A point critical to this thesis is that Inner Asian and Indo-European cosmological traditions are entirely distinct in one crucial way: the understood relationship between humans and animals. While both IE and Inner Asian traditions include the sacrifice of horses, it is only the latter in which a logic of the transformative abilities of animals is found. Within the Inner Asian system, animals are tied to the unseen world in that they may undergo transformations themselves, and it is only through animals that humans may move between the three levels of the seen and unseen world (Baldick 2000: 89; also Francfort 2001).

Several elements of Pazyryk archaeological material have been argued to indicate a connection with this Inner Asian system, with its focus on the tripartite universe and animal-

human transformations. For instance, Bokovenko (2000; and generally Brentjes 2000) attribute the semantics of the iconography on, and placement of, the decorations on the Pazyryk horse trappings to the upper, middle and lower worlds. I return to these issues in depth in Chapter 6.

It should now be apparent that a broad theme running through this research—“it must have come from the (more civilized, Caucasoid, or Indo-European) west” has been manifested in archaeological interpretations of the iconography, ideas, technology, ideology, and even the horses themselves. Set against this model, other scholars argue for autochthonous development of these elements. They invert the direction of diffusion and lean toward an earlier, Inner Asian, source for technological, artistic and cosmological elements which were then subsumed into “IE” (Ashe 1992: Francfort 1994: 406; 1998; Kingsley 1995, 1998; Ripinsky-Naxon 1993: 2; Sinor 1998: 736) or Scythian cultures (Chatwin 1970: 179; Jacobson 1983, 1999).

Social Structure, Ideology and Identity— Horses as Proxies for Human Attributes

In addition to subsistence patterns, economies, and cosmological beliefs, scholars have attempted to infer the social structures and political ideologies of Pazyryk society. Coupled with the size and differentiation evident in the kurgans, the presence and number of the horses in the graves and the variability of the iconography associated with their costumes are seen as reflecting the prestige, power and social statuses of the humans with whom they were buried (Belenitskiy 1978: 37; Hanks: 2002: 194; Samashev 2007: 44).

First, the presence and number of the horses in the burials has been argued to indicate differentiated roles, statuses or prestige of the individuals with whom they were buried (Belenitskiy 1978: 37-38; Hiebert 1992: 124; Rudenko 1970).

Based on the fact that almost all of the medium and small Pazyryk kurgan burials contained at least one horse, the burial of horses, *per se*, was not an indicator of status, but was typical (Rudenko 1970: 215). Of course it is possible there were other populations within the region who were not buried within these cemeteries, but within the studied Pazyryk-era burials, horses are the norm, not the exception. The number of the horses in the burials has also been seen as representing human social status and prestige (Belenitskiy 1978: 37). While this might be the case with the conspicuously large earlier kurgans such as Arzhan 1, this does not seem to correlate with the Pazyryk burials. There, for instance, kurgan 5—the second largest kurgan at 42 meters in diameter and very rich in grave goods including a carriage and four carriage horses—contained only five riding horses, combined, for the man and woman with whom they were buried (Rudenko 1970: 119). Yet kurgan 3 at 36 meters

and not relatively rich in grave goods contained one man and 14 horses. Thus, while at some level there seems to be a correlation between the number of horses and kurgan sizes, it does not seem to be simple and direct but rather more complex.

Second, several similar explanations have been offered for iconography on the horse outfits, which has been linked to human status and identity. Under this view, for instance, “The goat horns on the face of the masks of the leader’s four horses emphasized the divine essence and singularity of [the] human master” (Samashev 2007: 42; also generally Belenitskiy 1978; Hiebert 1992; Rudenko 1970). From the iconographic variation between, but consistency within, each horse’s costume it has been hypothesized that the horses were gifts from allies or subordinates brought to be sacrificed at the “ruler’s” funeral (Francfort *et al.* 2006: 122-123). Coupled with the different earmarks² on the horses, the variability has been used to argue that the horses belonged to different people at the time of their sacrifice, and were given at the funeral as “gifts of grief” to the higher-status deceased by “subordinate tribal elders” (Bokovenko 1995b: 290; also Francfort *et al.* 2000; Francfort *et al.* 2006: 122-123; Gryaznov 1969: 193; Hiebert 1992; Jettmar 1981; Samashev 2007: 44) of different tribal affiliations—Sino-Mongol, Near Eastern and local Siberian (Francfort *et al.* 2006: 123)—part of a confederacy beholden in some manner to the buried person.

Additionally, the distinct iconography on each horse’s costume is argued to represent particular human families within the broader tribal system (Gryaznov 1969: 193). Totemic explanations for the motifs on the saddles and other artifacts began among Russian scholars in the early 20th century (Cheremisin 2007). Here, particular animals stood metaphorically for particular clans or tribal groupings, and the predator-prey scenes related to fighting totems of respective clans, “the apotheosis of war, the right of the strong [and] the triumph of victory” (Cheremisin 2007: 87-88). Each family is argued to have had its own symbolic signs, with families of deer, elk, felines, wolves and birds of prey, opposed to each other in the artwork (Bokovenko 1995b: 294-295), and the motifs are seen to relate to a totemic social structure with two fraternities within each tribe, and five, seven or eight families within each fraternity (Gryaznov 1969: 193).

I present here several problems with these hypotheses. First, it is unlikely that the motifs themselves belonged to particular families or groups, or even to higher-status individuals, because “[s]imilar artifacts with identical representations were found in socially diverse burials of men, women and children alike. Therefore these representations rendered certain mythologems that were universal for the society” (Cheremisin 2007: 98). Two recent

² It is also possible the earmarks served a different purpose altogether. For the North American Native Peoples, for instance, the ears of a person’s favorite horse were trimmed for style, but also for the practical purpose of enabling individual horses to be identified by feel in the darkness (Barclay 1980: 179 citing to Dobie 1952: 50).

studies further challenge the hypothesis that the horses were funeral gifts from different tribal groups from various other regions. The first examined the gastro-intestinal contents of the 13 Berel-11 horses and found similar parasites, concluding that “the possibility of horse offerings from different allied neighboring tribes cannot be confirmed...” (Bailly *et al.* 2008). Next, mitochondrial DNA analyzed from the same 13 horses was compared to the supposed “ethnic” connections of their outfits (Mongolian, Achaemenid, Altai). This study found both that individuals belonging to the same lineage “were not similarly ornamented” and that horses “presenting decorative elements from the same cultural influence” had different mtDNA sequences” (Keyser-Tracqui *et al.* 2005: 205). In other words, the horses themselves did not come from the regions from which their outfits were presumed to have come.

Second, characterizing the Pazyryk society as “chieftain-based” under old and rigid anthropological categories, with the implications that status, ranking, and totemic motifs were presumably inherited, is problematic. Although the size and complexity of the burials does suggest some type of social differentiation, the dating of the eight large Pazyryk kurgans to within 48 years of each other make it unlikely that each would contain a generational “chief” (Hiebert 1992: 124). This also raises the interesting issue of the status of women within the community. Based upon reports by Herodotus and Chinese chroniclers wherein both attendants and “concubines” were sacrificed and buried with high-ranking men, women in the Pazyryk double inhumations were assumed also to have been concubines or “junior wives” (Rudenko 1970: 227). This interpretation does not adequately explain why, if women were either in essence men’s property to be slaughtered to accompany a male on his post-death journey (or so lacking in status that such an ending might be considered for them), grave goods in Pazyryk female burials appear to equal, or surpass in terms of quantity and quality, those of the men. No marks of intentional death have been reported for women, and the Berel 11 research suggests they were not “sacrificed” (Samashev *et al.* 2000, *Berel*). Other aspects of these female burials do not fit the proposed model. If these horses in their different outfits were gifts of grief to a higher-status “chief” from “subordinate tribal eldersmen” (Bokovenko 1995b: 290), what are we to make of the single female burials like Ak-Alakha 3-1, in which differently decorated horses were found? Would this make the woman a “chief”? If so, were the horses gifts from subordinate tribal eldersmen... or elder-women?

Third, as with totemic interpretations of Pazyryk art as representing war, battle and victory as themes, broadly across first millennium BCE Eurasia, the appearance of bridled horses within the kurgans has been argued to indicate “the formation of a social strata of mounted warriors within society” (Bokovenko 1995c: 266). Archaeologically, the presence

of weaponry in Iron Age Sauro-Sarmatian burials has been argued to indicate a “militaristic lifestyle” based upon a “*warrior ethos*” (Hanks 2002: 187, iii, emphasis in original). The idea of the Scythians as fierce warriors goes back to Herodotus’ descriptions of the Scythians, and continues today, as highlighted by Renfrew (1987: 260): “The notion of a warlike, early Indo-European society, propagated by nomadic horsemen in the course of their wanderings has of course been a very attractive one.” This outlook carries through in many aspects to Pazyryk culture. In keeping with Scythian-triad finds within Pazyryk funerary contexts, Pazyryk political ideology is characterized as one of aggression and militaristic action: The Pazyryk people were “cruel nomads” (Van Noten and Polosmak 1995: 76), “militarists in constant combat” (Lamberg-Karlovsky 1998; also see Samashev 2007: 44). Here, Pazyryk artwork is seen to reflect “the appearance of concepts which placed warriors and epic heroes in the foreground in nomadic society” (Bokovenko 1995b: 292).

There is no consensus that the Pazyryk society was structured around a warrior aristocracy or functioned under a warrior ethos. As noted above, other scholars have interpreted the Pazyryk iconography used to decorate the horses (Bokovenko 2000), and in general (Brentjes 2000), as relating to the tripartite universe of upper, middle and lower worlds. It has also been asserted that in particular Pazyryk kurgan 2 held the body of a spiritual leader or shaman³ (Hancar 1952; Cheremisin 2007: 91). Indeed it has been posited that the original Pazyryk burial ground was a “corporate cemetery of high priests” and that the Altai was the “sacral center of the Scythian world” (Kurochkin 1993 cited in Cheremisin 2007: 91; also Ashe 1992; Cheremisin 2007; Latham 1958).

Conclusion and Implications

The issues and problems brought out in this chapter include:

- From proto-historic sources forward, a settled, “civilized” way of life is set against the “barbarity” of those identified as nomadic. These biases continued into later times in diffusion models which focused on ethnogenesis and the presumed Classical, Caucasoid, or Indo-European origins of technological, artistic and cosmological aspects of Pazyryk population, who were presumed not to have been able to come up with these things on their own. Rather, any unidirectional, linear, civilized-to-barbaric, west-to-east, IE-to-other—often presented as advanced-to-primitive—direction of transfer of cosmological or ideological beliefs can no longer be assumed. Clearly the Pazyryk people exported bits and bridles, and it is likely that other objects and ideas travelled both ways, and were subject to partial adoption, transformation, syncretism, and recontextualisation.

³ Again, no consideration is given of the woman here.

- While the Pazyryk finds might be seen to reflect a broad, basic Iron Age Inner Asian “cognitive constellation” of beliefs (Renfrew 1998a: 260), it does not hold that everything Scythian should be attributed to them because of this. For a few reasons, the inclusion of the Pazyryk culture into the often-applied categories of “early nomads” or “steppe nomadic cultures” (see Levine *at al.* 2003) might not apply. Archaeological evidence, for instance, supports that those in the Altai-Sayan were not “nomadic” in the sense that the term is applied to the “early nomads” of the steppe: the geography, climate and ecology of the area did not require the same type of “nomadism.” Further, recent studies show that the value of any mutually exclusive categorizations into agriculturalism, nomadism, or hunter-gathering are not at all obvious in these regions. In the Altai, we do not have economies based solely upon stock-rearing; it appears we have people who not only raised and herded livestock, but also hunted, gathered, fished and, perhaps, battled ... and used horses to assist in these endeavors. Because of these nuances, perhaps “mountain pastoral cultures” might be a more accurate description of the Iron Age Altai-Sayan populations than “steppe nomadic cultures.” An interesting question is how the geographies and ecologies of the steppes versus the mountains may have fostered regional economic variation, and also differences in the treatment and perception of horses.

- The Pazyryk population has been characterized as either “fierce warriors” or “high priests,” as interpreted through the presence and adornment of the horses. Neither of these characterizations leaves room for the fluid, multiple or horizontal roles people may have held. Material remains do not simply define particular individual identities or cultural groups, but also serve practical and powerful functions in shaping and holding together group cohesion and identities. Equally important in creating individual and group identities, I further argue, are relationships with significant others—both human and animal.

- The archaeological explorations into the importance of prehistoric human-horse relationships in Inner Asia to date have been invaluable, and have considerably broadened our understandings of the societies of prehistoric Inner Asia. However, all of these studies have operated from the anthropocentric base of conventional archaeological and anthropological inquiry, reflecting a Western sense of their separation from human social and cultural life. They have viewed horses as bodies to be exploited, as gauges of human adaptation and subsistence modification, as facilitators of social and economic change, as receptacles of cosmologic beliefs, and as representatives of human status—as objects within the environment. In focusing solely on these functions, previous studies leave many unanswered questions. This thesis attempt to answer some of these questions, by first asking: What happens to

these models when we attempt to step across the culture-nature divide, and view horses as subjects, as working riders do?

- The preciousness of the materials of the horse outfits and the context of their interment with humans imply beliefs that were highly important to the Pazyryk community. Having now discussed how the horse is approached in three areas of study— functional/economic, religious/cosmological studies, and social/ideological—I end this chapter by noting that these studies tend to focus upon one or the other of these aspects, each with distinct research agendas and methods. This segmented type of analysis is necessary to some extent in order to narrow research projects. It is also conducted by scholars situated within today's intellectual and social milieu, which includes the “reification and radical separation of culture, nature, mind, body, society, individuals and artifacts” (Thomas 1996: 29). Thus,

[T]he functions of modern society are institutions such as politics, religion, economics and so on. Because we intuitively know that our society functions along lines of these institutions, these were assumed to apply to the past. The problem here is that traditional non-western societies in fact may not be structured in such terms at all (Whitley 1998: 16).

Practicing such historical anachronism runs the risk of separating ideas which might have been in ancient minds more holistically understood or fused, “not only of such notions as metaphor, symbol, simile, analogue and identity/sameness, but also of such activities/institutions as religion, animal husbandry and healing, which are now totally distinct” (Schwabe 1994: 36).

A community's worldview encompasses economic, cosmological, and political elements—all intertwined, socially embedded, and *acted out through daily life*. As this chapter has shown, the horse arguably permeated every aspect of Pazyryk culture. Yet to date, there has been no consideration of the horses themselves, of what it might have been like to deal with them relationally on a daily basis, and of what those relationships might have meant in terms Pazyryk social structures and senses of identities. What is missing from the broad base of work surveyed in this chapter is a sense of the practical and relational; of how horses and humans come together in everyday dealings, and how both are changed through those interactions.

Before turning to the specific issue of human-horse relationality, I next examine the nature and historiography of Euro-American beliefs about humans, animals, and their relationships.

CHAPTER FOUR

FROM WHO TO WHAT: CHANGING PERCEPTIONS AND WAYS OF KNOWING ANIMALS

In dangers, the rider entrusts his own body to his horse.

—Xenophon

Philosophers ask whether a falling tree makes a sound when no one is present to hear it. No one? A tree crashes in the ears of crickets and frogs and snakes and owls and hedgehogs and bats and bobcats.

—Robert Jourdain (1997: xiii)

Introduction

Archaeological discourses primarily emphasize the human aspects of human-animal interactions, and in doing so frame the “social” and “cultural” from the perspective solely of the human animal. The result of this is that non-humans’ perspectives and contributions are negated; they are not considered as participants in society or culture in any meaningful way. Where animals come into the picture, they are objects, parts of the environment, exploited as any other resource.

Such considerations are rooted in what post-humanist scholar Donna Haraway describes as the “culturally normal fantasy of human exceptionalism... the premise that humanity alone is not a spatial and temporal web of interspecies dependencies” (2008: 11). Within the past 20 years, scholars from a variety of disciplines have begun asking different questions about nonhuman animal intelligences and capabilities. Researchers in the fields of psychology, cognitive ethology, evolutionary biology, philosophy and history have begun to focus not on what other animals *lack* when compared to us, but instead upon what we *share* with them. The idea that differences between human and nonhuman animals are absolute is being replaced by one which sees these differences as a matter of “degree rather than kind” (Bekoff 2007: 30, 33). With this, we find that many beliefs about what absolutely distinguishes humanity from animality—humans’ unique cognitive abilities, senses of self, issues of culture, and use of language (e.g., Ingold 1988b)—are no longer sustainable. We find that we humans are not so very exceptional at all. As scholars ask better questions, many

animals are emerging as sentient and communicative actors, with senses of selves, emotions, morality, and cooperative and rich social lives (Allen and Bekoff 1997; Bekoff 2002, 2006, 2007; Bekoff *et al.* 2002; Griffin 1984; Kelch 2007: 239; Kennedy 1998: 12; Pepperberg 2002; de Waal 1996)—lives through which they entangle in interspecies webs with humans to co-create communities, identities and social realities (Birke *et al.* 2004; Brown 2007; Game 2001, Oma 2007a, 2007b).

These points, combined with the post-modern demand for contextualization, have funded suggestions that traditional anthropological and archaeological paradigms which view nonhuman animals as inert variables, cultural abstractions or mere objects used and acted upon by people could be expanded (e.g., Argent 2010; Cassidy and Mullin 2007; Jones and Richards 2003; Knight 2005; Noske 1997; O'Connor 1997; Ray and Thomas 2003). For instance, the recent anthropological volume, *Animals in Person*, sets out to depart from traditional anthropological paradigms that view animals as objects. The volume was conceived with an interest in “animals as *subjects* rather than *objects*, in animals as parts of human society rather than just *symbols* of it, and in human *interactions and relationships with* animals rather than simply human *representations* of animals” (Knight 2005: 1, emphasis in original). This attempt succeeds in that it challenges human-generated cultural conceptions of animals as all that they are. But it falls short in that we are still presented with etic views, fieldwork reporting the ways in which particular societies *perceive* specific animals, as the chapter titles convey—“Loving Leviathan: The Discourse of Whale-watching in Australian Ecotourism”; “Care, Order and Usefulness: The Context of the Human-Animal Relationship in a Greek Island Community” and “On ‘Loving Your Water Buffalo More Than Your Own Mother’: Relationships of Animal and Human Care in Nepal.” Animals are still, here, for the most part “kinds.” I contend that if animals are to be incorporated into archaeological studies as more than “sustenance or symbol” (Shanklin 1985), an “add animals and stir”¹ approach is not going to work. What is missing from the equation is a consideration of an essential element—the animals themselves (see Noske 1997; Shapiro 2008).

These recent calls to explore nonhuman animals within anthropological and archaeological analyses as more than calories or constructs—as subjects within co-created worlds—fall short not because of lack of desire, but because we have neither fully explored the theory nor developed the appropriate methodology to do this. I have noted that the archaeological studies to date have left unanswered many intriguing questions raised by the Pazyryk horse inhumations. If we are to ask more pointed questions about the nature of the relationships between the Pazyryk horses and human—or indeed any horse-using society, past or pres-

¹ With a nod to Leslie Irvine (2007:14): “For example, what is called the ‘add women and stir’ approach, which merely incorporated women into existing scholarship, did little to challenge institutionalized sexism.”

ent—we need a framework through which to do so. How might these changes welling up in the broader academy fruitfully be brought into archaeological studies?

In this chapter I first examine the approaches used by the emerging interdisciplinary fields of “animal studies” and “human-animal studies.” I then explore the meta-theory underlying cultural and academic beliefs from within which the study of animals emerges, and the anthropological and archaeological literature addressing human-domesticate relations, including perceptions of human-horse interactions. Finally, I situate the prevalent human domination/equine submission paradigm of human-horse relationships and suggest an alternative means through which to investigate these relationships.

‘Animal Studies’ and ‘Human-Animal Studies’

The “animal studies” approach—favored by historians, sociologists, anthropologists, critics and cultural historians—considers animals as social constructions. It connects the life sciences with the humanities in ways that allow a focus beyond the human (Simmons and Armstrong 2007: 2). The concern here is “how humans will think about and interact with” animals (Arluke and Sanders 1996: 9). Under this view, any attempt to *know* animals is relegated to “unverifiable speculations about the inner lives of animals”; and the focus is to “examine instead what is knowable about human-animal interactions and the significance that humans attribute to them” (Jerolmack 2005: 660). Thus, while animals here are objects of study, they are still objects, not actors.

Conventional anthropological inquiry, when it focuses on human “relationships” with animals, has in this way tended to concern human perceptions and conceptions of animals (e.g., Knight 2005; Manning and Serpell 1994; Morris 1998, 2000; Tanner 1979). Questions are posed about the functions of animals within different societies, their use and symbolic meanings in social and ritual contexts, human understandings of them in terms of metaphor and taxonomies, and variables involved in keeping different kinds of animals (Shanklin 1985). Anthropologists are thus concerned with how questions of nature versus culture “are constructed in different societies; that is, ...where different societies locate their humanity” (Tapper 1988: 49). Similarly, where archaeological enquiries have explored animals as objects of study, it has been from this paradigm: either considering animals as they have existed in particular (human) spatio-temporal contexts (e.g., Bennett 1998; Green 1992; Levine *et al.* 2003) or through theoretical explorations of symbology, semiotics, etc. (Clutton-Brock 1989; Ingold 1988a; Manning and Serpell 1994; Morphy 1989; Ryan and Crabtree 1995; Willis 1989). Additionally, several authors have provided broad anthropo- or archaeo-historical examinations of horses (Barclay 1980; Clutton-Brock 1992, Olsen 1996; Olsen *et al.* 2006).

The animal studies approach is inherently humanistic. By this I mean it is studied academically within the humanities, is based upon Enlightenment notions of rationality, and takes an anthropocentric epistemological view. Culture and nature are opposed and it is clear on which side of the dichotomy humans reside. In a philosophical sense, ontologically, the nature of being is the nature of *human* being. From a socio-political and post-colonial standpoint, the animal as situated as Other to Western norms.

A major problem with applying the animal studies approach to archaeological material is that we cannot expect to fully understand how humans conceive(d) of animals without an understanding of who and what the animals are—their biologies, behaviors and cognitive abilities. Interpretive archaeologists recognize that symbolic meanings are not always arbitrary; they can be based upon “iconic” elements, those elements inherent within an object or landscape (Hodder 1989: 259). Human relationships with nonhumans can be seen to function in the same manner. The abilities and behaviors of animals play a crucial role in how we both conceptualize and materialize them (see Birke *et al*, 2004: 172). Thus, we have to track back to precisely what is innate in them in order to then move forward again to ask how the actual funds (or has funded) the conceptual. I suggest that in order to more fully understand the human meanings applied to nonhumans, animals important to particular communities must be explored *as themselves*—as actors within the co-created communities in which both live.

The “human-animal studies” (HAS) research approach does just that, by reaching beyond human perceptions of animals to the animals themselves. Psychologist Ken Shapiro argues that in viewing human-animal relationships the difference between “animal studies” and “human-animal studies,” is that the former will view animals “as constructed” while the latter attempts to view them “as such... as they live and experience the world independently of our constructions of them” (Shapiro 2008: 9). The HAS approach moves beyond, for instance, an anthropological study that “describes the animal side of a human-animal relationship exclusively in terms of the animal as a cultural artifact—his or her value in commerce or ritual use” (Shapiro 2008: 13). Instead, it would explore all of the potential relationships in a context, from animal-as-commodity, to “the animal as a more or less equal partner in a relationship—the product of which is a common project or a shared world” (Shapiro 2008: 14). I have noted that the horse has adequately been explored as a commodity in archaeological analysis. What is missing is a view that interrogates the meaningfulness of their role as a partners in co-action; a shifting of the perceptual lens to foreground this aspect of human-horse interactions.

The HAS approach can be seen to have grown from three turns of thought. First, the political activism of the 1960s and 1970s, which broadly challenged power relations, fostered both concern with rights and advocacy for the oppressed, including the environment as an

entity, and academic interest in the creation of such disciplines as feminist, queer, ethnic, ecological and environmental studies (cf. Birke 2009: 2). Here, the animal rights movement led to philosophical challenges to ethics surrounding the human use of animals. Challenges to modernist ideas separating humans from animals and the environment (e.g., Latour 1993) also played a significant role. The HAS approach is thus post-humanistic, in the sense of “after” humanism, and ecocentric, in that it dismantles arbitrarily constructed modernist dualities between humans and their environments. Thus, the HAS approach is not solely concerned with how animals are *used* by people, but also allows an interrogation of how individuals from two (or more) species can be understood to interact with, and influence, each other at significant individual and group levels.

To apply a HAS approach, to view animals “as such,” the researcher first deconstructs “reductive, disrespectful ways of presenting nonhuman animals” (Shapiro: 2008: 14). Next, the animal is presented “‘in itself’... both as an experiencing individual and as a species-typical way of living in the world” (Shapiro 2008: 14). This sometimes brings into the mix, either implicitly or explicitly, the use of subjective and phenomenological methodologies (Churchill 2006; Shapiro 1990, 1997; Smuts 2008). Only following an exploration of the animal “as such” do we turn to analyzing the particular human-animal relationships (Shapiro 2008: 14). I suggest that including animals “as such” is a highly valuable step which archaeologists (viewing past societies) and anthropologists (viewing traditional societies) might include in our work. As a first step in applying this approach, I now, insofar as possible, confront the Euro-American scholarly reductionist paradigm of the horse as “absent referent” (Shapiro 2008: 14). In this I begin most broadly, and focus down to specifics.

Meta-Theory and Theory Underlying the Study of Animals

Anthropcentricism and Anthropomorphism

It is clear that humans’ perceptions of horses have changed through time, filtered through the intellectual and social dogma of the societies who have lived with them. The perceived truths surrounding the human-animal relationship and, more specifically, the human-horse relationship, can be said to consist of reflections based from within the tradition in which the observer stands. Thus, the “study” of animals is a difficult endeavor. To attempt to do so presents Euro-American academics with a serious dilemma—we recognize ourselves as animals, yet there exists a deeply embedded “species barrier”: a line drawn between us and them. This Othering is embedded in Western thought on a number of philosophical, socio-cultural, religious and social-scientific meta-theoretical levels (Kalof and Fitzgerald 2007 provide a thorough overview; see also de Waal 2001: 69).

At philosophical and socio-cultural levels, Aristotle made clear distinctions of intellectual hierarchy with his *Scala Naturae* or Ladder of Nature, with “humans at the peak or top rung of the ladder, and animals and plants at various levels below this according to their reasoning abilities” (Serpell 1986: 151), and Plato [*Republic*, IX, 571c] posited animals as sub-souls (Boyd 2007: 227-228). Specific to the horse, Western beliefs about its distinct nature and abilities are longstanding and deeply ingrained in our collective understanding. Xenophon (c. 430 - 335 BCE) is credited with writing the first treatise on the horse, in which he encouraged respect for horses and called for the rider to consider their mental aspects. It is interesting to speculate as to the reasons *why* Xenophon considered these points necessary to make. Why a need for their recitation if these concepts were commonly understood? It is apparent, rather, that the converse was true, that his message was counter to prevailing beliefs.²

Socio-culturally, human-animal distinctions have been and continue to be used as moralizing metaphors for conveying social values in folklore worldwide (Tapper 1988: 51). Here, the most malign attributes of human nature are often attributed to animals via fairy and folk tales. Animals are anthropomorphized as non-human metaphors for conveying right action by distinguishing between humans and other animals, conveying the message: We are human; we don't act as beasts (Tapper 1988: 47-51). At another level, this separation can be seen to be a distinctly religious construct. For those cultures which view the Old Testament as a religious text, humans are conceived in God's image, and the natural world, including its animals, was created for human use: “And God said ‘Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle and over all the earth...’”(Genesis 1: 26). The anthropocentric view of the world was cemented in the early seventeenth century, with Descartes' theory of rationalism (Serpell 1986: 154) and Bacon's of empiricism heightening the separation between humans and the natural world and promoting the goal of an objective science (Kalof and Fitzgerald 2007).

The positivists of the nineteenth and early-twentieth centuries held that animal behavior could be quantified and functionally explained as “passive products of evolution” (Boyd 2007: 232). By the mid-20th century the reification of “objective” science was at its peak, as evidenced by the flourishing of the processual movement in archaeology and behaviorism in human (psychological) and animal (ethological) studies. It is now recognized that human behavior and societies are not so simply explained, and I address changes to each of these movements here briefly in turn.

² Still, his insight into the abilities of horses was influenced by his own broader context, as exemplified by his assertion that “...it is evident that by word of mouth you can teach a horse nothing” (Xenophon: 49). As I shall later show, this is not the case.

When using scientific method to test hypotheses, one seeks to identify discrete variables, and in doing so often dichotomizes as opposites aspects which really exist on a continuum, or do not exist at all. With this realization came criticism of dualisms, exemplified in Hodder's statement that differentiating "culture and function, norm and adaptation, history and process, altogether impeded an adequate understanding of the very aim of their enquiry—social and economic adaptation and change" (1982b: 14). Vociferous critics of such functionalist dichotomies, Shanks and Tilley condemned "disabling dualisms" such as essence-appearance, substance-attributes, body-mind, subject-object, individual-society, and nature-culture as "conceptual dead-ends" (1992: 120, 129) and stated that "intuitive-deductive, theory-data, idea-fact, abstract-concrete, theory-practice, present-past ...pose a primary epistemological obstacle to understanding past and present and the connection between the two" (1992: 103).

Moreover, processual archaeology was based on prior linear evolutionist models, themselves constructs of Western thought. Such categorizations concern classification rather than analysis (Chapman and Randsborg 1981: 9; see also Hodder 1982b; O'Shea 1984: 10; Tilley 2000), and the linearity itself inherently operates with the underlying assumption that the point from which the researcher looks back in time—the present of the researcher—represents the pinnacle of advancement within a static social and cultural evolutionary process. Because of this, "objective" attempts to reconstruct past societies are latently value-laden (Pluciennik 1999, 2005). Additionally, in the search for discrete variables, processual archaeologies ended up both validating old and creating new, often value-laden, dichotomies: simple-complex, egalitarian-ranked, rich-poor (O'Shea 1984: 4; also Pluciennik 1999: 661; 2005). The point here is that it is difficult to remain open to understanding other human communities when they are viewed through the lens of superiority and judgment; the same can be said about animal species, communities and individuals.

Behaviorism, in positing that humans can best be understood in terms of directly observable, mechanistic responses to stimuli, is now seen as problematic (Whitley 1998: 4). It is now recognized that using the behavioral approach to assess human behavior in archaeological settings is faulty in that, primary among other reasons, it does not allow for individual agency (see Dobres and Robb 2000a; Whitley 1998; Woodward 2000: 50). Likewise, the focus of many ethological studies has shifted away from the Skinnerian approach prevalent in the 1950s and 1960s, wherein animals were considered passive containers of instincts which could be manipulated any which way, towards a growing recognition that social animals share a set of characteristics with humans, including intelligence, emotions and agency (Allen and Bekoff 1997; Bekoff 2002, 2006, 2007; Bekoff *et al.* 2002; Griffin 1984; Kelch 2007: 239; Kennedy 1998: 12).

A recognition of the similarities between human and other animal communicative purposes and actions both suggested and fueled the erasure of the arbitrary line drawn between humans and nonhuman animals. This shift was attributable in large degree to the work of animal psychologist Donald Griffin (1984), who developed the discipline of cognitive ethology in response to the rigid behaviorism of the times, and whose work from the 1970s forward explored animals' consciousness, attention and efforts at affecting their environments (Allen and Bekoff 1997: 4). With roots in Darwin's (1998 [1872]) proposal of the evolutionary continuity of not only anatomical structures, but of brain function and emotions as well, cognitive ethology concerns tracing such continuity among different species, exploring emotions, "beliefs, reasoning, information processing, consciousness, and self-awareness" in an evolutionary context, and understanding specific animals and groups of animals themselves (Bekoff 2007: 30, 33).

Thirty years ago—and indeed still today by those who view scientific method as the only narrative through which to explore such issues—discussions of animal subjectivity and emotions would have been labeled as "anthropomorphic" (attributing human mental experiences to animals) and discounted as invalid because they are neither provable nor, in most cases, repeatable. Primatologist Jane Goodall (2006: 652) recalls how early in her career researching chimpanzees one professor told her:

You cannot say that Fifi was 'jealous,' to which I replied, 'But she *was*, so what do I say?' He said 'Well, you say, Fifi behaved in such a way that had she been a human child we would have said that she was jealous'.

Since that time, cognitive ethologists, psychologists and philosophers have challenged such beliefs as reductionist (Bekoff 2007: 125-126; Datson and Mitman 2005: 8; Simmons and Armstrong 2007: 3), and contested as inappropriate the denigration of both an uncritical anthropomorphism, and anecdote—which eminent cognitive ethologist, Marc Bekoff, terms the "*A-words*" (2002: 103). Cautions against the use of anthropomorphism in scholarship addressing animals have been countered with arguments that these cautions stem from a flawed anthropocentric viewpoint, and are no longer tenable. Attacks on the use of anthropomorphism have been countered in the same way as behavioristic explanations of animal behavior:

We need a new vocabulary term to notice such errors—a nasty word like 'mechanomorphism,' for example, or some other way of referring to our thoughtless and superstitious habit of attributing mechanical traits to organisms, as though nature dutifully imitated our inventions (Hearne 2007: 232).

Primatologist Frans de Waal (2001: 69) counters the notion of the invalidity of anthropomorphism with “anthropodenial, the *a priori* rejection of shared characteristics between humans and animals when in fact they may exist,” the concept of which operates to promote the human-animal dualism. In addition to spawning glib and interesting neologisms, what has emerged from proponents of anthropomorphism as a means of understanding animals is an allowance that when done “carefully, consciously, empathetically and biocentrically,” it can provide explanations that are more accurate than “mechanistic or reductionist” explanations (Bekoff 2007: 125-126; also Bekoff 2002: 47, 49-50; Datson and Mitman 2005: 8; Kennedy 1998: 12; Mitchell *et al.* 1997).

The type of “critical” anthropomorphism now endorsed by some researchers concerns perspective taking, “the desire to take the animal’s viewpoint, rather than confer a human one” (Mitchell 2008: 7; also Rivas and Burghardt 2002: 10-11). This approach was pioneered by biologist Jakob von Uexküll (1957), who advocated the study of both an animal’s inner world, *Innenwelt*, and “phenomenal world” or “self world,” *Umwelt* (1957: 5). This approach considers such things as the sensory abilities of the animal, its “familiar paths” through space and time, the manner in which it relates to others and the broader world, and what it perceives as important or irrelevant. Figure 4.1 illustrates the concept by showing how a forester, a fox and an ant might be understood to perceive an oak tree. Thus, accord-

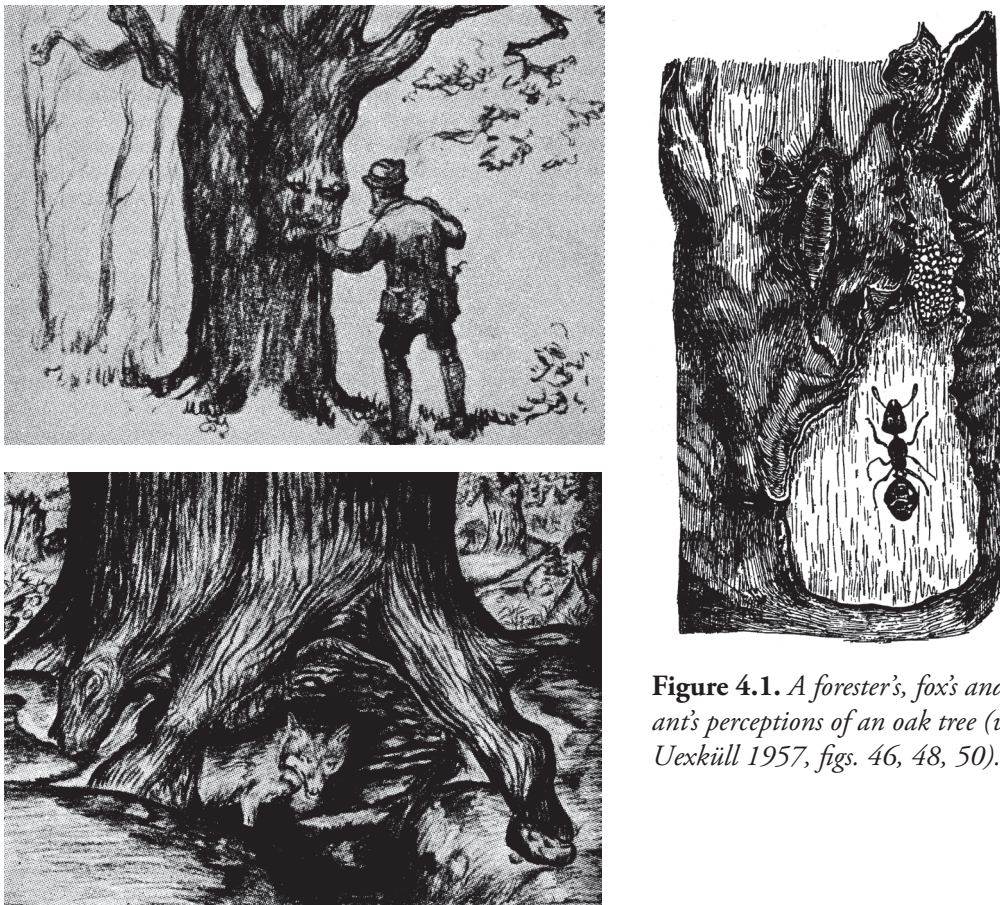


Figure 4.1. A forester’s, fox’s and ant’s perceptions of an oak tree (von Uexküll 1957, figs. 46, 48, 50).

ing to von Uexküll, “we ultimately reach the conclusion that each subject lives in a world composed of subjective realities alone, and that even the *Umwelten* themselves represent only subjective realities” (1957: 72). Under this view, critical anthropomorphism exploring the animal’s subjective world is not only allowed, but necessary, for if we do not “put ourselves in the animal’s shoes,” we run the risk of what Rivas and Burghardt (2002: 10-11) term “anthropomorphism by omission” in that we may inadvertently draw erroneous anthropomorphic conclusions. Thus, the problem with anthropomorphizing is not that we are acknowledging and naming what animals feel as what we might feel in similar contexts, but that we wrongly ascribe to them human feelings. “There are dog-joy and chimpanzee-joy and pig-joy, and dog-grief, chimpanzee-grief, and pig grief” (Bekoff 2006: 77). We should not confuse these with human emotions; nor should we discount their existence. I suggest that such critical anthropomorphism has a place in this discussion. But it is important to note that, from this perspective, understanding animals’ *subjective* worlds still takes on an (attempted) *objective* hue.

Ultimately, the deeper-rooted philosophical, socio-cultural and religious tenets which construct an anthropocentric world continue to underlie—albeit often perhaps covertly—both scientific and social-scientific research into the study of animals, including that in archaeology and anthropology. In many disciplines the broad Euro-American heritage of studying animals retains both human-animal duality and empiricism, with epistemological validity granted only to objective, scientific ways of knowing (and knowing animals). The Skinnerian perspective, now re-packaged as “learning theory” (e.g., Goodwin *et al.* 2009)—perhaps in an attempt to expunge the negative associations it now connotes to many—continues to drive many ethological studies. This is not to say that the behavioristic approach is not effective; anyone who has raised a child or worked with animals knows the value of positive and negative reinforcement in shaping future behavior. Nor is it to assert that studies of animals situated within the broad anthropocentric, empirical framework, or archaeological studies taking this position, are not valuable. It is rather to say that scholars are no longer limited to such approaches. Just as the archaeological studies highlighted in the previous chapter have provided invaluable information about horses in Iron Age Inner Asia, purely positivist, behavioral studies of animals also can provide insight into the nature and behavior of horses, at a species level. Indeed I pull heavily from such studies in the following chapter in exploring horses “as such.” But intuitively and experientially those who live with animals understand that these types of studies leave out crucial aspects of our interactions with them. Thus, in the same way that archaeological studies may now move beyond the intent of finding objective past realities, so might the means by which to explore human-animal relationships.

Anthropological and Archaeological Perspectives—Thinking about Animals

Ethnography and Metaphor

As noted earlier, classic anthropological interest has concerned ethnographic studies of the perception of animals by particular existing cultures (e.g., Tanner 1979; Morris 1998, 2000). Ethnographic studies have also explored societal beliefs about animal ancestors, totemism. Here, the structuralist-influenced anthropologists of the 1960s (e.g., Levi-Strauss 1963, 1966) defined binary oppositions between groups of humans and species of animals, seen among other things as necessary societal constructs to encourage exogamy. These oppositions are not productive here. In the first place, such dualisms, if indeed valid, cannot be projected onto past societies. Second, the horse is not conceived as an ancestor in any known society because “the horse entered most ancient civilizations too late to stimulate seminal religious or other cultural associations” (Schwabe 1994: 49). Still, ethnographic analogies and personal accounts of those cultures which live closely with horses (e.g., Cassidy 2009; Ewers 1955; Pony Boy 1998; Horse Capture and Her Many Horses 2006) remain valuable as they can open our minds to how other cultures have lived with and perceived them.

Other anthropological studies have explored how human associations with certain animals are understood metaphorically within societies, and how such understandings relate to humans’ concepts of identity. Here domestication is seen broadly as metaphor for the symbolic conquest of nature, of humans’ taming of the wild. Horses figure prominently in such analyses: “The importance of ‘man on horseback,’ reflecting the qualities of dominance, pride, independence, heroic striving and superiority, is crucially related to the attitude of dominion over nature” (Morris 1998:170). In a study of the metaphoric significance of the horse today, Lawrence (2000: 222) explored rodeo in the United States as a ritual event which “serves to express, reaffirm, and perpetuate certain values and attitudes characteristic of the cattle herders’ way of life,” the frontier ethos. “The duality of the horse [as representing both wild and tame] ... enables it symbolically to enter and re-enter the domains of culture and nature, in both directions” (Lawrence 1994: 228). Within the drama of the rodeo, horses variously take the role of antagonist in bronc riding, partner in mounted contests, friend in pick-up horses, or superior in clown acts.

Theoretically, Tilley (1999: 50) has noted that “[o]bservations of the characteristics of animals inform the metaphorical workings of the human mind, providing it with raw materials for processing and informing an understanding of human society.” This may well be accepted. It is, however, not the *only* manner in which human “observations of the characteristics of animals” come into play. When one is interacting with an animal—whether

riding a horse, petting a dog as it is euthanized (see Coetzee 1999), or encountering a bear or badger at a turn on a trail—it is immediate, visceral, emotional, and relational. It is difficult to imagine that in these or other moments of human-animal interaction thoughts of that animal's metaphorical significance come into play in the human mind, because through such engagements the animal is necessarily viewed “as such”—as an individual subject—not “as constructed” and objectified by human thought. Metaphorical understandings of animals are thus problematic for several reasons. Firstly, this view removes the animal from human-animal interactions. As noted by social anthropologist Barbara Noske:

Nowadays everyone is talking about the construction of things. But somehow it is always humans who do the constructing, [with] animals being the ones that ARE being constructed. This is a postmodern form of anthropocentrism which is very visible in the social sciences today.... [which displays] a lack of sensitivity for the ‘socialness’ of animals (Vaughan n.d./n.p.).

Secondly, in privileging the assumption that things “are in metaphorical or representational relationship to the ‘real’” (Pluciennik 2002: 229), we may well be confusing our constructions with the lived world. Finally, it is important to note, following Schwabe (1994), that while metaphorical analyses are instructive, caution must be taken applying this type of approach to prehistoric peoples, in that it can lead to an underemphasis of the actual prominence and indeed profundity of interspecies relationships in ancient societies.

Human Beings and Being Human—Distinguishing Animality from Humanity

Another line of anthropological discourse has supported the idea of human exceptionalism by seeking to define, absolutely, the differences between “us” and “them” (see Noske, 1997: 126-160). Summarized by Ingold (1988b), arguments distinguishing humanity from animality have focused on humans’ unique issues of culture, senses of self (also Serpell 2005: 123), use of language, and cognitive abilities. These arguments remain of concern today, and it is instructive to lay out the relevant main points and counterpoints regarding these issues here, which are addressed in turn.

First, it has been argued that humans are a special kind of animal who possess culture, while others do not (Ingold 1988b: 89). Ethologists and sociobiologists, on the other hand, have tended to posit that human culture stems from biological, i.e., animal, roots (Tapper 1988: 48), and cultural anthropologists have questioned the concept as “part of a system of problematic hierarchical dualisms” (Mullin 2002: 390). According to primatologist Fran de Waal (2001: 69), culture means “that knowledge and habits are acquired from others—often, but not always, the older generation.” Culture implies communication and social

organization, and in this, de Waal notes, humans by no means have a monopoly (2001: 69). Yet some seem to fear that seeing our reflections in other animals denies human uniqueness. Accordingly, others have tried to further hone the definition of culture, raising the bar by inserting a symbolic component: while animals may have “culture” it is not “symbolic culture” (Gibson 2002).

Second, the idea that at least some animals possess a sense of self—a conscious, subjective sense of one’s self as an entity—has been proposed for several species. The gold-standard assessment for such knowledge has been the mirror test, used also with young humans to determine when in the developmental process the sense of self develops. In this test, a mark is surreptitiously placed upon the faces of the subjects, and their reactions when shown a mirror recorded. An animal’s attempts to explore or rub off the mark are seen as proof that she recognizes that she is *her* in the mirror. At least some primates (Bekoff 2003: 237; Dere *et al.* 2006: 1210), elephants (Emory 2006) and dolphins (Reiss and Marino 2001) are able to recognize themselves in mirrors. The lack of this ability in other species such as dogs, who do not usually touch their faces, may be more a factor of the mirror test not tapping into their ability than of a lack of self-awareness (Bekoff 2006: 87).

Both humans and social animals use deception, the use of which indicates “second order” intentionality, which involves not only awareness of self but also of others: “a conception on the part of the animal of its own and another animal’s beliefs” (Kennedy (1998: 18, 25). In using deception, animals can be seen to possess a “Theory of Mind” where “mental states [are] conceptualized as thoughts and feelings” (Mitchell 2008: 377). This also includes the ability to recognize not only one’s self, but to empathetically recognize other selves as having intentions and beliefs different from one’s own. When a younger animal challenges the established hierarchy, for instance, he is making a distinction between the office and the office-holder, indicating a sophisticated level of rhetorical understanding (Kennedy 1998: 16), and a recognition that the other’s interests are not his own. Interspecific interaction involves self-awareness on both sides: “There is a selective advantage in being able to anticipate the behaviour not only of other humans, but also of other species—especially if they are potential prey, competitors or predators” (Coy 1988: 79). Such interspecific awareness, argues Coy, is co-evolutionary between humans and other animal species. To be able to “co-operate” in the world, an animal must have self-awareness in order to “first, place itself in relation to the environment; secondly, to perceive itself as having an effect on that environment; and, thirdly, to be aware of the other individual as separate from itself” (Coy 1988: 80). Furthermore, a “self concept” is thought to be required for “episodic memory,” the “conscious recollection of unique personal experiences in terms of their details (what), their locale (where) and temporal occurrence (when)” (Dere *et al.* 2006: 1206). To date, such conscious recollection is recognized in rats (Dere *et al.* 2006: 1211) and jays (Morell 2008: 53).

Third, conceptualizations which value the verbal elements of language are deeply rooted in Western notions of mind; from the Greeks forward, philosophers and scholars have assumed verbal language was a necessary precursor to both reflection and intelligence (Lingis 2007: 45; Sharpe 2005: 169-189). The lack of nonhuman animals' communicative abilities, equated always with human *speech*, has been argued to equate with the lack of reasoning (Kennedy 1998: 12). It has been suggested that "because we humans have the language instinct, we can to some extent learn the proto-language of other species, as Karl von Frish did with bees, Konrad Lorenz with geese, Jane Goodall with chimpanzees, Dian Fossey with gorillas and Monty Roberts with horses" (Boyd 2007: 233). Countering this argument that the human utilization of different animals' communication modes, rather than expecting them to utilize ours, could lead to inter-species interactions which could broaden our understandings of them, Ingold discounts that animals think:

Intuition tells us that animals are conscious even when their manifest behavior conforms to a genetically transmitted template, but we cannot infer from this that they necessarily think about what they feel and do.... [W]e cannot grasp the animals' thoughts simply by learning and practicing their communicatory mode, *because the animals have no thought*, as such, *to grasp*" (1988b: 96; 94, emphasis in original).

This is a deceptively and superficially attractive argument, but not one that is sustainable. Examples of nonhuman animals utilizing *human* speech and communication modalities are many. Dr. Irene Pepperberg's Grey parrot, Alex, who died in 2007, could not only count the number of items presented to him with 83% accuracy, but also could distinguish—and speak in English about—if-then reasoning regarding similarity-difference and between abstract categories such as colors, shapes and materials (Pepperberg 2002). Many primates since the first gorilla to learn American Sign Language (ASL), Koko, have been taught to do so in a much more than rote fashion, using it to convey not only wants but also emotions (see, generally Bekoff, *et al.* 2002; Morell 2008: 57). Furthermore, "language" according to Ingold (1998a 7-8), is the "very instrument" for generating ideas, and animal "language" has "no ideational content." This "conventional, linguicentric perspective on mind-as-internal-conversation is inadequate and confining" (Sanders 2003: 407). The use of sign language by deaf humans accents the fact that verbal modes of communication are not essential for either human or animal communication (Burling 1993). The question becomes further muddled when one brings into the picture the developing human child, or the developmentally or mentally disabled human adult, neither of whom might be understood to "have language" (cf. Patterson and Gordon 1993). Following the language-equals-mind criteria, one is left to wonder if these humans should be considered human at all.

Fourth, regarding cognition, Ingold equates thinking with the ability to have “prior intentions,” (Ingold 1988b: 96) which I take to mean the ability to conceptualize action outside of the present; since such thoughts are dependent upon language, and since animals have no language, then they cannot think. With regard to “prior intentions,” I am reminded of the poignant exchange between Koko and one of her assistants, who asked, “Where do gorillas go when they die?” to which Koko responded “Comfortable hole bye.” When further queried, “When do gorillas die?” Koko answered, “Trouble, old.” Many months after her pet kitten Ball was killed by a car, Koko was asked how she felt when she lost Ball. She replied, “Want.” Asked again, she stated “Red red red bad sorry Koko-love good” (Patterson and Gordon 1993). These examples illustrate that clearly Koko constructed meaning around events in both the past and the future (and had feelings about them).

Finally, the notion of “man the tool-maker” as indicative of superior cognitive abilities is no longer sustainable. Anthropologist Barbara Noske points out that with findings of animals *using* tools, the focus of these arguments shifted from tool *use* to tool *making* (1997: 129). Neither is this concept sustainable: some primates and several corvids (crows and ravens) have been shown to both use *and manufacture* tools (Holekamp 2006: 67), which implies the “conceptualization of an end product” (Noske 1997: 129), and thus “prior intentions.” To date dolphins and some birds also have been shown to mentally time travel to the past and future (Dere *et al.* 2006: 1212). Further, rats have been shown to possess metacognition, “the ability to reflect on one’s own mental processes” (Foote and Crystal 2007: 551).

As this brief discussion has shown, in many regards arguments which attempt to distinguish humanity from animality—issues of culture, senses of self, and cognitive abilities as related to the use of (human) language—can be credibly countered with research that is framed under the auspices of animal-human similarities. But here we are holding up these issues to *human* standards. Here, the very structure of these arguments is based upon the question: “How smart are animals?” with the implied addendum, “compared to humans.” The questions themselves are loaded from the beginning and will always yield answers in which the animals under study come up lacking or deficient, because humans do have unique characteristics, and exclusively human abilities and achievements. As noted by Noske (1997: 88), “The anthropocentric social sciences view their own subject matter, humans, as animal physical bases + a vital addition. This view automatically turns animals into reduced humans, only comparable with us on a physical level.” When we approach them this way, “It is not surprising if we find that creatures seem stupid if we ask them the wrong questions” (Birke and Parisi 1999: 60). Discussing problems with a stance which regards “non-humans as deficient rather than different,” philosopher Lynn Sharpe observes:

It is interesting to note that horses do not make the same mistake about human beings.... My horses certainly take into account my relative frailty and lack of physical size and accord me physical protection appropriate to a foal. They do not, however, assume I am therefore equivalent to a foal or a defective horse in social status or psychological ability. That they are able to recognize a member of another species as different rather than defective suggests that they have an ability lacking in many philosophers (Sharpe 2005: 23-25)

I mentioned at the beginning of this chapter that researchers are beginning to ask better questions of animals. This might best be phrased as an inverting of: How smart are animals (compared with humans)? to: How are animals smart? Doing this, the focus is not on human-animal similarities or “continuities,” but on “discontinuities”—how animals differ from humans—but with a view that both recognizes and respects animal Otherness (Noske 1997: 126; Vaughan n.d). Asking, for instance, “How are dolphins smart?” we learn from Scott Taylor (2010), director of Australia’s Cetacean Studies Institute, that *unlike* humans, dolphins:

...can, and do, control the flow of blood around their bodies, including the ability to shunt blood away from injuries; they can, and do, shut down half of their brain to rest it while the other half remains awake; they examine, in detail that human technology has yet to replicate, both the exterior surfaces and the interior layers of living beings, enabling them to ‘sonically see’ organs, fluids, gases, bones and other objects in their surroundings, also enabling them to sonically stun, and kill, their prey, or to send biosonic energy to injured tissue to support healing response.... This gives the dolphin a type of sonic sight that enables it to interact with its environment in ways that humans cannot. These abilities lead us toward an understanding of their much more complex, and therefore more compassionate, relationship with other lives.... Dolphins have, and live in, a sophisticated culture. This includes both communication, of more than immediate needs, but also learned skills passed on from generation to generation, but also a kind of leaderless group dynamic in which an especially skilled dolphin will put itself forward to lead in one situation, while returning to the general pod structure during other times. Dolphin females can even consciously control their own fertility.

These issues—particularly the linking of intelligence with a limited definition of human language, and the recognition of both human-horse continuities and discontinuities—are critical components of this thesis and will be dealt with in depth in the following chapter.

Domestication Paradigms and the Pazyryk Horses

I now turn to aspects of the manner in which the human-domesticate relationship is constructed in archaeological and anthropological discourse: the wild-domestic dualism, and the nature of domestication schemes which perceive it as a human-initiated and unilateral process. My purpose is not to bring all aspects of this broad discussion into play, but to question if and how the horse might be differently conceived within these constructs as widely recognized—both situationally in the Altai region and generally with regards to human-horse interactions.

The Wild-Domestic Dichotomy

It is difficult to attempt to fit the Pazyryk archaeological material into current domestication paradigms. First, “domestication” is a fuzzy concept, and there is no clear consensus on its definition (Hecker 1982; Russell 2002), much less its timing or processes in prehistoric Iron Age Inner Asia societies (e.g., Anthony 1986, 1996, 2007; Clutton-Brock 1989, 1994; Levine 1999, 2006; Levine *et al.* 2003). It is most commonly defined as it relates to “human mastery” (Leach 2003: 356), and as having both biological and social components. Biologically, it concerns the isolation of an animal population from the wild genetic pool (Russell 2002: 288). Clutton-Brock defines domestication as a “progression from taming” wherein the animals are “bred in captivity, for purposes of subsistence or profit, in a human community that maintains complete mastery over its breeding, organization of territory, and food supply” (1994: 26-27).

The first problem with applying these biological and ecological characteristics of domestication to the horses of the Pazyryk burials is the manner of horsekeeping practiced in the region, which can at least partially be seen to be ecologically determined. Today, indigenous Altaians practice vertical transhumance, driving their horses in summer to pastures in the highlands, where the snowmelt nourishes lush grass. In the winters, they bring them down to the somewhat warmer realms of the more permanent villages, where the horses pick through the snow for what fodder they can find. A few horses are always kept in the settlements for riding, but most—including trained riding horses—are pastured on their own. Figure 4.2 shows Altai horses brought down from their high-mountain summer pastures to corrals for DNA testing, which I coordinated in 2000 (see Argent *et al.* 2000). It took a youth from the village, who was dispatched by horse to retrieve the pastured horses and bring them halfway down the mountain, three days to accomplish this. This type of ancient horse management, utilizing year-round pasturing, is termed *tabun* keeping in Asia (Rolle 1989: 105). These management techniques were noted by nineteenth century travelers in

the region; at that time a *tabun* could consist of 1,000 horses, consisting of multiple stallions, who were sometimes herded, but often left alone (Rolle 1989: 105).



Figure 4.2. *Altai horses entering corral half-way between summer mountain pastures and the settlement.*

Discussing early domestication, Levine *et al.* (2000) point out that if herding progressed from hunting, wherein tamed foals of hunted dams might have been kept as pets, initial differentiating of wild from domestic stock might be difficult (Levine *et al.* 2000: 125). For the horse, this difficulty might not have been limited to early domestication. As to isolation from the wild genetic pool, accounts across Asia from the early first millennium CE forward describe the encouraged mating of captured or tamed mares with wild stallions, in order to produce exceptional offspring. One of the oldest and most intriguing mythological associations concerning the horse in Inner Asia deals with legends of exceptional horses bred from domestic mares and wild dragon-stallions. (Argent 2001; Banks 1989; Beal 1884; Esin 1965; Gladitz 1997). The practice of encouraging or tolerating such matings continued in Europe to at least Medieval times (Gladitz 1997: 136) and is still practiced today in Kyrgyzstan (Cassidy 2009:15).

Control of ‘Culture’ in *Tabun* Horsekeeping

Another component of domestication concerns social elements—control of the animals’ “culture” (Clutton-Brock 2000: 29) and the bringing of the animal into the human social

sphere as property (Russell 2002). In the case of *tabun* keeping, the horses' "culture," while it might include interaction with humans at times, would rest primarily on interaction within their own species. Further, under this type of management scheme, while the horses might be considered (individual or group) property, neither their breeding nor food supply is controlled by humans. While we cannot be certain that the Pazyryk people practiced *tabun* horsekeeping, we might at this point infer some similar process because, although archaeological evidence of small corrals has been found in Eneolithic Kazakhstan (Outram *et al.* 2009; Stiff *et al.* 2006), no barns or other enclosures attributed to the Iron Age in the Altai have yet been found.

The Altai region's ecological characteristics are such that great numbers of horses could exist without human assistance or intervention. Ecological conditions favored stockbreeding, where horses "could be left to look after themselves, needing only general oversight" (Rudenko 1970:55). Thus with presumed *tabun* keeping, extant wild and/or feral horses nearby, and the historical evidence of encouraged matings of wild and domestic stock, it is difficult to feel comfortable with fitting the horses of Pazyryk into traditional classifications as either wild or domestic. Although we today classify horses as domesticates, and they today arguably fit into the above biological and social criteria, it is not at all clear that they fit into *any* of the criteria—control of food supply, movement, breeding or culture—to allow them to be considered domesticates in Iron Age Inner Asia. All of these factors combine to argue for a conception of the Pazyryk human-horse interactions as less that of domestication than perhaps that of taming and training (see Sebeok 1998: 68).

As this Altai example shows, conventional definitions of domestication are overly constrictive and are not adequate to explain the myriad ways in which humans and animals interact. The criteria for domestication again put forth the idea of human subjects *acting upon* animal objects through the process of domestication. This is not the only manner in which domestication may be viewed. Noske points out as an alternative to the anthropocentric lens through which domestication is seen as a "process occurring within human society," an ecocentric view "where domestication appears as a relation between two species" (Noske 1997: 10).

The Interactive Approach

One model of domestication which views the process as less human-centered is proposed by O'Connor (1997; see also Budiansky 1992; Cassidy and Mullin 2007; Coppinger and Coppinger 2001). Here, O'Connor asks us to reassess the definitions of domestication in light of the fact that, from a biological perspective, interactions between species are often symbiotic. Following a system devised by Begon *et al.* (1990), O'Connor (1997: 151-154) notes that from a species/population perspective, each "interactant" can have either a

positive (+), neutral (0) or negative (-) effect on the population size of the other. With this formula, O'Connor defines potential interactions thusly (among others): mutualism (+, +), a special form of which is domestication; competition (-, -); commensalism, "in which one species benefits with no detriment to the other" (+, 0); and contramensalism "in which the interaction is clearly of benefit to one species and to the detriment of the other," essentially predation, (+, -). Examples of mutualistic and commensal relationships, such as those between ants and aphids, are not limited to human-animal other interactions, and are common in the natural world. In such animal-animal relationships, as in human-domesticate relationships,

the process of domestication is unlikely to have been one-sided. People did not take sheep into domestication: rather people and sheep entered into a particular interaction by behavioural adaptation on the part of both species. The new relationship succeeded precisely because it benefited both species (O'Connor 1997: 152).

With this view, O'Connor posits that mutualistic or commensal interactions—which we have come to perceive as human-initiated and falling under the categorization of "domestication"—can be seen as adaptive on the part of both species, and are not always human-initiated. In the case of cats scavenging around human settlements for food, "our adoption of cats as a symbolic and therapeutic companion species was another means of deriving benefit from a commensal species which clearly was not going to go away" (1997: 155). Rather than solely benefiting humans, then, "in terms of reproductive success, domestic animals have [also] benefited from the relationship" with humans (Russell 2002: 289).

Russell takes issue with O'Connor's symbiotic model because "the human side of this mutual adaptation, at least in most instances, has a larger component of intentionality than is normally implied by symbiosis" (2002: 293); and it thus "draws attention away from the issue of exploitation" (2002: 289). She posits that the defining element of domestication is the point at which animals move from shared resource to property (2002: 294; also Levine 1999: 34-35). While these are good points when looking at large-scale, or species-level contexts, they are not applicable to viewing the kind of relationship I am interested in exploring, as it occurs between two individual beings. This is because while I (or past peoples) might within the frameworks of academic (or cultural) conceptualization, law or custom "own" my horses as chattel, the issues of ownership and property status do not come into play for them. Horses have no conception of "ownership," but as I shall show, as social animals, they do understand "belonging"—belonging to a friend, a family, a group and a community—in the sense of interdependent relating and connectedness. In other words, while humans might choose to objectify horses in this manner, and such beliefs may factor

into how they are treated or maltreated, that we so categorize them does not impinge on the horse's own decision to "belong" to a human. Therefore issues of ownership are irrelevant to the exploration of the interspecies, intersubjective *relationship* I have with them, because relationships work both ways, through concepts understood by both parties.

To return then to a more ecocentric view, O'Connor aptly challenges us to "ask not what animals could do and did for us, but what we humans could do and did for them" (1997:155). I believe we can look at both sides of this challenge, as does archaeologist Kristin Oma (2010; see also Tapper 1988: 52-53) in exploring the "contract" between humans and domesticates. In the following chapter I will address this question from both angles, exploring what humans and horses can be seen to do for one another.

Domestication Equals Domination

Applying current models of domestication to the Pazyryk materials raises the question of whether or not the horse-human relationship always can be characterized as one of "domination." Despite recent turns of thought, (Cassidy and Mullin 2007; Knight 2005), traditional archaeological paradigms of human relations with domesticates have been heavily influenced by an over-emphasis on issues of exploitation and control, fostering a "domination-through-pain" model of human-animal relations. As stated by Ingold (2000: 72-73):

The relationship of pastoral care...is founded on a principle not of trust but of domination. These principles of relationship are mutually exclusive: to secure the compliance of the other by imposing one's will, whether by force or by more subtle forms of manipulation, is ...an abrogation of trust, entailing as it does the denial rather than the recognition of the autonomy of the other on whom one depends.

Within this paradigm, in pastoralism animal "sentience and autonomous action" must be "overcome through superior force" (Ingold 2000: 74). Within the understanding of this domination model of human-domesticated relations, horses are coerced through "the whip, spur, harness and hobble, all of them designed either to restrict or to induce movement through the infliction of physical force, and sometimes acute pain" (Ingold 2000: 73; on physically painful means of "control," see also Dietz 2003; Drews 2004: 74-80; Tuan 1984; but see Baker and Manwell 1982; Brownrigg 2006; Budiansky 1992; Cassidy and Mullin 2007; Coppinger and Coppinger 2001; O'Connor 1997; Oma 2010; Tani 1996). It has been difficult for archaeological analyses to step around this influential paradigm of human domination and domesticated animal submission, wherein domesticated animals are inflicted with pain or otherwise coerced to do human bidding. As this is a critical point to my thesis, I would like to spend some time discussing problems with this model, specifically:

(1) it is itself constructed; (2) it discounts other human motives; (3) it projects the attitude of human domination of nature onto other and past societies; (4) it mis-states the purposes of horse equipment; and (5) it discounts the agency of the ridden horse.

The Context

It is important to contextualize this model, which is not at all empirical, but constructed. As stated by historian Erica Fudge, “What is assumed to be natural—human dominion—is revealed... to be manufactured, that is, ideological” (Fudge 2002: 14). Specific to the horse, von Dierendonck and Goodwin (2006: 28) note:

Cultural differences in approach to the human-horse relationship have been evident from ancient and classical history. These differences persist to the present day. There are two main approaches, a co-operative approach based upon understanding the behaviour of the horse, and an alternative approach based on human dominance and equine submission.

The prevalence of the domination model of human-domesticate interaction in archaeological and anthropological thought is not surprising considering that “social and cultural anthropologists come to domestication via an intellectual trajectory that is strongly influenced by Marx” (Cassidy 2007: 7). Whether the category is race, gender, or any other issue, concerns over the use of power, domination and control by one group over another has been a prevalent theme in archaeologies of the past 30 years (e.g., Parker Pearson: 1982; Shanks and Tilley 1982: 132-133; Shanks and Tilley 1992: 133; Tilley 1996). Under this approach, ideology is seen to operate to “... secure the reproduction of relations of dominance...” (Shanks and Tilley 1982: 130). Following this path, the natural tendency is to explore human-animal interactions in terms of a sole focus on economics and social inequality, where notions of human “control” and hierarchical dominance are privileged.

Interpretive Marxist-influenced archaeologies proved highly valuable in foregrounding the potential of ascribing communicative motives from archaeological evidence. However, in reducing human action to the planned manipulation of members of one social stratum by another—even with the “softer” conception of “power as enabling” that has evolved since the approach was first applied (Tarlow 1999: 24; also Miller and Tilley 1984: 6), Marxist archaeologies ignore that human communication occurs at many levels; that individuals have diverse motives; and that there are various communities functioning within a society at any given time. Here, in terms of animals, in addition to being anthropocentrically objectified, all domestic animals are subalterns. Whether explicit or implicit, the Marxist-based approach with its focus on power, control and domination presents several problems for exploring humans’ relationships, both with other humans and with other animals.

Human Motives and Needs

One very significant problem with a this approach is that by focusing only on the power-replication aspects of human interaction, it seeks to explain highly complex social action through but one of the ways in which social needs are met. It should be clearly understood by now, by those in all disciplines dealing with human behavior, that no single factor can explain the complexity of human behavior, whether relative to burials, to societal change, or to everyday interactions and activities. One model which might be used to expand the focus was developed by psychologist William Schutz (1966), the “three-dimensional theory of interpersonal behavior.” Schutz’s research into interpersonal communication identified three motivations that drive people to communicate in order to come together with one another: affection, inclusion and control. Although initially developed in 1958, Schutz’s theory remains a respected paradigm for assessing human motives and communication today (Anderson and Ross 2002: 143-144; Griffin 2002: 93-101), and Schutz’s three categories will play a prevalent role in this thesis. The element of control has been well addressed in archaeological studies utilizing the often-prevailing focus on power, resources, and domination, yet inclusion and affection are equally potent human drives. My interest here, then, expands notions of communication as used to propagate power, and focuses on all three of Schutz’s areas of human needs—control, affection and inclusion. Further, as I shall show, as social animals, horses can be seen to possess and be motivated by these needs in many of the same ways as humans.

It is these more benign, yet equally interesting and important, features of human-animal interactions, “issues of relationship in interspecies social dwelling, that tend to lose out to anthropocentric agendas of meaning and power” (Campbell 2005: 79-81). Tarlow’s innovative study on commemorative monuments in Orkney (1999) and discussion of emotion in archaeology (2000) begin to highlight the value of exploring the ways in which other aspects of social relationships are created and enforced through human communication. What is needed is a means of bringing these other aspects of humanity together within a workable theoretical framework, one which encompasses a view toward recognizing a fuller range of human (and animal) experience. Viewing human-horse relationships through models of communication presents another perspective. These concepts are further explored in the following chapter, but the point to take away here is that communication is the means by which relationships, which meet the needs theorized by Schutz, are developed and maintained—whether in human-human or human-animal interactions.

Perceptions of the Horse in Other Cultures

The domination model projects Western conceptions of the typologies of the natural world and the attitude of human domination of nature onto other and past societies. Campbell questions this “generic dominatory logic in pastoralism as compared to hunter-gatherers” as over-generalized (2005: 96). Further, within pastoral economies, both “species and individual animals [are] completely integrated culturally and economically within the social fabric” (Schwabe 1994: 37).

It is unwise to start from the embedded assumption that the Pazyryk people—or any past or other society—perceived animals in the manner we do in Western scholarship today. Neither the anthropocentric dichotomization of humans from nature nor the domination-through-pain paradigm allow for other ways of understanding the horse-human relationship. Three examples point to different ways that relationship has been viewed.

First, coeval with the Pazyryk burials, in ancient Eurasia, individual horses often became the companions of men:

Some acquired a special reputation for loyalty and affection, which was often reciprocated. Examples include Alexander’s love for his horse Bucephalus and Cyrus’ for his favourite horse which drowned under him in Mesopotamia’s Diyala River (causing, it is said, his engineers to wreak revenge by dividing it into 365 channels which then flowed out into the desert and died!). Evidently among mounted soldiers, as among rulers, individual horses were regarded as partners and companions.... (Schwabe 1994: 50).

Second, throughout Inner Asia, epic poetry has been passed down as oral tradition. These epics invariably consist of the exploits of a hero and his companion hero-horse. In Kyrgyz epics, “all horses of heroes have names and some have the ability to understand and speak human language” (Köçümkulkiži 2007). In the Kyrgyz epic *Manas*, horses are generally referred to by the term *janibar*, “one who has a soul” (Köçümkulkiži 2007). The Persian epic *Shah Name* concerns the battle stories of the hero, Rustam, and his leopard-spotted warhorse, Rakush, who by himself slays foes and many times saves his human’s life. The Oguz Turkic epic hero, Bamsi Berek, speaks to his horse, Ak Boz, “I do not call thee horse but brother, O truer than my brother” (Esin 1965: 171, 193).

A third example of how horses are viewed differently from the domination model, comes from the North American Apsaalooke Chief Plenty Coups, who stated of the warhorse-human relationship:

To be alone with our war-horses [before battle] teaches them to understand us, and us to understand them. My horse fights with me and fasts with me, because if

he is to carry me in battle he must know my heart and I must know his or we shall never become brothers. I have been told that the white man, who is almost god, and yet a great fool, does not believe the horse has a spirit. This cannot be true. I have many times seen my horse's soul in his eyes (Lawrence 1998: 137, citing Linderman 1930).

It is clear from these examples that in past and other societies perceptions of horse-human bonds were qualitatively different from, and do not fit within, either the anthropocentric human-animal dualism or the dominated-horse model. It is apparent from these perceptions that the boundaries placed by Western thought between humans and animals, here between humans and horses, have been and can be conceived quite differently. In these illustrations we have horses with names and souls, horses as partners and brothers—horses viewed as not as objects, but as subjects.

The Purposes of Horse Equipment

As a further problem, there is no doubt that the equipment mentioned by Ingold *can* be used severely, as tools of force. The question, then, that arises with this view is: Are they *always* used to intimidate and coerce through pain? I will posit an alternate view. Horses can be, and in many societies horses are, ridden and directed with very little, or no, tack (see Dressage Appaloosa en liberte, 2008; Liberty horse training with Michelle Dennis, 2008). Many Native Americans rode horses with only a leather thong through the mouth and without saddles. Ancient Libyans were noted to have steered their horses with switches, and Roman authors refer to Numidians riding without bridles (Brownrigg 2006: 165). All of the horses I raised and schooled to be ridden were started with no bits (Fig. 4.3).



Figure 4.3. *Sun Son Shen being backed for the first time by Jayne Haislett in a halter only, with no bit.*

There is a misconception of the use of bridles and bits to “control” horses, as exemplified by the statement, “The bit, consisting of a mouthpiece and two cheekpieces, is the instrument through which a rider or a driver both directs a horse to left or right and also brings it to a stop” (Drews 2004: 71). The bridle and bit do not serve the function of the steering wheel and brakes on a car. It is understood by working riders that equipment such as bits, spurs and whips are communication tools used to extend the reach of the human body, which is smaller and weaker relative to the horse. Such tools communicate requests for changes of speed or direction from the human to the horse: A touch of the bit on the left side is a request to turn, a whip can be used to reach and touch a part of the horse’s body the human cannot reach, and which touch both understand as a request for a certain action. But a good rider relies upon the bridle and bit only when more subtle communication requests—the minute shift of the rider’s weight, a slight pressure of leg on the ribs—are not perceived or acknowledged by the horse. They are attention getters, that is all. As anyone who has ever sat a runaway horse will well remember, pulling hard on the reins to apply painful pressure on the horse’s mouth through the bit does absolutely nothing to remedy the situation, and indeed the pain induced can make the scenario worse (cf. Drews 2004: 81).

Horse equipment does not grant the rider any kind of “control.” Discussing the manner in which horse and rider communicate, through what she terms the “skin’s mode of thought,” Hearne notes “one must get past the notion of the bridle as an instrument of the kind of subjection that, in my experience, exists only in the fantasy lives of people who have bizarre notions about the nature of power” (2007: 114). When viewing a rider and dressed horse together, I can tell whether the rider views their relationship with horses as one of dominance or cooperation by the tack they use. The former think that harsher means will give them “control.” This is not so. Control of a ridden horse, if there is such a thing, doesn’t come from devices, but from the willingness the horse grants us when we have gained their trust and respect. The only way to “control” a horse is to “teach them that if they follow our lead, however incomprehensible at may be [to them] at times, nothing bad will happen” (Saslow 2002: 222). Figure 4.4 illustrates these concepts.

Abrogating the trust (Ingold 2000: 72-73) the horse must have in the rider by inflicting pain is antithetical to building the type of rapport needed to safely ride a horse. From a physical standpoint, the working rider understands that applying the least amount of “volume” (pain or psychological pressure) possible to get the desired result—as a communicative request rather than as a domineering demand—is more efficient and safer for the rider. We must, therefore, disengage from the idea of horse equipment *necessarily* as implements of torture, through which any horse may be “controlled.”

The Agency of the Ridden Horse

A final problem with applying the domination-through-pain model to the ridden horse is that it discounts the agency they bring to the relationship. Although I further discuss the idea of equine agency in the next chapter, what I mean by the term “agency” at this



Figure 4.4. *Impromptu schooling session with yearling Della, no tack, Miles Schuster, three years old, up, and me (photo: Bob Schuster).*

point is that in the context of their interactions with humans, horses do not merely passively or instinctively *react*, they *respond*, and they do so in any number of ways. Considering the agency of the horse is not only appropriate but also—considering that they are large, powerful and potentially dangerous beings—necessary. As well stated by Hearne (2007: 115), “because we ride them, because they *carry* us, it is particularly hard to avoid noticing not only that horses know us but that they know us without yielding their own volition, which continues to belong to the horse.”

Humans and ridden horses—each through their own decided actions—put each other in danger or keep each other safe every time they come together (Brandt 2004; Hearne 2007; Sharpe 2005). The assumption of human dominance and equine submission is an illusion based on an inflated conception of human ability. One does not confront and expect to climb aboard the back of a creature who weighs at least seven times more than the average human with an attitude of that being—within whom resides incredible power—as an object lacking agency. It is impossible for a human to physically overpower a horse into behaving, much less into working. Horses “*allow* people to teach them to be led... to be tied up, hosed down and clipped, to have tack put on them, rugs and shoes, and bits in their mouths.” (Game 2001: 4 emphasis in original). One does not “tell” a horse, one “asks.”

This is because, as working riders know, inflicting physical pain through “whip, spur, harness and hobble” will induce one of two responses. First, it can cause a horse, who has “undergone a critical loss of control of its environment,” to display “learned helplessness” (McGreevy and McLean 2005: 203)—apathy indicative of a broken will. Ridden horses

“which are literally entrusted with our lives are not merely required to refrain from injuring us but to deliver us safely to our destination, which involves...making judgments and choosing a safe route” (Sharpe 2005: 109). To do this, a ridden horse must not be “shut down” so, but must be mentally capable of using his unique sensory and physical abilities to make decisions which will ultimately affect his and his rider’s safety. On the mountain trails near where I live, one does not want an “obedient,” insecure or helpless horse waiting for the *rider* to make split-second decisions about how she needs to move to keep both parties safe. In situations where hesitation can mean death, one wants the horse, with her more refined sensory abilities, to *decide* where to put her feet or whether to jump the washed-out trail or step lightly over it.

Second, ill treatment can cause the horse to exhibit “agonistic” behaviors—biting, kicking, bucking, rearing and striking the human (McGreevy and McLean 2005: 201). This sheer physical revolt can take the shape of waiting for a time the human is distracted to disobey, feigning a misstep or bucking to unseat the rider, or even physically attacking the person who has treated them thusly. In other words, the use of brute force is a “recipe for creating problem behaviours” (Goodwin *et al.* 2009: 7). While one might want a horse used as a pack animal to display learned helplessness, or be able to stay clear of striking hooves when a horse is in the traces, with neither of these outcomes of domination would one have a horse suitable for use as a riding partner, particularly in dangerous situations. A horse so treated is simply not trustworthy. Turning to Xenophon’s epigraph at the beginning of this chapter, neither of these behaviors are wanted in a horse... to whom one entrusts one’s own body in dangers. For daily riding, and particularly in dangerous endeavors, one wants a horse who is, as working riders use the terms, “reliable” and “honest.” One wants, in other words, a horse who both listens and obeys *or* decides on her own, as the case dictates, and who considers in her choice of actions not only her welfare, but her rider’s as well. There is both give and take on both sides. These traits simply cannot be developed through violence. As well put by philosopher and horse trainer, Vicki Hearne, “...the objection to cruelty is simply that it doesn’t work” (2007: 160).

Conversely, horses treated with trust and respect behave responsibly: A horse may:

... [carry] a rider safely across country or on busy roads. A police horse may be involved in riot control, stoically facing terrifying situations while a pony in the ‘riding for the disabled’ scheme will be carrying frail and uncoordinated children with amazing care. In each case the life of the rider depends upon the reliability of the horse (Sharpe 2005: 94)

Relationships between horse and human can be seen to increase in breadth and depth on a continuum, depending upon the nature of the joint action. When the horse merely is be-

ing handled or asked to move from one place to another, very little is expected or required; when the horse is ridden at high levels of precision or in dangerous situations, a great deal of mutual understanding and trust are necessary. In this latter instance, which takes many, many years to develop fully, just as the rider must know the horse, the horse must know the rider. As stated of the horses and people of the North American Blackfoot culture:

Through experience in hunting a rapport was established between man and mount that enabled the rider to know the peculiarities and capabilities of his mount and the horse to understand the wishes of his rider under trying conditions that required their close cooperation (Ewers 1955: 196-197).

In order to stay safe, working riders understand that they must necessarily acknowledge not only the agency of horses, but each individual's character. Each horse owns not only a biological self, but also a separate and distinct life history: a biographical self. Although certain general understandings of "horses" apply, one horse cannot be dealt with exactly in the manner as another—each is an individual, with different abilities, likes and dislikes, and fears and anxieties which can put a rider in danger if not acknowledged. In safely riding together, then, the astute rider and horse participate in the co-creation of the action—riding—intersubjectively. The rider listens to and dialogues with her horse. I listen, for instance, when on a ride my stallion tells me at the junction of two mountain trails that the one I have chosen is not the one to take today because he smells or otherwise senses something there (probably a mountain lion or bear) that I lack the sensory finesse to notice. I would be ill advised not to hear what he tells me. As Hearne (2007: 112) pertinently stated:

It is important to remember that any decently developed jumper knows more about jumping than any rider in the world. This doesn't mean that the rider's analytical capabilities don't come in very handy indeed, but the rider who tries to advise the horse about such matters without participating in the horse's understanding and knowledge doesn't get very far (literally).

In these scenarios, who is the "leader"; who is "dominant"? This kind of interchange perhaps cannot even be conceptualized within the paradigm of "dominance-submission." According to LeGuin, good riders demonstrate:

... nothing so crude as a capacity for domination, but rather—and this is a most crucial distinction—a capacity for command: command as distinct from domination, command as a *reciprocal condition*, command as predicated upon a knowledge of *when to listen and when to tell*.... Even the most minimally effective horsemen...

—those multitudes who did not ride exquisitely or artistically, but who could consistently manage not to irritate or confuse the animal so much that it hurt or killed them—knew something, and knew it profoundly, in their bodies, about the importance of learning *both to speak and to listen* with corporeal intelligence (LeGuin 2005: 193-194, my emphasis).

The intersubjective relationship between rider and ridden horse can be viewed differently, not as that of master to slave, but as a partnership in which the human—often, but certainly not always—acts as the leader. Corporeally, the horse and rider must move together in synchrony to remain safe. Within this partnered movement, which can be likened to a dance, the horse lends his greater strength, speed and sensory abilities, and the rider—often, but certainly not always—leads. In battle, the rider may act as a commander, but a commander who is also a comrade. Granted, we most often are the ones who *call* horses to act with us but, as I have shown somewhat to this point and shall explain further in the next chapter, they must *respond* to our request to join together safely in the embodied partnership that is riding. Constructing them as dominated does not negate this; they retain this agency beyond whatever classificatory scheme we choose to apply to them academically.

None of this is to imply that domination and oppression did not and do not exist, and are not worthy of study, nor to discount that horses have been exploited, for they most certainly have been and continue to be. I conclude, rather, that the relationship between humans and horses is not *necessarily* exploitive. As anthropologist Elizabeth Lawrence (1984: 39) noted: “It should be stressed, because of commonly held misconceptions, that human interaction with horses is multi-faceted and includes, but is not limited to, those relationships involving domination.” The validity of schemes focusing solely on control issues—whether in human-human or human-nonhuman interactions—cannot be assumed *a priori*.

To conclude this section of discussion, in the case of the ridden horse, the principles of trust and domination are indeed “mutually exclusive” (Ingold 2000: 72-73), but are inverted: trust is the vital interactive mental state that is necessary, desired and built upon by both parties, human and horse, while domination is the state to avoid (see Oma 2010). Ultimately, then, while the domination paradigm arguably might, or might not, be sustained in relation to domesticates which are solely herded and used as a food source, it cannot be applied when it comes to the use of the *ridden* horse, particularly to the horse ridden in dangers. These points together argue for a conception of the human-ridden horse relationship as considerably more psychologically nuanced than one dealing merely with control and domination.

Conclusion and Implications

- The roles of the horse within human culture are complex and context driven. Horses may be domesticates whose bodies are eaten or used as products. They may be trainees, drafted and indoctrinated into human endeavors and utilized for their strength, speed and power to human advantage. They may serve as metaphors and symbolic representations of human or cosmic properties. They may also be companions and partners, subjects with whom people engage, bond and share space, time and experiences.
- In this chapter, I have defined the broad human-animal studies approach I use from this point forward in this thesis. It is clear from this summary that traditional archaeological and anthropological narratives provide limited models through which to explore the relationships between the horses and humans from the data derived from Pazyryk frozen tombs. In this context, it appears, horses might not have been “domesticates” in terms of prevailing definitions. Furthermore, the conventional anthropological/ archaeological paradigm which presents animals merely as dominated subalterns within an anthropocentric world does not work for the horse ridden “in dangers,” now or in past times.
- We are limited when we try to apply Western socio-cultural models of human/non-human animal “relationships” to the Pazyryk people—or any non-Western society, past or present, which lived or lives with animals. Archaeological discourses have yet to consider the nature of the intersubjective experiences of two sentient beings in dealing with each other in situations and uses such as those presented by the Pazyryk burials. Nor are the mutual benefits which each species gains through such interaction noted. They are heavily one-sided, with humans always asserting total control over—exploiting—the other animals.

In order to explore how the horse fitted into, and possibly recursively influenced, the Pazyryk worldview and sense of identity, a more nuanced approach is needed—one which considers both the nature of the horse and the embodied communicative interactions between horses and humans. Thus, I suggest we need to explore the dynamics of human-horse relationships that would account for a fuller range of human motives and needs, suspend the assumption of a universal scheme in which all pastoralists relate to all domestic animals by subjugating them, and allow for the agency of the ridden horse, as is clearly recognized by those who actually deal with them.

The Western illusion of “human exceptionalism” (Haraway 2008: 11) and the linear hierarchical domination model of human-horse interaction encapsulated within that narrative are limiting. To return to Jourdain’s opening epigraph to this chapter, ours are not the only

ears who hear the tree falling in the forest; we indeed exist within “a spatial and temporal web of interspecies dependencies” (Haraway 2008: 11). Having discussed that humans and horses embrace intimate intersubjective relationships, the next questions I address are: How, then, might we better understand such human-horse intersubjectivity? and, How might such intersubjectivity be seen to affect both species? I argue that a more ecocentric and biocentric, holistic and “relational” model can answer these questions, to which I turn now.

CHAPTER FIVE

WE MOVE, THEREFORE WE BELONG: A RELATIONAL MODEL FOR HUMANS AND HORSES

There seem to be instinctive tendencies on the part of [social animals] to move in the direction which other animals are moving, such as is found in any group of cattle drifting across the prairie together as they graze... [but] they do not enter into the life of the individual so as to determine that life throughout.

—George Herbert Mead (1967: 239)

Armies do not march in step for exercise.

—Paul Byers (1997: 137)

Introduction

The relationship between the human and the horse—particularly the ridden horse—has fascinated both riders and writers at least since Xenophon in the first millennium BCE penned the first treatise exploring the psychology of the horse. Since then, many societies have applied “mystical, occult or religious connotations” to the human ability to work well with horses (Dierendonck and Goodwin 2006: 35). In the United Kingdom, for instance, a secret trade society of horsemen was entered through an initiation ceremony that included communication of the “horseman’s word,” which was said to bestow powers over horses when whispered in the horse’s ear (Dierendonck and Goodwin 2006: 35). This is probably the source of our contemporary understanding of the term “Horse Whisperer” as someone with an ability to work with horses in a nonviolent and seemingly invisible fashion; human and horse appear in-synch in ways that communication is indiscernible to others who are not so attuned.

A significantly deep amount of scholarly attention from widely disparate academic realms—much from scholars who are themselves “horse people”—has focused on explaining the relationship and manner of interaction between horses and people. Sociologists (Brandt 2004; Brown 2007), ethologists (Mills and McDonnell 2005; Stone 2005), anthropologists and archaeologists (Lawrence 1985; Olsen *et al.* 2006; Oma 2007b), critics and

cultural historians (Fudge 2006; LeGuin 2005; Ritvo 1987; Weil 1999), feminists (Birke *et. al* 2004; Birke and Parisi 1999), and philosophers (Hearne 2007, Sharpe 2005) all have addressed this relationship from various perspectives.

In many of these discussions, the relationship between humans and the ridden horse¹ is described in rather esoteric terms. In one study, many informants:

... mentioned having an intense, non-verbal communication with their animals which gave them a feeling of oneness. For example, many participants who discussed horses talked about feeling so connected to their horses when riding that all they had to do was think about a command (such as turning) and the horse would do it (Brown 2007: 336).

Further, informants in sociological studies describe an association that is both physical and psychological, that reaches into the telepathic, spiritual and metaphysical (Brown 2007: 336; *also* Sharpe 2005: 212), and that often allows the person a connection with something larger than themselves (Brown 2007: 336). Primary authors, as well, speak of “mutual becomings” (Oma 2007a). They make statements such as “... to ride a horse well, in the sense of creating a harmonious partnership, we must ‘become horse’...” (Birke and Parisi 1999: 64), and “I have come to appreciate just how important a forgetting of our separate human self is if we are to ride well” (Game 2001: 8-9). What emerges is a general trend describing human-horse interactions as seemingly both extrasensory and transcendent.

Why do these people say such mysterious and cryptic things? Do these comments simply reflect current Euro-American understandings of the human-horse relationship? Or are there elements of these interactions that can help illuminate how Pazyryk society may have comprehended their horses? In this chapter, I seek to answer these questions by interrogating the human-horse relationship. In keeping with a human-animals studies focus, I examine horses “as such” and propose a model for understanding the embodied communicative interactions between horses and humans which considers them as “a more or less equal partner in a relationship—the product of which is a common project or a shared world” (Shapiro 2008: 14). I do so by first situating agency and relationships, and exploring the various aspects of horses’ characteristics and abilities. I then explore relationships and communication, as they are understood for humans and might be applied to horses, and to horse-human interaction. This leads to the potential meanings generated by interspecific corporeality and an assessment of the nature of the human-horse relationship and the bonds

¹ “Ride” is a loaded and inadequate term for the process through which humans and horse traverse the landscape together because it does not acknowledge agency of the part of the horse. A motorcycle or train, which we “ride,” does not decide to jump or not jump, to stop or not to stop, to put itself in this situation but not that one, or even to allow or disallow itself to be mounted. Rather, I conceive of riding as a “joint project” (Shapiro 2008: 14; Sanders 2007) that might better be described as “riding with.”

that can develop between the two. I end by discussing how the two species broadly might be seen to benefit from interacting with each other.²

Agency, Self and Relationality

It has been proposed that places can be seen to possess agency; that the inter-relatedness of humans and their spaces is recursive (e.g., Edmonds 1999; Hodder 2000; Tilley 1994, 1996, 2008). Interpretive archaeologies also recognize that artifacts can act as social agents (e.g., Gosden 2005; Shanks 1998; see also Gell 1998). Yet the agency of (live) animals has not been considered in a similar way (Ray and Thomas 2003: 46).

As discussed earlier, I contend that horses have “agency.” In the context of their interactions with humans, horses do not merely passively or instinctively *react*, they *respond*, and they can do so in ways that are either beneficial or dangerous to humans. Under this relational approach, agency is strongly acknowledged; the juncture between thought, action and interaction is primary. This is not a study in agency *per se*, and a full iteration of the ongoing discussions of agency, around which theory and method remain in flux, is beyond the scope of this work (see Dobres and Robb 2000a). Rather, an “agent-centered” approach (Brumfiel 2000) underlies this work, using communication and psychological paradigms to examine human-horse relationships through archaeological material. In the context of horses as social actors, I do not consider agency in all of its potential definitions for humans, but rather as “the socioculturally mediated capacity to act” (Ahern 2001: 112). Elements of agency which horses might be seen to share with humans include:

...the constitution of the individual as a psychological entity; ...a process of inter-subjective engagement with the material and social world; ...the strategic carrying out of intentional plans for purposeful goals; ...and the strategic carrying out of an intentional plan in accordance with a specific culturally constructed idea of personhood... [or] class... (Dobres and Robb 2000b: 9).

I clearly and strongly recognize as a central tenet that humans as agents “create themselves... through communicative action” (Barrett 1991: 2). But this is not a uni-directional process. George Herbert Mead’s (1967) theory of symbolic interactionism, which posits that human senses of self and identity are created and maintained through our relationships with significant others, remains a keystone of sociological theory today. Although Mead (1967) discounted the interactive nature of human-animal relations, others have fruitfully argued, implicitly or explicitly, that animals impact people in similar ways (Brandt 2004; Hobson-West 2007; Irvine, 2007: 7; Myers 2003; Oma 2007a; Sanders 2007; Smuts 2006). In this

² Portions of this chapter will be published elsewhere (Argent forthcoming).

regard, both humans and individuals of other social species are “beings [who] become who they are in and through their interactions with others” (Smuts 2006: 124).

Such interactions—whether human-to-human or human-to-nonhuman—are developed and maintained through communication. Communication is said to be “relational” in that it involves both dimensions of content, that which deals with specific behavioral responses expected, and of relationship, how the communication is carried out and the relationships are maintained (DeVito 1993: 14). “Saying that communication is relational means that in any communication setting people not only share content meaning but also negotiate their relationships” (Verderber and Verderber 2002: 17). Incorporating principles of human communication into this study allows for an approach which looks beyond issues of relational control and acknowledges that such communicative negotiations serve other relational functions: among them, to meet needs for affection and inclusion; to fulfill social obligations and to enhance and maintain our senses of self and group identity (Verderber and Verderber 2002: 11-12).

Three assumptions seem necessary to a model which might allow for a more thorough understanding of horse-human interactions: (1) an erasure of the fixed and arbitrary line drawn between humans and nonhuman animals and an allowance for a conception of permeable and varying communicative boundaries between the two; (2) a movement away from entirely positivist epistemologies in our understanding of horses, humans, their abilities and interactions; and (3) a consideration of the phenomenal and subjective experience and agency of both horse and human in their interactions.

An exploration of the relationships between the Pazyryk people and their horses based on the funerary data provides productive lines of inquiry into how people of the past thought about the horses, the range of roles the horses may have played in their lives and cosmologies (Ch. 6), and the roles the horses may have played in formulating and maintaining individual identities. Exploring the human-horse relationship within the Pazyryk context can reveal how the people saw themselves situated in relation to the horses, which could in turn have informed their perceptions of group identity and ideology (Ch. 7). Moving back and forth between the archaeological data and questions of relationship allows us to investigate both what the archaeologically visible material from the Pazyryk burials can reveal about the nature of the relationship between these people and these horses, and how viewing the data with a different set of assumptions can provide different and more nuanced interpretations of Pazyryk people’s notions of identity and ideology. But first, the relationship must be defined and expanded, which is the purpose of this chapter.

My relational approach acknowledges that in the linkages between humans and horses, horses are not simply objects of study, but can also be participants in the co-creation of culture and identity (Birke *et al.* 2004; Brandt 2004; Brown 2007; Game 2001; Oma 2007a,

2007b; Sharpe 2005). Applying a relational approach to archaeological materials (e.g., Brück 2004; Jones 2005; Jones and Richards 2003; Tarlow 1999, 2000; Thomas 1996) can be expanded to include animal others, here, horses. This allows us to back away from the assumption of humans unilaterally “acting upon” animals. It recognizes that domination and subjugation do not solely define human-animal, or human-human, interactions. It retreats from notions that control and exploitation are the key drivers of human behavior, or are the most interesting aspect to explore in prehistoric societies. Furthermore, it considers how we constitute ourselves and others through embodied engagement with the world we inhabit, which includes animal others (Brown 2007; Game 2001; Hobson-West 2007; Irvine, 2007: 7; Myers 2003). In short, in this model, by intent and also for reasons which become apparent below, I view horses as sentient subjects with whom the Pazyryk people interacted. The reason why horses and humans can be seen to come together in relationship, why a relational model is even considered, is that both are social animals. I turn to that now.

Continuities—Humans and Horses as Social Animals

Characteristics of Social Animals

In order to understand the horse’s unique *Umwelt*, we need to understand their social lives, and sensory and cognitive capabilities, because “a good ethologist asks what it is like to be the animal under study...” (Bekoff 2002: 53). We need to ask and attempt to understand, *from the horse’s perspective*: What type of social environment do horses have, and how do they interact within that structure? How do they think and how do they perceive their lifeworld? The following sections deal with these issues.

Primary to a relational model of human-equine interaction is the fact that both species are social animals (Kennedy 1998: 216; Reed 1988). Social animals exist not only within a physical environment, but also within a social community (Reed 1988: 119), and all social animals have a need to communicate, and the means for doing so, for purpose (Kennedy 1998: 216). Within this rich social and communicative context, social animals exist with understandings of “proper” behavior within their communities (Reed 1998: 112). Social animals communicate within shared conceptions of right actions, social norms which are understood by those within the community (see Vitebsky 2005: 175 on reindeer social norms) For individuals of two social species to interact in significant and non-adversarial ways, shared notions of proper behavior govern the interactions.

Equine Social Structure

Wild or feral horses live in small, stable groups called bands, ranging from 2-35 horses. The band is both a social structure and family unit, wherein one male bonds and breeds

with numerous females. The stallion, mares and offspring maintain long-term bonds, with a sophisticated care system in which the father, mothers, siblings and peers all contribute to teaching the foals social skills (Fey 2005: 83; Morris 1988: 49). Such long-term relationships are rare among other mammals who, for the most part, come together to breed and then disperse—along with equids, some canids, some rodents, and some primates are the exception (Fey 2005: 84; also cetaceans). Stallions defend their mares, rather than territory. Bands often inhabit overlapping geography, in which case the larger group is called a herd, within which there are complex interband hierarchies (Boyd and Keiper 2005: 55-56).

The horse's innate psychology derives from its condition as a prey species and consists of two main aspects: hierarchy and cooperation. Hierarchy facilitates the survival of the band. Far from a simple "pecking order," rank is based upon multiple factors including age; personal characteristics such as athletic ability and strength; association, as a foal with a high-status dam; temperament, with more assertive individuals achieving higher rank; and order of arrival in the group (Boyd and Keiper 2005; Sigurjónsdóttir *et al.* 2002). When a new horse is added to the band, that individual's rank must be determined. This is accomplished through shows of assertion, which—unless between stallions fighting for bands of mares—are usually threatening but ultimately nonviolent. Therefore, the view of horses (and other social animals, including humans) as existing in communities with simple, rigid and violently defended hierarchies is oversimplified and inaccurate.

Alongside hierarchical considerations, horses are highly affiliative, gregarious and cooperative. Horse hierarchy is complex, contextually determined, and indeed is not the most important aspect of their sociality: "Bonds of friendship complicate a simple pecking-order hierarchy.... The result is a society based on friendships and context dominance, rather than rigid formal dominance" (Morris 1988: 52). Horses engage in a variety of nurturing behaviors performed on others: mares lick and nuzzle foals to comfort them, young and adults engage in co-grooming, and cohorts will stand head to tail and swish flies off each other (Godfrey 1979: 4; Morris 1988: 54). Like humans, they form long-term bonds with preferred social partners, with whom they stay in close proximity, rest, co-groom, approach and follow (Fey 2005: 83-86). They are faithful and loyal to (Morris 1988: 49; Sigurjónsdóttir, *et al.* 2002: 4-5), and in their lives will have only one or two such close preferred partners (Fey 2005: 86).

Horses are cooperative in socially complex ways. Horses herd together in winter blizzards on open plains, forming a triangle with the apex windward. As the horses at the head of the triangle get cold, they rotate toward the center, and others relieve them, allowing survival. Through such constant rotation a herd can survive for up to two days during a blizzard. (Kiriushkin and Tishkin 1999). If there is a real danger of wolf attack, horses form a circle with the foals inside and the larger horses with their hind legs turned outward to kick the

wolves (Kiriushkin and Tishkin 1999). Horses also establish and maintain complex roles (Boyd and Keiper 2005; Sigurjónsdóttir *et al.* 2002). The stallion is the watchdog and defender of the herd, providing the alert call when danger is near, but it is usually an older mare who assumes the role of “leader,” making decisions about the movement and safety of the group (Morris 1988: 51). Mares of all statuses will rotate “sentry duty” so that other mares and foals in the group can rest (cf. Sharpe 2005: 109).

HUMANS	HORSES
<ul style="list-style-type: none"> •Live in hierarchical family and social units; •Establish roles within their community and adhere to social rules; •Operate within learned norms of appropriate behavior; •Seek control, inclusion and affection; •Cooperate and form bonds and friendships; •Can bond with members of other species; and •Communicate through verbal and nonverbal means. 	<ul style="list-style-type: none"> •Live in hierarchical family and social units; •Establish roles within their community and adhere to social rules; •Operate within learned norms of appropriate behavior; •Seek control, inclusion and affection; •Cooperate and form bonds and friendships; •Can bond with members of other species; and •Communicate through nonverbal means.

Table 5.1. *Aspects of human and equine sociality.*

As summarized in table 5.1, horses share with humans most important aspects of intraspecific sociality and social needs, and because of this can comprehend something of what the other goes through. Before exploring how members of the two species communicate their needs to one another, I briefly describe the equine sensorium as it factors into such interactions.

Discontinuities—Equine Cognition, Senses and Patterning

While the sociality of horses and humans is remarkably similar, their cognitive and sensory abilities differ significantly. Myriad cognitive studies have shown that horses are able to “learn to learn,” ... to apply previously learned information to solve a new problem” (Godfrey 1979: 54; Hanggi 2005). Discrimination studies have shown that tested horses “were able to form an abstract category [about relational size] that was flexible and sufficiently

robust to permit instant discrimination of completely novel stimuli” (Nicol 2005: 179). Horses are able to recognize different humans by sight (Stone 2010), do not see all people as the same, something working riders certainly know.

Additionally, horses have been shown to rapidly learn the meaning of around 200 human verbal symbols (words), including commands, body parts, other animals, plants, things, propositions, pronouns and proper nouns, adverbs, and adjectives (Kiley-Worthington 2004: 78-79)—this contrary to Xenophon’s earlier-mentioned assertion that horses cannot learn from the human voice. Other than requests for changes in speed (e.g., “whoa,” “walk,” “trot,” “canter”) and direction, (“gee” and “haw”) used in driving where the requests cannot be sent by bodily contact, the recognition of this ability of horses seems not acknowledged in Euro-American horsekeeping today.

Horses also perceive levels of detail and patterning—visual and aural patterns, patterns of action and movement, patterns of artifacts, and patterns of place—which in many cases exceed our abilities, and “have an amazing ability to recognize and connect patterns of rhythm, sound and movement” (Lyons 2006: 17). Visually, in a study of pattern discernment, one pony was taught to differentiate between 20 pairs of patterns in order to receive a reward, with 92.5 percent success (Godfrey 1979: 55). Another study, using classical conditioning techniques, found that horses can “differentiate between 96 and 100 beats of a metronome, between a frequency of 1,000 and 1,025 cycles per second, and between 69 and 70 decibels” (Godfrey 1979: 51).

Working riders routinely take advantage of the horse’s ability to associate the patterns of use and meaning with artifacts; to correlate certain equipment with certain behaviors. I handled my stallion, for instance, in different halters for riding and breeding. During the former he was asked to ride in mixed company, often with mares in season, something that many stallions are never trustworthy to do; during the latter he was free to “act like a stallion.” By his behavior, it was apparent that he easily understood this concept that one wears different attire in different contexts.

Horses’ use of the landscape reflects their ability to utilize and remember patterns of place. Horses can find their way “home,” and stories of horses taking their riders home after a night on the town occur in many cultures (Morris 1988: 83). Here I am reminded of the Russian toast *za loshad*, given as the last toast of the night, literally, “to the horses,” but with the implied addendum, “... who take our drunken selves home when we are unable.” It has been suggested that this ability is due to their excellent spatial memory, mental maps of patterns of odors, sounds and images, and perhaps other sensory modalities, such as a heightened sensitivity to the earth’s magnetic fields (Morris 1988: 83-84). The equine ability to “move further faster and more easily than us” might also come into play; to them distances seem smaller and space larger (Kiley-Worthington 2005: 62).

Patterns of movement are very easily internalized by horses. Several judged equine sport disciplines, such as *dressage* or reining, require the horse to move through patterns, but to do so at the rider's request. Working riders know to practice patterns alternate to the judged test, lest the horse after only a few times memorize, anticipate and carry out the movements on his own.

In most instances horse's sensory abilities exceed human's. The exception is vision. With eyes laterally placed, the total field of horses' vision is very large, 340 degrees (Morris 1988: 40), but there is very little binocular overlap and therefore worse depth perception. Horses' vision developed to detect predators, and is most sensitive to dim light and movement, with the best acuity restricted to a horizontal band. Horses are not as good as humans at identifying detail and distant stationary objects, and "rely more on their other senses for forming a view of their world" (Saslow 2002: 209; also Morris 1988: 40).

Compared to humans, horses have extremely large olfactory bulbs with a convoluted surface, and can move large volumes of air in one breath. They also possess a prominent vomeronasal organ, which is nearly vestigial in humans, which processes species-specific molecules found in body secretions—pheromones (Saslow 2002: 212-213). Smell is used for recognition: mares use it to recognize their foals, and stallions can smell mares in season up to half a mile away (Morris 1988: 36; Godfrey 1979: 21). Horses personally identify each other by smell; upon approaching, they touch noses and each blows into the nose of the other, identifying and memorizing the scent of that individual. Horses high-frequency hearing exceeds humans, at 33,000 Hz compared to 20,000 Hz, respectively. Hearing is a more major part of the equine *Umwelt* than of the human's, and while we turn our bodies or head to orient our eyes to a sound, horses move their ears when attending to something (Saslow 2002: 216).

The equine tactile system is incredibly more highly developed than a human's (Ainslee and Ledbetter 1980: 33-34). In one study which used stimuli developed for measuring human tactile sensitivity:

...we were surprised to find that horse sensitivity on the parts of the body which would be in contact with the rider's legs is greater than what has been found for the adult human calf or even the more sensitive human fingertip. Horses can react to pressures that are too light for the human to feel (Saslow 2002: 215).

It has been suggested that horses receive auditory/tactile signals through their entire bodies, with sounds amplified as they come through their hard hooves, bones and organs to the inner ear, and that this might explain anecdotes of horses' apparent abilities to pick up signs of upcoming weather and earthquake before people (Ainslie and Ledbetter 1980: 31).

The ability to recognize rhythm is seen in horses' ability to "pick up the rhythms of the gaits of other horses they know when they hear them" (Kiley-Worthington 2005: 75). In other words, from idiosyncratic patterns of gait, the particular individual is recognized. It seems that some horse-using societies recognized and used this ability. Of the Kyrgyz in the mid-nineteenth century, traveler Atkinson (1860: 302-303) observed:

A Kirghis, like an Arab, loves his horse, and they live together like members of an affectionate family. [One tribal khan's] father possessed a celebrated stud of horses, and one of the best was his constant companion.... When on a journey, the animal is piqueted at night beside his master's earthy couch, and then acts the part of a faithful watch-dog. Nothing can approach without his giving notice, and by snort or the tone of recognition his master knows whether friend or foe is at hand.

Compared to the human brain, the horse's brain has a much larger cerebellum, the region which deals with balance and movement (Kiley-Worthington 2005: 67), which are known as the sixth and seventh senses respectively. The "seventh sense," proprioception, concerns where the various parts of the body are located in relation to each other and the sense of one's self in space. I will return to this concept as it relates to humans and horses moving together, below.

In sum, as social animals horses share a great deal with humans, and this permits the potential of empathetic understandings of one another. Differences in cognitive and sensory abilities allow, within the practice of riding, each to borrow from the other's stronger senses. But for vision and analytic aptitude, this mostly consists of humans borrowing horse's capacities, strength and size. Here, a hybrid is created through riding; both beings are advantaged, and the sum of the parts is exponentially greater than the whole. (cf. Game 2001).

Defining Equine Communicative Behaviors within Models of Human Communication

As noted above, many have argued that horses and humans communicate, primarily through non-linguistic channels. However, no one has yet proposed *how* we might begin to look at these interactions, in any structured or rigorous fashion, for an archaeology of horses. In order to explore the relationships they are capable of forming, I propose a model of horse-horse and horse-human communication based upon models of human interpersonal and nonverbal communication.

Interpersonal Communication and the Schooling of a Horse

"Interpersonal" communication can be defined in one of two ways. It can be described situationally, as occurring dyadically, between two people. Within this model, any interac-

tion between two people—you and the clerk at the store where you stop on a road trip—is seen as interpersonal. It may also be viewed developmentally, wherein communication develops from impersonal to interpersonal only when certain qualitative changes occur (Knapp and Vangelisti 2005: 14-20). Within this developmental construct, communication can be seen to move from *impersonal* interactions governed by culturally determined rules (e.g., When you greet someone, you smile and offer your hand to shake), to *interpersonal* interactions governed by rules which develop within the relationship and are specific to that relationship (e.g., When I am reading, you won't ask me important questions; When we go out, you drive.). Additionally, communication becomes more "interpersonal" with changes in understanding that move from being able to describe another's behavior to being able to explain and ultimately predict behavior. These changes occur over time, with an expenditure of effort and with self disclosure of information from each party to the other. Long-term interpersonal relationships are constructed not wholly through the exertion of one's will upon the other, but through negotiations centered upon the abilities, desires and fears of each person. They are concerned with how the social needs for control, inclusion and affection are met by others. All of these elements are specific only to those two people. When communication becomes interpersonal, it is "distinguished by uniqueness, irreplaceability and interdependence (Adler *et al.* 2003: 14-15).

The schooling of a horse for riding involves not only physical, but also psychological and emotional aspects. The horse must first learn to accept the rider on its back, an unnatural and potentially very frightening prospect for him for three reasons: because the horse's balance, necessary for its survival ability to flee from predators, is compromised, one of its great fears; because the rider is in the only blind spot of the horse's wide range of vision, the process is reminiscent of attack by the horse's main natural predator, the large felines, who strike from above and behind; and because the horse can no longer *see* her handler for reassurance, and communication must all be made tactilely and/or aurally. The horse must then develop the musculature and balance needed to carry the rider at various speeds. In the early stages of schooling to be ridden, the horse neither understands the nuances of the rider's requests, nor has the physical abilities to carry out the requests, and movements in response are large and rather clumsy. There are no shortcuts in schooling either the physical or mental aspects necessary for creating a safe, honest and reliable mount.

More effort and time are necessarily spent training a horse for certain activities than others. There is little subtlety involved in teaching a horse to pull for traction as it consists of large, as opposed to refined, movements. It can be done in days or weeks, requires very little of the horse, and the relationship between human and horse need not be psychologically nuanced. The learned helplessness discussed in the previous chapter as a result of cruel treatment might be desired, and within the confines of the equipment used, aggressive behaviors

of the horse might pose little danger to the humans involved. Next, for what I shall term “simple riding” consisting of riding in straight lines on flat ground with few turns, even at speed, all the horse must do is accept the rider on his back and be marginally guidable. Schooling to the next level, that of “plain usefulness” (Wynmalen 1952: 20) takes about a year of regular work. Examples of such riding might range from the horses rented by novices for weekend countryside hacks, to Thoroughbred racing on the flat. This type of riding is also a phase a horse must go through to advance to more precise work. Here, horse and rider function through standardized, societal rules as the horse is socialized into the human world (cf. Latimer and Birke 2009).

Riding a horse over dangerous terrain, for herding other animals, or for hunting requires a horse to understand and respond to requests for more subtle movements: quickly stopping and starting, changing pace and stride, turning and yielding. It occurs in situations where tight maneuvering is required, and is potentially very precarious indeed. Riding for such activities requires a responsive and honest mount, and such responsiveness only develops between horse and rider through ongoing and sustained positive interaction. Horse and rider must move as one, in synchrony. They must be able to anticipate and predict each other’s actions.

Finally, the use of a horse as a partner in combat—where, in the heat of battle, a miscommunicated or ignored subtle request for even a minute movement can be perilous to horse and/or rider—requires the highest degree of mutual trust, understanding and responsiveness. The warhorse must trust the rider and overcome his natural tendency to flee from loud noises and frightening situations. He must be responsive “enough instantly to answer the rider who has found himself disadvantaged in battle... so that *the horse could help the rider regain his bodily control*” (Hyland 1994: 116, my emphasis). In other words, he must place himself under a rider who has become unbalanced. He must be capable of great endurance and, at the request of the rider, of tackling physical feats he would not attempt on his own. Figure 5.1 shows an example of this: Russian cavalry horses performing c. 1912 an almost unthinkable athletic act—leaping onto and off a building, the eaves of which are at least six feet high.

The warhorse can also be taught to perform maneuvers which themselves are aggressive or extend the power of the warrior. The European discipline of *dressage*, or schooling—developed to an art in the 18th century and still an equestrian discipline today—includes the *mezzair*, in which the horse hunkers back on its haunches and paws the air with his front hooves while hopping forward, and the *capriole*, through which he launches with all four legs off the ground, kicking out with the rear hooves, both movements used to strike out at enemies. At the pinnacle of such training, these movements are called “airs above the ground.” They are only attempted after a very minimum of six to eight years of constant,



Figure 5.1. *Russian cavalry horse training exercise (Littauer 1934, frontispiece).*

daily schooling, through which the horse's physical and mental abilities are developed. In 1860, traveler Atkinson wrote that the Kyrgyz "possessed steeds on which they could fully depend; they were trained to carry their riders into battle, and by bounding give additional force to the uplifted axe, which, when thus wielded, no sabre can parry" (1860: 302-303). In these situations, the horse himself becomes a weapon. The movements themselves are not foreign to the horse, but using them to attack in this way are. Through all of the training process, the powerful horse, with his extreme prey instincts, must be reassured that he is safe doing what we ask of him. He must trust.

I will at this point suggest that the schooling of a horse to be ridden progresses on a continuum where mutual knowledge of the other moves from impersonal to interpersonal. As the potential danger of the action increases, rider and the horse must uniquely "know" each other at enhanced levels and be able to predict each others' responses. Schooling a horse to be reliable and responsive for riding in dangers will take many years of ongoing, daily interaction and can be seen, like human-human interpersonal relationships, to be distinguished by "uniqueness, irreplaceability and interdependence" (Adler *et al.* 2003: 14-15). The process can be seen to include all of the elements of an "interpersonal" relationship under the developmental view. We could model such communication as in Figure 5.2.

TRAINING OF THE HORSE

1.) Unresponsive-----> Responsive

2.) Driving--> Simple Riding--> Plain Usefulness --> Hunting, Battle
or Rugged Terrain

INTERPERSONAL COMMUNICATION

3.) Expenditure of Time and Effort

Little-----> Much

4.) Rules System

Societal-----> Relational

5.) Understanding of the Other

Describe -----> Explain -----> Predict

6.) Impersonal -----> Interpersonal

Figure 5.2. *The schooling of a horse and the development of interpersonal communication.*

Nonverbal Communication

I now turn to *how*, though a joint language, horses and humans can be seen to come together to develop relationships. As social animals, both humans and horses have the need to convey a variety of information within the social contexts of their respective communities. What differs is that people communicate using verbal and nonverbal messages, while horses use primarily nonverbal means. There are three central considerations to offer about nonverbal communication.

First, in the field of human communications, “language” is most often understood as *both* verbal *and* nonverbal messages. Nonverbal communication can be broadly defined as those messages sent through other than linguistic means, the goal of which—as with verbal language—is to “create shared meaning between a sender and a receiver” (Guerrero *et al.* 1999: 6). Nonverbal communication encompasses the full range of channels and media which do not include the spoken or written word but through which humans convey messages. These include both “presentational” elements, those which are experienced but often not visible archaeologically and which would include facets of daily life and ritual as enacted or performed, and “representational” elements, which can be correlated with some material

culture. Thus, nonverbal communication includes: body movement and appearance; the management of structures, objects and bodies within space; time issues; touch; color; and both two- and three-dimensional artifacts which may represent these aspects or convey their own meanings (DeVito 1993: 102-118, 1999: 141-160; Fiske 1990: 18; Verderber and Verderber 2002: 75-91).

Second, with very few exceptions, nonverbal communication serves primarily to convey elements of affect, relationship and intentionality, as opposed to non-relational, abstract concepts. One can, for instance, present nonverbally the messages “I am upset with you,” or “I am attracted to you,” or “That was a really stupid way to treat me.” But it is not possible to nonverbally express “I am in favor of legalizing marijuana,” or “This thesis is about...”.³ This is the case interspecifically as well. Discussing her interactions with her dog, primatologist Barbara Smuts (2008: 137, emphasis in original) notes, “If you ask what our interaction was about, the best answer is that it was about *us*.”

The third point is the importance of messages conveyed through nonverbal means for humans. Contrary to the prevailing Western notion which privileges verbal elements of communication as equated with mind brought out in the previous chapter, humans are *not* primarily linguistic animals, particularly in regard to social or relational information exchange—the stuff of everyday living. Studies have shown that more than half (60-65%) of “social meaning” is derived nonverbally (Guerrero et al. 1999: 4); and that “perceived attitude” is understood more by facial (55%) and vocal (38%) cues than verbal information (7%) (Mehrabian and Ferris 1967, in Knapp and Hall 2002: 380). Although mediated to some degree by context and personal differences, it is accepted that nonverbal messages are so important in conveying meaning that when verbal and nonverbal signals conflict we tend to believe the nonverbal (Knapp and Hall 2002: 15-16). An example of this would be someone stating “I didn’t do it,” while avoiding eye contact and shifting their body posture uncomfortably. We know, through a subconscious reading of the person’s nonverbal messages, that they indeed “did it.”

Both intra- and inter-specifically, humans and horses communicate nonverbally through body movement (kinesics), touch (haptics), proximity and place (proxemics) (Argent forthcoming). Nonverbal communication allows us to read the emotions of others. Ainslee and Ledbetter (1980: 67-81) have noted, and I have found this also, that the observant horsekeeper can come to recognize when a horse is happy, interested, eager, healthy, sharp, bereaved, frightened, bored, sour, angry, pained, sick or proud. People who live with horses talk about how they will proudly “show off” for photo sessions, and a recent study showed

³ I refer here to typical human communication. It is recognized that those who communicate nonverbally with ASL or other sign languages fall outside these descriptions.

that horses chose an attentive person over a non-attentive one, suggesting that “domestic horses are highly sensitive to human attentional cues, including gaze” (Proops and McComb 2010: 197). Because we recognize horses’ facial and bodily expressions as similar to ours, it is not so very difficult for people to read these things, which I invite the reader to attempt with Figure 5.3.



Figure 5.3. *Small-scale equine kinesics, Clipper, when called, left; large-scale equine kinesics, Mr. Clipper on the first day of snow, right.*

Because humans share with horses both social characteristics and nonverbal communication modalities, the two are able to come together through a co-created embodied language, potent in its ability to create relational meaning, and compelling in affective force. I now turn to how humans and horses use bodily movement, touch and space in moving together—intra- and inter-specifically.

Moving Together in Synchrony and Rhythm

Corporeal Synchrony in Humans and Horses

The ability of human infants to mimic adult nonverbal behaviors, *sychromemesis*, has been noted for some time as both pan-human and innate (e.g., Carpenter *et al.* 1998; Hall 1976, 1983; Metzoff and Moore 1983). The ability to synchronize continues through life. When talking, adults synchronize with each other the tempo and rhythms of their speech

patterns and nonverbal behaviors such as eye blinking (Hall 1976: 72-75; 1983: 177). People in interactions move together “in a kind of dance, but they are not aware of their synchronous movement and they do it without music or conscious orchestration. Being ‘in synch’ is itself a form of communication” (Hall 1976: 71). Some have also argued that other physiological processes may become synchronized, as with synchronized heartbeats between psychiatrist and patients (Byers 1977: 138). Synchronization extends beyond dyadic to group interactions: “church ceremonies, cheerleading at sport events, rock concerts, [and] dances” are examples of moving together in synchrony (Byers 1977: 137). When in-synch, “the players [constitute] a single, living, breathing body” (Hall 1983: 163); they “function, in part, as a single organism” (Byers 1977: 138).



Figure 5.4. Mares and foals moving in synchrony, clockwise from top: *Shavano Domino* and *CTR Shavana Reign* (photo: Cheryl Miller); *Angel Many Spots* and *Solar Flair Eclat* (photo: Garrit Hamstra); *SOS Cameo Comanche* and *ORA Sham Wow* (photo: Stefanie O'Dell).

Horses, too, have ability for intra-specific corporeal synchrony. Horses run flat out, over rough terrain, seemingly of one mind, distances between individuals maintained; no one is jostled or trampled.⁴ Beyond that, over the years I have noticed in horses the ability to move in exact synchrony with one another. Although this ability has been noted in dolphins (Fellner *et al.* 2006; Smuts 2008), it has not been explored as relates to horses. Figure 5.4 show foals moving accurately in foot-for-foot synchronization with their dams.

⁴ I have often wondered if this plays into the reason why wild herd animals, such as deer, who do not run into trees or off cliffs, are hit by cars. It is perhaps not that they lack focus or attention; it is difficult to miss a large, loud entity such as a moving vehicle. Is it, rather, that because they do not collide with *each other* it is not within their frame of reference that a thing in motion would collide with another thing in motion?

With humans, the *drive* to participate in synchronous movement with another being seems inherent, but *expertise* comes with practice, as with, for instance, infantry or marching bands. Perhaps these photos represent a dam-to-foal “lesson” in honing corporeal synchrony, the passing on of this vital cultural skill. The ability extends to horses working in tandem, where horses often fall into synchronous movement (Fig. 5.5). I have noted above that horses will turn their ears when attending to something. This photograph is particularly remarkable in that each of the horses is “listening” with his inner ear to the other, while the outer ears of both are attuned to the driver in the cart, making a full circle of focused, connected attention between the three.



Figure 5.5. Breton draft horses working in tandem, in synchrony (photo: Alain le Lagadec).

Horses also synchronize their movements directly with people. When walking or trotting together, horses will coordinate their movements with people in the same way they do with other horses, as shown in Figure 5.6 of two “in-hand” judging classes. To get a horse to trot when lunging (working from the ground with a long line connected to the horse’s halter or bridle), one stomps her feet in the cadence one wants the horse to take on. This ability translates to riding. Even though they are quadrupeds, the movement of our hips and seat when we ride mirror the horse’s leg movements; their walk is like our walk, their



Figure 5.6. Humans and horses moving in synchrony in in-hand judging classes. Above, Breton draft horse (photo: Alain le Lagadec); below, Stryker (photo: Mellanie Burkhardt).

trot like our jog, and their canter like our canter on two feet. Two axioms of the equine discipline of *dressage* are: “You must move to be still” and “You must walk to ride.” The former means that “the rider must allow for the horse’s motion to come through their bodies” (Kru-ger: n.d.: n.p.). The latter contains a paradox, which “refers to the rider’s ability to allow his body not only to move in unison with the horse, but to be able *to entice the horse to mirror his image*” (Kruger: n.d.: n.p., emphasis added). Within this mutual cross-species embodiment of movement, both rider and horse follow and lead, as in a dance (see Game 2001).

Further, as working riders are aware, and as noted above with regard to warhorses, some horses will synchronize their move-ments with clumsy humans in order to prevent harm to them. Working riders refer to these horses who adapt their movements to ineptly-riding humans to keep us on board, horses who “fill in for a person who lacks experience” (Dorrance and

Desmond 1999: 16), as “babysitters,” and such benevolent and attuned horses are highly valued.

An occasional public riding stable is lucky enough to own an old warrior that specializes in transporting kids. Let a small child shift its weight sideways in the saddle and the horse shifts its own to restore the youngster’s balance and prevent a fall (Ainslie and Ledbetter 1980: 61).

In other words, these horses see and understand the world from the human’s point of view, and accommodate them to take care of them.

Other Types of Synchrony between Horses and Humans

Horses have been shown to synchronize with humans in several other physiological ways. A study by (Keeling *et al.* 2009) measured the heart rates of humans and horses being ridden or led four times around an arena. Just prior to the fourth pass, the rider or leader was told that an assistant standing in the arena would open an umbrella as the horse went past, a situation which a horse would find startling. Both human and horse heart rates increased significantly between passes three and four, as the human anticipated the startling event of which the horses was unaware. “Thus the HR of the horse increased when the person ‘thought’ the horse might be frightened by the umbrella,” a point the authors take to relate to “unintentional signals” sent by the humans (Keeling *at al.* 2009: 70-71), which caused the horses’ heart rates to increase as the humans’ did.

It is an axiom among working riders that horses “mirror” the emotions of the humans interacting with them. Approach a horse in anger, fear or confidence, and you soon will find you are working with an angry, fearful or confident horse (cf. Brandt 2005: 12). It is often said that horses can “smell fear,” and it has been posited that the horse’s acute olfactory sense may be the reason they are understood to mirror human emotions. “[S]ince angry, frustrated, and emotionally upset humans release products in their sweat, it may be possible that unintentional olfactory messages can upset or anger the animal as well” (Saslow: 2002: 245). This, however, does not explain why horses will mirror positive emotions.

One recent study provides another possible explanation. In this study (Crews 2009), electroencephalograph (EEG) brain wave patterns were simultaneously recorded of three human and two horse participants. The humans consisted of two college-aged human subjects—one female who was fearful of horses, and one male with minimal horse experience—and a 49-year-old female horse trainer noted for her ability to connect with horses. All three humans were tested with an unfamiliar horse, Magic. The horse trainer was also tested with a horse of hers, Diamond, whom she had schooled for eight years (Crews 2009:

6-7). Individual EEGs were collected at: (1) baseline, (2) with the human standing next to the horse, (3) with the human petting the horse, (4) with the human grooming the horse, and (5) with the human sitting on the horse. Additional data were collected (6) when the trainer rode the familiar and unfamiliar horses (Crews 2009: 8).

The mapped brainwave patterns—indicative in humans of different mental states—became more similar with increasing interaction, suggesting that the horse and human became more synchronized (Figs. 5.7 and 5.8).

With all four tested

humans, as the level of interaction increased, the level of brainwave pattern synchronization with the horse increased, with “horse grooming” and “horse sitting” of the unridden horses creating “the most synchronized state between the horse and the rider” (Crews 2009: 10). Further, the trainer, who also rode the two horses, had greater synchronization with her familiar horse than with Magic, supporting that synchronization is greater when the horse and human have bonded. The researcher concludes, “So the question of whether a horse ‘mirrors’ the emotions of a human may be more accurately described as ‘synchronizes’ with the state of the human” (Crews 2009: 11). This is not absolutely correct. In viewing

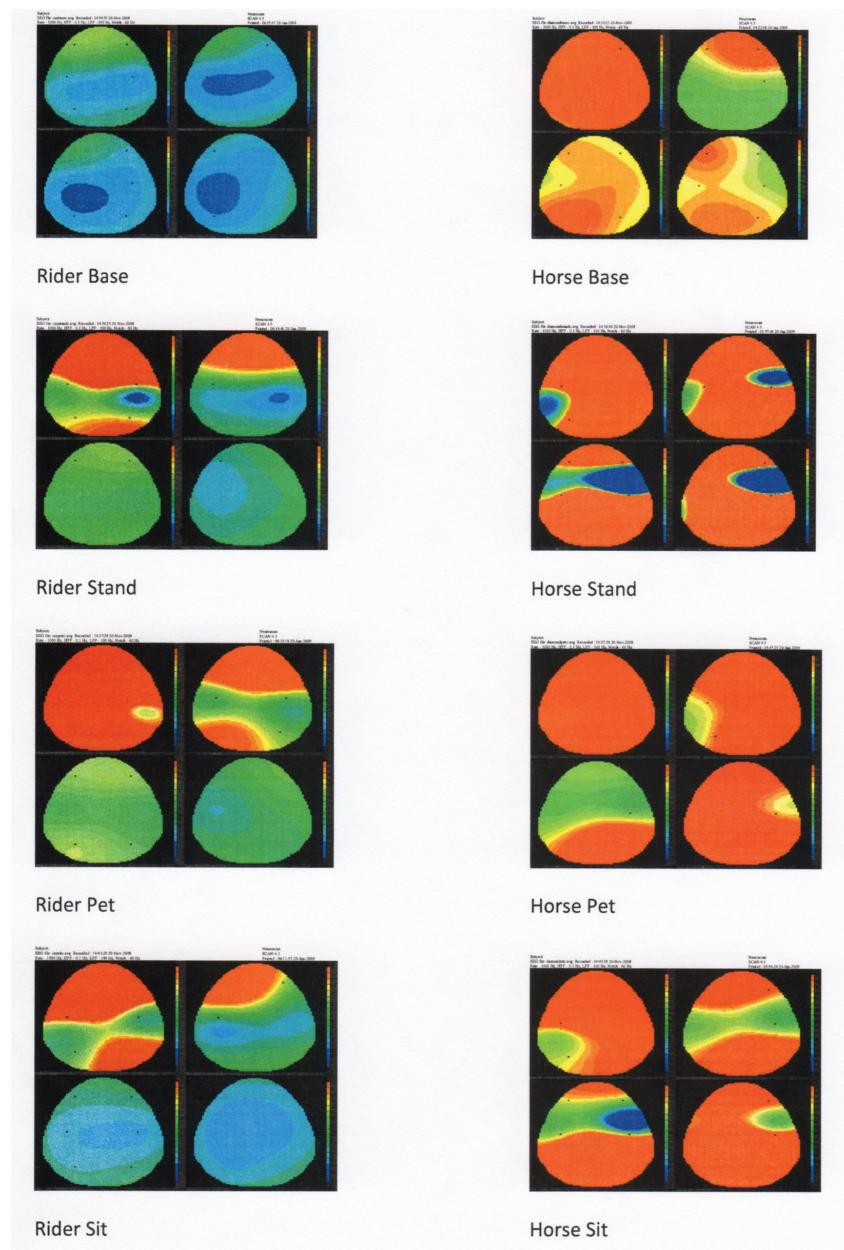


Figure 5.7. *Brainwave map of college male and Magic (Crews 2009, fig. 3).*

these brainwaves maps, particularly the trainer's and her horse's (Fig. 5.8), it can be seen that the synchronization of each trends toward the other, and that the human actually more “mirrors” the state of the horse.

The importance of cooperation to horses is manifestly embodied in their ability to synchronize movement with an “other” better than human can do. While some people appear to retain from infancy the facility to move with others harmoniously, often it seems lost. This should be evident by observing at any nightclub the percentage of dancers who simply cannot keep a beat, or though examples of human corporeal pattern synchrony—such as infantry or marching bands—

which require determined and lengthy practice to do right. With these points in mind, I suggest that the equine ease—and human difficulty—with the ability to move together in corporeal synchrony is tied to a higher degree of nonverbal awareness and other-attune-

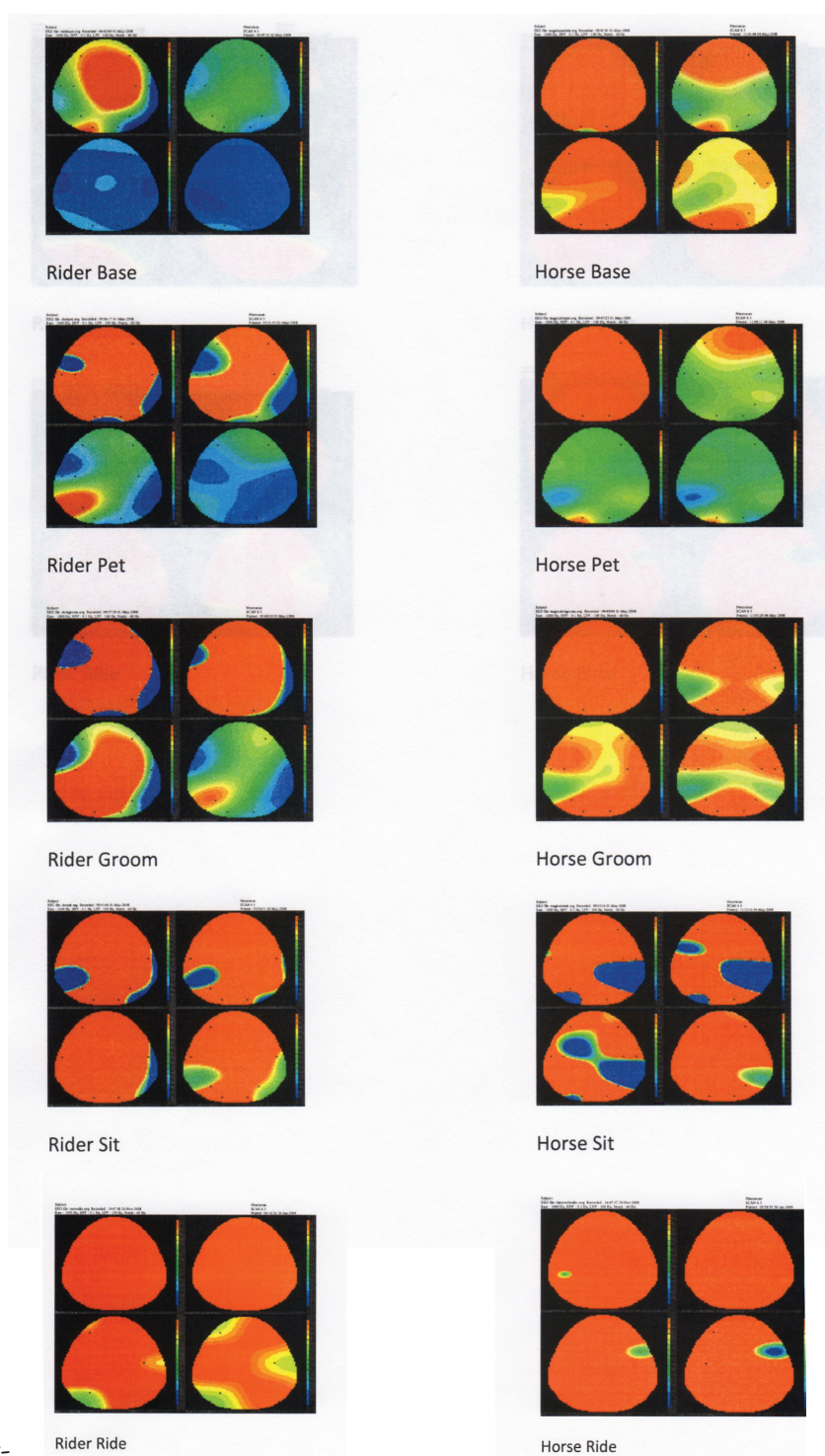


Figure 5.8. Brainwave map of the trainer and Diamond (Crews 2009, fig. 5).

ment, or empathic intelligence, in horses than that of which most humans are capable.

We might now return to the questions presented at the beginning of this chapter with some partial answers. Riders report that horses seem to intuit their requests because what is extrasensory for us is not for horses—particularly with regard to their superior tactile sensitivity. Here, “the seeming ability of a well-trained horse to ‘have ESP’ for its rider’s intentions, may be instead its response to slight movements or tightenings of muscles that the rider makes without awareness” (Saslow 2002: 215). Removed from the dangers of predation, domesticated horses have honed the “ability to pick up non-verbal cues so slight as to be indiscernible to most humans” (Sharpe 2005: 193). Thus it is likely “in fact the horses’ remarkable ability to read *bodies* that enables it to predict human behaviour so accurately” (Sharpe 2005: 212), allowing humans to feel they had not even conveyed their requests before they were answered by the horse.

These explanations, however, might not have been considered by Pazyryk horse riders who, like the people in this chapter’s preface, might well have felt their horses were attuned to them at an extrasensory or supernatural level. Coupled with their recognition of horses’ superior sensory abilities, this capacity of horses to pick up on, and respond to, unrecognized (by humans) nonverbal messages and move together synchronously may well have factored into meanings they generated from such interspecific corporeal harmony, a point to which I later return.

Social Needs in Humans and Horses

In terms of meanings and understandings ascribed to the horse by the Pazyryk people, it is tempting to stop my investigations here. But given the human-animal studies approach I have chosen, and my concerns with the social aspects of the horse in Pazyryk culture, I would like to think about how the points brought out to here might be applied to other models of human-animal interactions and relationships.

In O’Connor’s (1997) biological model, under the domination/exploitation paradigm, the horse-human relationship is seen as one of contramensalism, to the benefit of humans and detriment of horses. In light of the above, we might now view the ridden horse-human relationship as one of commensalism, to the benefit of humans and with no detriment to the horses. It is also possible to suggest that pastoral horse populations like those of the Pazyryks benefited from human protection from predation, the provision of food, and perhaps medical attention, thus qualifying as mutualistic. O’Connor’s model, however, addresses the question of relationship only at the broad, species-to-species level. I would like to look beneath this level, beneath the vast functional advantages horses have offered to societies which have figured out how to harness their power and unique set of attributes. In order to direct that power to human advantage, the nature of the horse encourages a

relationship that goes beyond the functional, to the individual. I suggest that in light of the above discussion regarding human-equine communication as viewed through the relational model presented, the relationship between the ridden horse and rider might be seen to be mutualistic for other reasons, reasons concerning the nature of the con-specific relationship, and the manner of relating.

Investigating the nature of human-horse relationships using a human-animal studies approach requires viewing the horse as “a more or less equal partner in a relationship” (Shapiro 2008: 14), as a sentient being with agential qualities. To focus this analysis, I return to Schutz’s (1966) three motivations that drive interpersonal social interactions: control, affection and inclusion, and ask: To what degree can the social motivations for control, affection and inclusion be seen, for individuals of each social species, to be met in an interspecific context?

Affection and Physicality

Affection may be the simplest of these three aspects to describe. Numerous studies have found that human-animal interaction have positive, stress-relieving results for humans—among them lower blood pressure, increasing self-esteem, developing humane attitudes in children, and reducing the need for medical care in the elderly (Bekoff 2007: 15; Walsh 2009).

Horses’ heart rates and cortisol levels lower when they groom each other, reducing social tension (Dierendonck and Goodwin 2006: 30-31). Horses benefit from positive interactions with humans as well, with decreased heart rates reported in numerous studies following various forms of positive contact with humans (Hama *et al.* 1996; Mills and McNicholas 2005: 167; Normando *et al.* 2002). The grooming of horses by humans has a calming effect on them and promotes “deep rapport, intimacy, and mutual understanding” (Yorke *et al.* 2008: 19). For horses:

[mutual] grooming has become an end in itself, a gesture of ‘belonging’ and a symbol of the bond between the equine companions. Because of this, the grooming of horses by their human owners has a vital significance.... In the horse’s mind, [this is] an indication that its human companion is a close friend (Morris 1988: 56).

Riding a horse, moving synchronously with a horse, utilizes kinesic, haptic and proxemic modes of communication, all potent in affective charge for both horse and human. For each species, ridden horses and riders are in the zone of intimate space, which is reserved in both species for friends and lovers. In intimate space “... the presence of the other person is unmistakable.... sight (often distorted), olfaction, heat from the other person’s body, sound,

smell, and feel of breath all combine to signal unmistakable involvement with another body” (Hall 1966:116). Touching enables the formation of emotional bonds between humans and animals (Konicki 2008). Thus, being together in such a direct, physical sense can meet affectional needs for human and horses.

Control and Hierarchy

People want and need to know that they have the ability to influence their lives and social environments. Here, Schutz’s category of “control” is more nuanced than merely controlling the behavior of others. It also includes the need to “establish and maintain a feeling of mutual respect for the competence” of others, and the “need to feel that one is a competent, responsible person” (Schutz 1966: 18-20).

There are several misconceptions about the nature of control in human-horse interactions. First, it is often held that humans insert themselves into the horses’ hierarchical social structure in order to dictate their actions. We read, for example, statements like the following: “The well established dominance hierarchy inherent in equine social order may explain how ‘a cavalry charge can be held together with very little effort by the human rider or driver who assumes the position of the stallion’” (Lawrence 1989: 327 citing Clutton-Brock 1981: 86).

Lawrence and Clutton-Brock are wrong for several reasons. In the first place, it is not the stallion, but a lead mare who takes the band out of danger. Secondly, the band follows not because the mare has intimidated them into prior submission, but because that is her negotiated role within the band and because *they trust her* to act in the best interests of the group. This misconception reflects the belief that, physical differences aside, horses perceive humans as similar—or similar enough—to allow them into a rigidly perceived, linear, social hierarchy. To do this underestimates horses’ ability to operate within the nuances of the contextuality of social roles I have outlined above. It is reductionist to state that they view us as “more important” horses. “There is no evidence that horses perceive us as ‘honorary horses,’ or that we can insert ourselves into their social organization” (Goodwin *et al.* 2009: 7).

This is not to imply that hierarchical considerations are insignificant in human-horse relations. Because horse society includes contextual roles, some of which deal with hierarchical issues, in some instances the horse is “more comfortable... with a competent leader in charge” (Lamb 2008: 47). One of the Dorrance-Hunt principles is, “Be as gentle as possible and as firm as necessary” (Lamb 2008: 47). These are difficult and subtle concepts to convey, and often are misunderstood to imply that violence is needed. The key to gaining it is mutuality, not domination. “Horses get so that they’ll do anything they can for you, but [only if] they know that you will for them too” (Hunt and Hunt 1978: 39). When horses understand this of a human, being “as firm as necessary” can be as subtle as a discrete

sidelong glance, along the lines of what one might give a friend overstepping propriety at a party.

A second misconception is that in coming together with humans, “the natural instinct of a horse having to carry a rider on its back is to misbehave” (Drews 2004: 75). This is not the case. Within horse society, “interaction with one another is based, not on domination or even confrontation, but on cooperation and approval-seeking” (Sharpe 2005: 197). Horses bring this to human-horse interactions. They are inherently cooperative, and they “can sense what a person wants them to do and will try to understand a person’s intent” (Dorrance and Desmond 1999: 1). Thus, the natural “instinct” of the horse is not to misbehave, but to move and relate in synchrony and harmony, whether with other horses or with humans. Horses are driven to co-operate, to operate pro-socially together within a complex, contextual, negotiated, multi-focal society.

With regard to “need to feel that one is a competent, responsible person” (Schutz 1966: 20), certainly interactions with horses can contribute to feelings of competency for humans, as evidenced through horse shows and other human-horse competitions. Hearne posits that horses, too, care about being good at what they do. She states, and this resonates with my experience, that horses are concerned with “beauty, precision, [and] perfection of performance” (2007: 157). “Thus the very fact, the very possibility, of Grand Prix riding, both jumping and dressage, is our discovery in the horse of a capacity for meaning a movement or series of movements artistically” (Hearne 2007: 162). Moving together is *the way* they belong with each other, and doing it synchronously is important to them. Horses who have been well and gently socialized to participate in joint action with a rider seem to want to, and try very hard to, get the synchronous movements “right.” When they do,

riders report that their horses enjoy those moments too, that they also seem ‘proud’ or pleased with their performance. ... [It seems] that experiencing this floating harmony, which is so difficult to achieve, addresses a capability and pleasure-reward in both human and non-human partners (Evans and Franklin 2009: 176).

Therefore, humans and horses can meet each others’ needs for control, as the term is defined by Schutz (1966: 18-20).

Inclusion and Entrainment

The human motivation for inclusion incorporates “the need to establish and maintain a feeling of mutual interest with other people” (Schutz 1966: 18). One way the human need for inclusion is met is through embodied synchronous action with others. Such embodied synchronous action often leads to entrainment, “the process that occurs when two or more

people become engaged in each other's rhythms, when they synchronize" (Hall 1983: 177). While synchrony "is the manifest observable phenomena; entrainment refers to the internal processes that make this possible, i.e., the two nervous systems 'drive each other'" (Hall 1983: 225, n.1).

Although entrainment certainly can yield destructive and nefarious results (e.g., Canetti 1960), my concern here is with how it might be seen to function positively, in the horse-rider context. Mithen (2006: 25) notes that bodily entrainment occurs when we automatically begin tapping our fingers and toes or swaying our bodies while listening to music. Most religious rituals use music or dance, and thus the process of rhythmic synchronous entrainment, to enhance the experience (McNeill 1995: 67). Shamanic ritual, as well, uses entrainment wherein the shaman uses synchronized rhythmic devices to bring both observers and patient into the same state of altered consciousness (Byers 1977: 137). In other words, we become in-synch with other beings *through* entraining with some action of rhythmic, synchronous movement such as music, dance, sports activities, and religious and public rituals.

In many instances, such as those relating to dance, music and other performative contexts, entrainment is pleasurable (see Bond and Stinson 2000-2001; Sheets-Johnstone 2002). There is something about moving together that powerfully calls out to us. Military leaders well know that moving together in rhythm encourages emotional bonding, facilitating a sense of boundary loss, shared identity, and feelings of oneness with something larger than ourselves (McNeill 1995: 8). As Byers has noted in the epigraph to this chapter, "Armies do not march in step for exercise" (1977: 137). Describing his basic training experience in the U.S. Army, historian William McNeill—who explored the effects of "muscular bonding" when humans move together purposefully (1995: 151)—noted that "marching aimlessly" produced in him:

... a sense of pervasive well-being... more specifically, a strange sense of personal enlargement; a sort of swelling out, becoming bigger than life, thanks to participation in collective ritual.... Moving briskly together and keeping in time was enough to make us feel good about ourselves, satisfied to be moving together, and vaguely pleased with the world at large (1995: 2).

At both dyadic and group levels, entrainment fosters rapport. Rapport is experienced when people feel they have "clicked" with each other, emerges from each during interactions, and concerns three interrelating components: mutual attentiveness, positivity and coordination (Tickle-Degnen and Rosenthal 1990: 285-286). The coordination correlates are "those behaviors that signal that the participants are 'with' one another, functioning as a

coordinated unit, such as postural mirroring and interactional synchrony” (Tickle-Degne, and Rosenthal 1990: 290). Through the process of entrainment, manifested in synchronous movement, we transcend our senses of individual selves; we are still “there” but our identities expand outside of our boundaries. When we entrain, our bubbles of space and our experience encompass more than our senses alone allow; we are both giving and receiving identity to something larger. This experience of boundary loss in social synchrony is “the deeply felt, yet often unspoken experiences of being *of* a group.... [which moves] *beyond felt resemblances to experienced fact of social connections and unity*” (Turino 1999: 241, emphasis in original). We *become* a part of the larger event. It is no longer the doing, but the being, the belonging, that is important. Here, the medium is indeed the message: moving together in embodied synchrony produces its own results.

Might something of the same be said about horses? Those who subscribe to the domination paradigm would answer my proposal regarding horses’ finding pleasure in corporeal synchrony in the negative. Like George Herbert Mead in the epigraph to this chapter, McNeill also posits that animals moving together in herds, flocks or schools does not constitute the same level of meaning as does human dance, because they do not keep a regular beat (1995: 183, n. 22; but see Kroll 1981; Lawrence 1985; LeGuin 2005). I disagree with both Mead and McNeil. Contrary to Mead, movement, for the horse, does “determine that life throughout” (1967: 239). As social animals who are also prey, moving together with others is vital to every aspect of their social lives, throughout their lives.

Equine researcher Kiley-Worthington notes that horses seem to “take pleasure in various group movements that they do with other equines, but also with humans” (Kiley-Worthington 2005: 211). If we allow for social agency in horses, it is possible to propose that entrainment with each other—and perhaps with us—through shared purpose and joint action might constitute for them “being a part of something larger than themselves.” It is perhaps in this that the success of a cavalry charge lies, rather than in hierarchical considerations: horses feel a part of the human-horse joint project at hand, whatever that may be, and participate as they can.

It is perhaps this entrainment—this bodily- and synchrony-induced sensation of boundary loss—that more fully answers the question as to why informants and primary writers alike describe their interactions with horses as generally transcendent, spiritual and metaphorical, and as allowing connection with something larger than themselves (Brown 2007: 336; also Birke and Parisi 1999: 64; Game 2001: 8-9; Sharpe 2005: 212).

This assessment of the possibility of horses and humans meeting each others’ needs for affection, control and inclusion suggests that the nature of the con-specific rider-horse relationship can be seen to meet those needs, to greater or lesser degree, for the humans so involved. While the ability of humans to meet these needs for horses remains speculative,

horses' sociality, the nature of their communication and interactions with each other, and the behaviors they exhibit when interacting with humans would seem to indicate that the relationship is also rewarding for them. In light of this the human-horse relationship—not as it always is but as it *can be*—could be considered to be mutualistic at an individual, psychological level.

How might these aspects have manifested to generate meaning in Pazyryk horse-human relations? Data from Pazyryk clearly demonstrates the horses were well groomed, their manes and tails were clipped, and they were complexly costumed. Their outfits were well used and mended indicating that such affection-inducing grooming was commonplace. Their saddles, as I shall discuss in the following chapter, are flimsy and provide much more bodily contact than any saddles used today, placing the horse and rider in very direct physical contact. From these points, within the Pazyryk horse culture, human-horse relationships at some level may have met affectional needs for both. Moreover, as I shall discuss in the following chapter, the functional aspects of the horse equipment—bridles, bits and saddles—shows they were not designed as painful devices for demanding acquiescence and submission. Rather, they were designed for communication, with an understanding of the effects they would have had on the horse. I have noted that the florescence of Pazyryk bit-making shows that they were keen observers of equine psychology, and as such they would probably have figured out that mutual respect between horse and rider is safer and garners more cooperation than harsh devices or methods. In dressing them the way they did it appears the Pazyryk people took pride in their horses, and probably in their own competence and abilities as riders as well. If it is so that horses care about doing things well, and enjoyed doing them with people, then the criteria set out by Schutz regarding control, affection and inclusion issues can be seen to be met for both humans and horses within the Pazyryk community.

The sensory aspects of riding may have contributed to both Pazyryk and current understandings of the horse. Sensory archaeologies concern how the senses phenomenologically form “categories of perception” (Woodward 2000: 128; see also Goldhahn 2002; Lymer 2009; Watson 2001; Witmore 2006), and have been used to explore the recursive inter-relatedness of humans and their spaces (e.g., Edmonds 1999; Hodder 2000; Tilley 1994, 1996, 2008). The experiential aspects of riding a horse can be viewed and explored similarly, not only as a tangible space, “a *spatiality of position*,” but also as “a *spatiality of situation*” (Merleau-Ponty 1962: 115, emphasis in original). Applied to the riding of horses, a sensory archaeology could approach (at least) three angles, each tied up with the others: the *patterns* horse and rider actively create and follow within the landscape, the *psychological* aspects of the human-horse relationship as it is embodied; and the actual *sensory* experience of horse riding. Of this latter concept, we can ask: How might the sensory aspects of riding have

contributed to Pazyryk understandings of “horseness” (cf. Conkey 2001: 277), or “horseness-humanness”?

The human’s perceptual world is enhanced when riding a horse. To experience riding a horse, full out toward an unfenced horizon, all the senses are engaged. The tympanic rhythm of the hoofbeats reverberates through both bodies and marks time in a different manner (Lawrence 1985), temporality is altered as more ground is covered more quickly (Hall 1983: 39-40; Lawrence 1984: 147). Riding grants us speed (Dietz 2003) beyond that which we alone are capable, fostering a burst of adrenaline which further heightens the entire sensory experience. Although today we are inured to rapid travel, for the Pazyryk riders this was speed they could experience no other way. When riding a horse at speed, one doesn’t so much feel the wind as confront it. Even on a calm day one creates wind. Heat, sweat and breath are exchanged as each borrows the other’s stronger senses and abilities, and the gentle swaying is hypnotic and lulling. The added height creates a more expansive view of the world, and one is in a position closer to the heavens. As put by Kazakh historian T.H. Gabitov (2001), “The man that saddles a horse realizes that he is beginning to be released, that his will-power increases and that he is closer to the Cosmos.”

While many of these factors can be seen as functionally advantageous, the sensory engagement of riding also promotes at the least an altered state of corporeality, and perhaps also an altered state of consciousness, heightening the sense of connectedness between horse and human, and the entrainment with the shared action. Considering that the human-animal boundary might have been perceived as more porous and permeable than it widely is today, for the Pazyryk people the entrainment fostered by corporeal synchrony may well have taken on a different and perhaps even more compelling quality, funding similar beliefs that carried over into deeper meanings.

Bonding between Humans and Horses

I will end this chapter by touching upon the bonds that can and do form between humans and their horses. It is clear that humans report intense connections with their horses that indicate they are powerfully bonded to them. An anthropocentric analysis would stop here. But I would like to also venture that these factors can be seen from the horse’s side: that humans can figure in horses’ lives in similar ways. I have noted that intra-specifically horses form intense bonds with each other and that horses will have only one or two close preferred partners in their lives (Fey 2005: 86). Further, for horses “[p]referred attachment ... [appears] not only between dam and foal, but also among peers of all ages, genders and *between species*” (Dierendonck and Goodwin 2006: 30 my emphasis) (Fig. 5.9).

Because horses maintain complex roles and statuses within their own communities it is not unlikely that they ascribe meanings to their interactions with humans, and roles to



Figure 5.9. Above, horse and sheep friends; below, horse and cat friends (photos: non-attributed email pass-alongs).

those they deal with. Based upon my experience living with them, I will surmise that a horse can perceive a person as a non-entity, a helper, a bully, a teacher, an enemy to be attacked, a playmate, a weaker being in need of protection, a casual acquaintance, or a friend. They may also see us as one of the only one or two bonded life-partners they will have in their lives. Working riders refer to a horse who chooses a human in this way as a “one-person” horse, or a “horse of a lifetime,” reflecting this bond.

Further, horses understand the concept of belonging. They belong to families, friends, bands and herds—their communities. They can choose to belong to particular people as their “human of a lifetime.” Lawrence (1989: 326) has noted that “the merging of bodies and of wills between mount and rider provides a complementarity leading to bonding of a different order from that of

other human-animal relationships.” When the bond is between two social beings who have chosen each other in this way, it is manifestly heightened.

With such a bond, Hearne (1997: 149) posits that horses can show a “protective, possessive attitude toward the rider” which would motivate them in battle to “think well and bravely.” Certainly folklore and history provide many examples of horses choosing to act to save their human partners—fending off their natural predators attacking their humans, taking the war wounded to safety before collapsing of their own battle injuries (Bunting 1997:

54-57), overcoming their own fears to contribute to the joint project at hand as a part of a human-horse partnership. Ancient authors refer to precisely such a bond between Alexander the Great, and his horse-companion, Bucephalus (Schwabe 1994: 50). Before meeting Alexander, Bucephalus was considered fierce and unmanageable, allowing no one to ride him. Through Alexander's understanding of him, as an individual, he became a valued battle partner, a horse of a lifetime. Bucephalus died in battle after sustaining multiple spear wounds:

... but though at the point of death, and almost drained of blood, he turned, carried the king with a bold dash from the very midst of the foe, and then and there fell down, breathing his last tranquilly now that his master was safe, and as comforted by it as if he had had the feelings of a human being (Morgan, in Xenophon 2002: 105).

There are several ways to interpret this narrative. The conventional view might consider that the tellers of this tale merely witnessed an event, and anthropomorphized Bucephalus' actions. Looking deeper into this anecdote, within the context of its telling it is apparent that it was written by and told to people who *believed* that horses possessed not only the agency to act, but also courage and altruism.⁵ From a strictly behavioristic, ethological perspective, it could be said that within an equine band the "lead" individual's responsibility is to assess any dangerous situation, and take the others away from danger. Conversely and considering the relational model I have proposed, Bucephalus' actions could be explained as one bonded friend—using his own agency, mind and body—taking care of the man with whom he comprehended himself to *belong* the best way he understood. Working riders who possess the sensitivity to allow for such things will recognize this as a powerful story, which transcends time and culture, of a horse who indeed thought "well and bravely." People who live with horses understand that "the movie that depicts a horse's resourceful concern for the well-being of its injured master is, for a change, quite accurate" (Ainslee and Ledbetter 1980: 64), because they have received such concern. Perhaps Pazyryk individuals also witnessed such actions by their horses, and conceived of them similarly. If so, they—like the tellers of Bucephalus' tale, the authors of the Kyrgyz (Köçümkulkizi 2007) and Türkic (Esin 1965) epics, and working riders today—may have created similar narratives about particular horses who went above and beyond the call of duty to act in the best interests of their riders, a point to which I return in Chapter 7.

This is not to discount that horses have been exploited, for they most certainly have been and continue to be (Bunting 1997). Even under this relational model, ultimately decisions are made by humans through which they utilize the horse's speed, strength and sensory

⁵ For altruism and morality in animals, see Bekoff and Pierce 2009; de Waal 1996.

abilities for solely human purposes, and which may put the horse in imminent danger or cause long-term injury. However, I suggest that one cannot even get to the place where one asks these things of a horse without a cooperative mindset, and that through the process of schooling for such “work,” (joint action which may be constructed quite differently by horses) both become interdependent through paybacks, reward circuits and feedback loops which exceed any simplistic cost-benefit analysis of functional or evolutionary expediency. Rather, such rewards rest on our shared social needs for control, inclusion and affection, and on consensual, cooperative partnerships of both mutual usefulness and affection between individuals. I suggest that while the work we might ask from ridden horses ultimately might be considered exploitive, the *relationship* that must occur between horses and humans for this to happen is itself dynamic, complex, mutual, co-created and bi-directionally cooperative. Further, this relationship both precedes and carries through any ultimate actions we may ask them to carry out. In this relationship, the horse participates not as an object but as an agent. In this shared social landscape, bi-directional communication is the thread that stitches needs, actions and beings together into a relational, interspecies whole.

When the focus is solely upon issues of domination and hierarchy, we miss entirely the part of the social picture in which horses are cooperative and effective communicators, with each other and with humans. It is worth noting that the secret “horseman’s word,” said to convey powers over horses when whispered in their ears, was “both in one” (Evans 2008: 246), reflecting the harmonious partnership that can occur between the two when both approach the interaction cooperatively. Perhaps indeed there is a power to the words, although it is not mystical at all. It is not unreasonable to suggest—given horses’ acute ability to read intentions and innate desire to cooperate—that, if communicated to horses honestly, they might choose to answer the humans who approach them in this manner with like intent.

Conclusion and Implications

In this chapter I have discussed that as social animals the manner through which horses communicate can be accommodated in large degree by models of human nonverbal communication, and that this mode of interaction is the means through which relationships are developed and maintained. I have argued that the nature of the relationship between the horse and the rider deepens through instruction in much the same way that human interpersonal relationships develop. Rather than considerations of what we do not share with horses—their perceived deficits in verbal and cognitive capabilities—my view has been toward exploring the social and communicative aspects we do share with them and how, when combined with our differences, these manifest beneficially for both when individuals of the two species come together. I have discussed notions of corporeal synchrony, entrainment, and boundary loss that might be seen to function similarly for both humans and horses, as

social actors, and how such interactions can lead to intense bonding and mutual care and concern.

In doing this, I have shown what the human-horse relationship *can* be, with an understanding of horses “as such.” I now return to the Pazyryk human-horse burials to investigate both what archaeologically visible materials from funerary contexts can reveal about the nature of the historically specific rapport between the Pazyryk people and their horses, and also how viewing the data with an expanded knowledge base about horses and horse-human interactions provide fresher understandings of relationships in the past.

CHAPTER SIX

DO THE CLOTHES MAKE THE HORSE? ROLES, STATUSES AND IDENTITIES IN THE PAZYRYK WORLD

Clothes make the man. Naked people have
little or no influence on society.

—Mark Twain

He held up the bridle in front of my face.
Do you know what that means? He asked quietly.
Yes, I said, the mare's been taken away.

—John Berger (1996: 103)

Introduction

In the preceding chapter, I stepped outside of the objectivist-functionalist models traditionally applied to horse-human relationships and explored the potentialities of the embodied relationships humans can have with horses. In this chapter, I investigate how the horse-human relationship might have been constructed with the Pazyryk burials, and what that reveals about the nature of the historically specific relationships they may have had with them. I further discuss how that actual, embodied interspecific relationship may have acted recursively on aspects of Pazyryk identities, social structures and cosmological beliefs, which are then materialized in various other forms of media.

As Berger's comment above makes clear, horse trappings are not only functional objects, they are also both material and symbolic representations of the connections between horses and humans. Particular pieces of horse equipment through their design touch the bodies of both human and horse simultaneously and impact the way each feels the life force of the other. They are nodes of contact, points of interaction, where their movement and placement are key to the ways messages are conveyed back and forth.

Beyond the functional aspects of the horse equipment, the Pazyryk culture depicted a variety of animals in interesting and unique ways, but it is not the purpose here to analyze the entire Pazyryk bestiary. Nor do I attempt to describe all of the finds from the Pazyryk kurgans; this listing was accomplished by Gryaznov (1950) for Pazyryk 1, and Rudenko (1970) for the collection of kurgans in the valley (summarized in Appendix 1). Rather, my concern

is specific to the horse-human interface as materialized through “clothing” which “can be described as part of the total structure of personal appearance which includes hairstyles, ornaments, masks, decorations and mutilations” (Kuper 1973: 348). I include in this category the horses’ tack and outfits which, like other aspects of (human) clothing, may be considered “instrumentally”—functionally, as they are used—or symbolically (Campbell 1996: 95-95).

In order to treat these topics in appropriate depth, I limit my analysis to four aspects of the burial assemblages: (1) the functional characteristics of the horse equipment; (2) the structure and decoration of the outfits which adorned the horses¹; (3) representations of humans and horses within the funerary context; and (4) iconography of other animals adorning humans and horses. For the first dataset I describe, analyze and interpret the functional aspects of Pazyryk horse equipment, across the Pazyryk culture. For the second dataset I focus more closely on the outfits of the ten horses interred in Pazyryk 1, drawing upon significant finds in other kurgans for comparison. For the remaining two categories of information, I look broadly at various Pazyryk-era burials, and broaden the field of my inquiry into a discussion about the implications of my findings to Pazyryk-era burials in general.

Functional Aspects of the Pazyryk Horse Equipment

I begin by exploring what the functional aspects of the Pazyryk horse equipment—the saddles, bridles and bits—reveal about how the horses were handled and ridden. Although I have argued it is not sensible to do so, there is no doubt that the horse equipment mentioned by Ingold (2000: 73) can be used severely, as tools of force. The questions that then arise are: Are they always used to coerce and intimidate through pain? Would they have been employed in such a brutal manner by the Pazyryk community? What does the Pazyryk horse equipment reveal about the actual nature of the relationships these people had with these horses?

Pazyryk Saddles

The Pazyryk saddles, bridles and bits are all of consistent design. The saddles have two wooden bows front and back for support (Fig. 6.1A) and a seat of joined leather cushions stuffed with hair or grass (Fig. 6.1B). The saddle is secured to the horse with wide leather girth strap which ties on each side to a similarly wide strap attached to the saddle (Fig. 6.1C). Each saddle has a breastplate (Fig. 6.1D), which keeps the saddle from sliding backwards upon acceleration or going uphill. These consist of a horizontal leather strip which ex-

¹ A version of this portion of the chapter has been published elsewhere (Argent 2010).

tends around the front of the horse, attached to a band stitched to the saddle on each side. About halfway between the saddle and the front of the horse, vertical strips of leather on each side are permanently fastened to the breastplate, and tie at the base of the horse's neck, stabilizing the breastplate horizontally. (On all of the kurgan 1 saddles, at these junctures and at the very front of the breastplate, special decorations—larger, or somehow different from the others—were placed.) The crupper strap (Fig. 6.1E) attaches permanently to two places at the rear of the saddle and runs behind the back of the horse's hind legs, and serves to keep the saddle from sliding forward when decelerating or going downhill. The purpose of the three hanging elements (6.1F) which Gryaznov (1950: 11) termed “trichatkas” is unclear, but the fourth leather cords (Fig. 6.1G) have three buttonholes with a button made of a stick at the end, and are believed to have been for tying up items for carrying when riding which (Gryaznov 1950: 57).

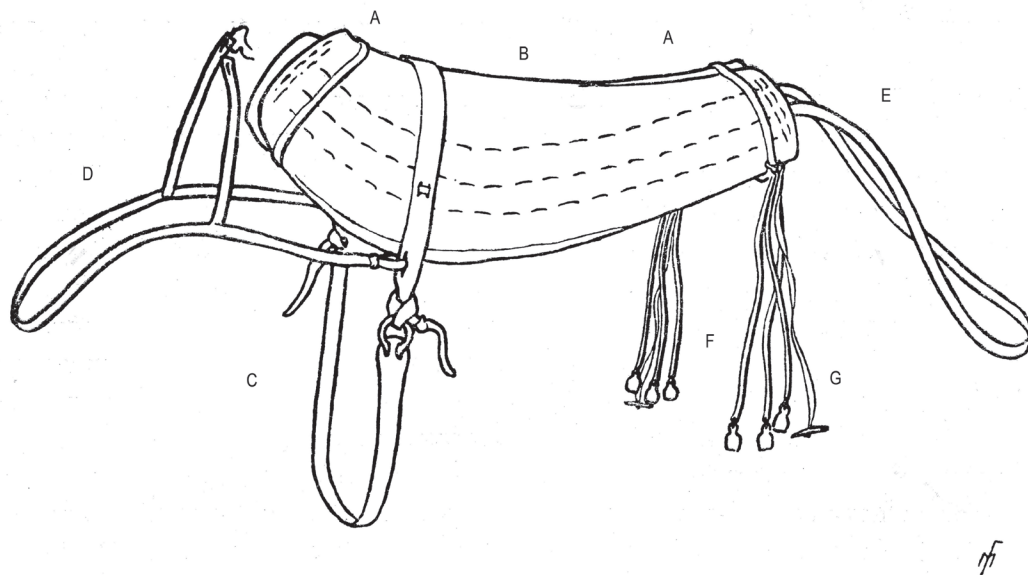


Figure 6.1. *Pazyryk saddle structure: A—placement of structural wooden bows (within the pad); B—seat; C—girth strap; D—breastplate; E—crupper strap; F—“trichatkas” of unknown purpose; G—leather strip for tying things (after Gryaznov 1950, fig. 22).*

The saddles were topped with felt or leather saddle covers which are decorated with leather, wood, felt, fur, horse-hair and metal. Figure 6.2 provides an example of a saddle cover. While the saddle construction is consistent, the decorations vary widely, and are discussed below.



Figure 6.2. Saddle cover from Pazyryk 1 showing a predator-prey scene on the seat, and six hanging pendants as downturned argali heads, with horse hair attached, horse #3 Gryaznov, #2 Rudenko.²

Pazyryk Bridles

Structurally the bridles consist of a headstall which goes behind the ears at the top, a noseband, and a throatlatch. As can be seen, the bridles fastened on the horses' left sides (Fig. 6.3). This indicates that the horses were handled and mounted from the

left, a point to which I shall return. They are made of thin (1 -1.6 cm wide) leather strips. They are consistent in most ways—but that the ties are now buckles—with basic bridles as used today. One significant difference, however, is that the headstall splits near the bit end, and is connected to cheekpieces, or *psalia*, upon which the bit rings ride. In most cases the split ends of the headstall are wooden, as

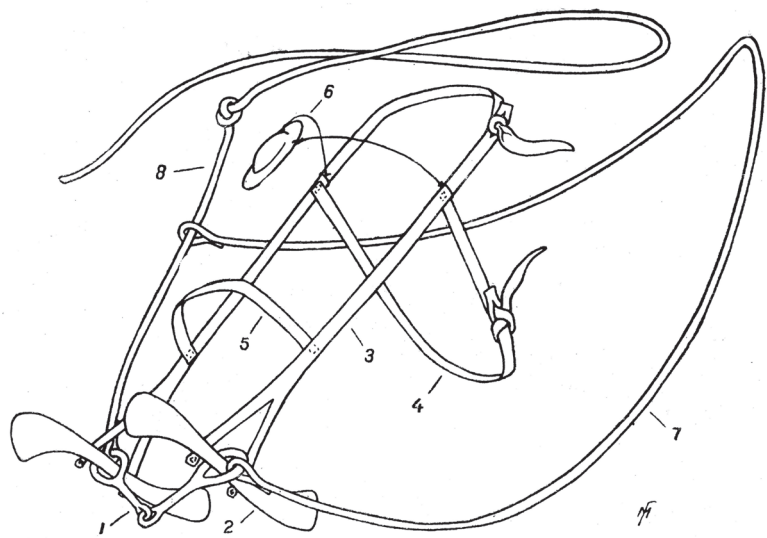


Figure 6.3. Pazyryk bridle structure: 1-bit; 2-cheekpieces (or *psalia*); 3-headstall; 4-throat latch; 5-noseband; 6-decorative frontlet (round or disk-shaped) on non-structural browband; 7-rein; 8-tie-rein (after Gryaznov 1950, fig. 20).

² There is no consistency in the numbering of the horses from Pazyryk 1 between Gryaznov and Rudenko. They were rivals, and when Rudenko later published material from the original Pazyryk kurgans first published by Gryaznov, he re-numbered the horses (L. Barkova, pers. comm.).

are all of the *psalia*, which are carved and highly decorated (Fig. 6.4). After slipping the bits over the *psalia*, this component was fastened to the split ends of the headstall. The brow-band is not structural, but in most cases holds a circular or disk-shaped wooden frontlet, carved with a raised center and usually covered in gold foil, between the horse's eyes. This covers their most vulnerable point—the point where they were dispatched for the funeral sacrifice and the place where one shoots a severely injured horse, should there be no other means of euthanasia available.

Some bridles had a lead-rein, an additional rein. On these, rather than both rein ends terminating at the bit, the end of one ties onto the longer lead-rein, kept in place when riding by a knot. Rudenko (1970: 123) discusses this as being on the left; although Griaznov places it on the right in his drawing (Fig. 6.3-8). Lead reins were not apparent on any of the bridles I examined, and I am not sure how to deal with the left-right discrepancy, as this very clever design is not in use today. It would seem



Figure 6.4. Split headstall ends and psalia from Pazyryk 1 bridle.

that when handling and mounting from the left, this rein would be most useful on that side.

All bridles were decorated differently. Figure 6.5 shows an example of the ornamental detail and workmanship: four carved wooden splayed argali (*Ovis ammon ammon*, the largest of the wild mountain sheep) with leather inserts for horns are attached to the headstall; argali heads decorate the *psalia* and the front of the noseband. All were covered with gold foil. The bridle ornaments were fastened by tying with sinew through tiny holes, either running angularly from end to surface or running all the way through the length of the shaft (Fig. 6.6).



Figure 6.5. Bridle from Pazyryk 1 (horse #10 Griaznov, #5 Rudenko).



Figure 6.6. *Manner of fastening the
bridle decorations.*

Pazyryk Bits

Pazyryk bits were cast from two pieces of bronze, or most often iron (in Pazyryk 1, nine iron and one bronze) (Fig. 6.7). They are similar in all regards to a type of bits used today which we call snaffle bits. Snaffle bits rest on the horse's tongue and lips, at the corners of the horse's mouth. They are jointed in the middle, which allows for contact of different types when pulled by the reins.

I discuss bit action here using my knowledge as a working rider and veterinary authors (Clayton and Lee 1984; Scoggins 1989), rather than the work of those who misunderstand the bit as a means of “controlling” the horse, or explore bits for chariot driving,

which are of a different nature than bits for riding due to the removed nature of human-horse contact (e.g., Brownrigg 2006; Drews 2004; Littauer and Crouwel 2002). Although there is no formal scale, bits are understood in terms of severity. Of course any bit can hurt

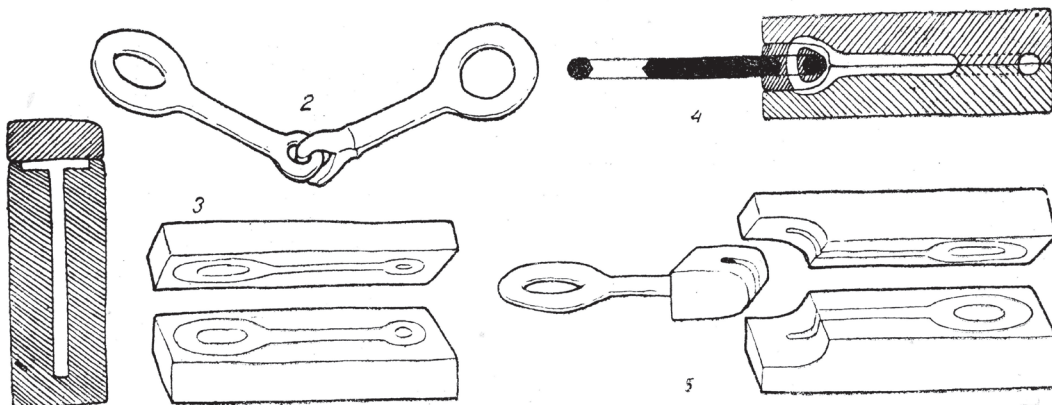


Figure 6.7. *Pazyryk bit casting process (Gryaznov 1950, fig. 18).*

a horse if used with “hard hands” (roughly, by pulling or jerking, or by not “following” the horse's movement), but generally there are two main qualities to bits that make them more or less severe: action (the way in which, and places upon which, the bit-bridle combination applies pressure), and the thickness and texture of the bit cannons (the horizontal pieces that rest on the tongue) and cheekpieces.

Snaffle bits are among the least severe in action, second only to one-piece straight bits. Snaffles must be precisely the width of the horse's lips to work correctly and not cause the bit to slip into a painful position (Scoggins 1989).

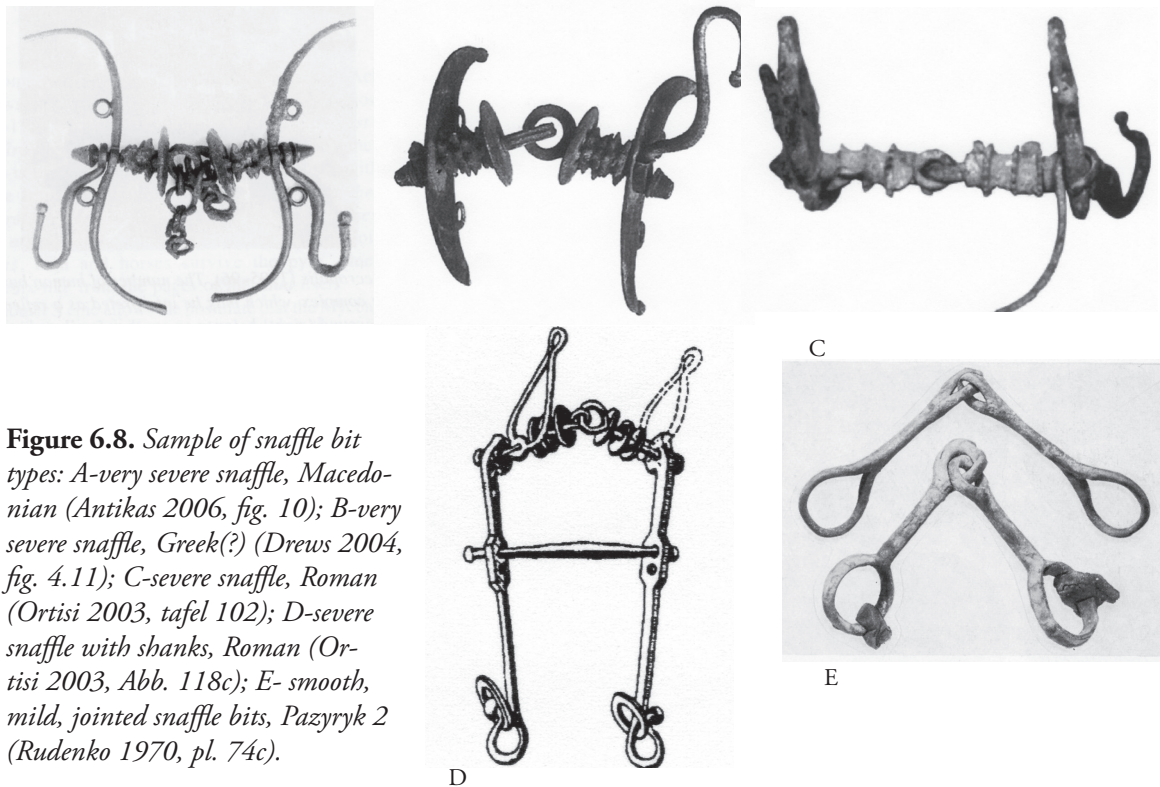


Figure 6.8. Sample of snaffle bit types: A-very severe snaffle, Macedonian (Antikas 2006, fig. 10); B-very severe snaffle, Greek(?) (Drews 2004, fig. 4.11); C-severe snaffle, Roman (Ortisi 2003, *tafel* 102); D-severe snaffle with shanks, Roman (Ortisi 2003, *Abb.* 118c); E- smooth, mild, jointed snaffle bits, Pazyryk 2 (Rudenko 1970, *pl.* 74c).

A bit gentle in action can still be severe, as noted in Figure 6.8, which are ordered by decreasing severity. Within the category of snaffles, those that are thinner, roughened or spiked are more severe (Fig. 6.8A-C), as are those that have shanks of varying length to which the reins attach in order to increase the torque applied to the horse's mouth and poll, the sensitive area behind the horse's ears where the bridle headstall rests (Fig. 6.8D). In contrast, these representative Pazyryk bits (Fig. 6.8E) are smooth, have no protrusions which would hurt or even cut the tongue, and have no shanks.

Pazyryk Horse Equipment and Relationality

With regard to the question of the Pazyryk people's use of horse equipment as tools of force, we may look to three functional aspects of the equipment found in the burials: the saddles, bridles and bits.

The Pazyryk saddles do not include stirrups, the main purpose of which is to keep the rider stable during changes of speed and direction. While they have wooden frames which would provide some minor stability, the responsibility for keeping the rider astride would have rested on the communication between horse and rider. When riding what is essentially "bareback," riders must know that their requests for changes of speed and direction will be responded to. If the horse misbehaves or ignores a request, the rider can easily become

unseated. Moreover, “the skin-to-skin contact of bareback riding makes significant communication of every tensing human or equine muscle, every shift in human or equine weight” (Ainslie and Ledbetter 1980: 96). If the Pazyryks shot bows from horseback, the bridle was insignificant: the reins are dropped and every request is communicated through the body.

Moreover, from the way the saddle is constructed (Fig. 6.1) it appears that after untying the vertical breastplate strap and girth strap, the entire structure would be put on over the horse’s head, and the wooden decorations would clatter through this. The horse’s tail would then have been brought through and on top of the crupper, and the two straps tied. None of these are things horses naturally enjoy, and they would have been gently taught to accept this rather awkward and noisy dressing event calmly and quietly in order not to damage the equipment and rather fragile decorations.

The bridles and reins are made of not particularly thick leather strips which a horse could easily snap with very little revolt. No hobbles (leather straps applied to the lower legs to shorten the stride and keep the horse nearby) were found in any of the Pazyryk burials. Nor were there any halters (essentially bitless bridles used for tying) in the graves. Bridles with bits are not used for tying, as serious injuries to the horse’s mouth can occur if the horse pulls back (Scoggins 1989), and horses cannot wear bridles with bits and eat. Moreover, I saw no evidence on the horses’ bodies of the rubbing off of facial hair seen in constantly haltered horses.

Once socialized into a horse-human community, horses will stay nearby without fencing (see Ewers 1955: 189; Howard 1881: 128). Therefore, it is likely that the Pazyryk riding horses—who would have been needed for daily activities—lived as part of the community feeding nearby the people, while the larger bands were kept farther away so as not to deplete the grass nearby the encampment or settlement. I have discussed this earlier as *tabun* keeping (Ch. 4). This would imply that they lived untethered and when needed, they came when summoned by name—with either a word, whistle or another sound—as all of my horses do, as all horses can. These horses knew their home was with these people. They knew the names they were called by their Pazyryk handlers.

I have noted that the bits were quite gentle. Their style indicates an advanced understanding of the biomechanics of bit action on the horse’s mouth, as similar bits are still used today. As discussed previously in Chapter 2, much experimentation went into achieving such functionality of design and they were widely exported (Bokovenko 2000). As horses were domesticated and ridden in different cultures, bit designs varied, “a testament to the multiplicity of attempts by riders to communicate effectively with the ridden horse, and perhaps also evidence of their failure to achieve this in many situations” (Goodwin *et al.* 2009: 6). To apply this back to the domination versus cooperation models of horse-human interactions, the example bits in Figure 6.8A-D appear to be produced by people holding

various cultural understandings along a continuum ranging between the two models, the most harsh bits correlating with the misguided assumption that a horse can be “controlled” through such painful devices. In contrast, the Pazyryk bits indicate they were designed for communication, and imply a mindset of cooperation.

Although not functional, *per se*, I address one more element of the horse outfits here: the elaborate costumes of the masked horses. The first time I viewed representations of these outfits, as a working rider I was struck by how well and gently schooled the horses would have been to allow themselves to be so dressed. The hanging pendants would flap, and head-dresses are weighty, cumbersome and vision restricting (Fig. 1.1). One could not simply pull an unschooled horse out of the herd and place such items upon his body because horses are inherently wary of objects with these traits. There are two ways to deal with this. The first is to use what is known in behavioral terms as “flooding.” This is the forceful manner of colonial methods of “breaking” a horse used in the North and South America and Australia, although this practice has for the most part lost favor in the United States, but for rodeo exhibitions. Here, both the equipment and a rider are placed upon the horse’s restrained body, and he is turned loose and bucks in an attempt to remove the foreign and frightening objects until he tires and gives up bucking. I have noted that this type of treatment is detrimental to a trusting relationship, in that it will cause a horse to either shut down emotionally or revolt (McGreevy and McLean 2005). The other option is to use “gradual habituation to new equipment and experiences to train horses” (Goodwin *et al* 2009: 5). Here, experiences and equipment are introduced to the horse slowly and sympathetically until he understands they are not threatening. This systematically both diminishes the horse’s fear and builds his trust in humans.

It is possible some other method was used with the Pazyryk horses, but it would have been similar: a frightened horse could not be bullied out of his fear; an unschooled horse could not be wrestled into these valuable costumes without damaging them. The mere fact of these outfits discounts a domination-through-pain relationship because they imply that these horses trusted their people. The only indication of any equipment in the burials that might be wrongly construed as harsh are three small whips found in kurgans 1, 2 and 4 (Rudenko 1970: 186), discussed below. Although such whips could be used as tools of punishment, in light of the other aspects of the horse equipment, they might rather be viewed as communicative tools used to extend the reach of the human body.

From the instrumental aspects of the horse equipment—designed not to dominate and control through fear or pain, but as subtle communication tools—I infer these horses were well-socialized by people who understood their nature, and that a relationship of cooperation and mutual trust was wanted, developed and nurtured. With regard to this implied relationship, Bourdieu’s (1977: 80-81) concept of *habitus* might be applied here to describe

the unavoidable interdependence and intersubjectivity between the participants in a coordinated activity that arises from the commonality of their coexistence and experience and, further, leads to a growth of that interdependence as that activity continues and evolves. The crucial point here is that all the archaeological evidence suggests that for Pazyryk society *engaging with horses in a cooperative manner was a structuring principle* (in the sense of Giddens 1984: 195-190). As I shall bring out further, this carries huge implications for Pazyryk social structures, cosmologies and ideology.

I now turn to how this relationship might be seen to have impacted social structures and cosmological beliefs of the Pazyryk community, as reflected in the funerary material.

The Pazyryk Horse Costumes

I have noted that one of the most intriguing aspects of the Pazyryk horse burials is the variability of the horse costumes. The questions that present are: Why were these particular horses inhumed with this particular human? Why was *this* horse, but not *that* horse, caparisoned in this manner? Why do we see the variation we do? As earlier noted (Ch. 3), proposed explanations include that the horses' decorations served as proxies for human statuses (Belenitskiy 1978: 37-38; Hiebert 1992: 124; Rudenko 1970); and that they were sacrificed as tribute from subordinates with their decorations indicating group identities (Bokovenko 1995b: 290, 1996d; *also* Francfort *et al.* 2000; Francfort *at al.* 2006: 122-123; Gryaznov 1969: 193; Hiebert 1992; Jettmar 1981), or that they served as a means of displaying power and prestige "within the context of warfare or as a pretence to warfare" (Hanks 2003: 100).

I have pointed out in Chapter 3 some problems with these explanations. Understanding that riders view horses as individuals, coupled with a more nuanced appreciation of the semantics of clothing, allows for other meanings.

Meanings and identities intended and conveyed through clothing are complex (Feinberg 1992: 18). Clothing can be used by agents to nonverbally convey social and political attitudes (Buckley 1974: 94), spirituality and aesthetic considerations (Schneider 2006: 204), and "religious, metaphysical, or other supersensory relations" (Harms 1938: 244-245). Elements of clothing are consciously manipulated to mark status and identity at various levels of scale: international, national and personal (Kuper 1973: 348-349). Certainly clothing can be "profitably viewed as a reflection of social structure" (Kuper 1973: 365), and also as acting recursively to both reflect and create a sense of self (Campbell 1996: 102). For the living, the choice of clothing elements also concerns the symbolic representation of self identity within the group, of "relative identities and relations" (Gansell 2007: 44). From this vantage point, bodily adornments such as jewelry have been argued to express "an individual's social and ritual identity in relation to others within the reference group of a mortuary community" (Gansell 2007: 29). But in the conjoined, con-specific Pazyryk world, might

those meanings solely have concerned human social structures and identities? Of course, the dead are dressed for burial by the living, and in this sense burial attire conveys who others think we are and what they believe about us. In this sense, and because the Pazyryk horses did not dress themselves, might the horse attire be viewed to some degree as expressing roles, attributes and “identities” of the horses, as perceived by the Pazyryk people?

I now examine the horses from Pazyryk 1, and propose an interpretation different from those previously made. Ten elaborately costumed horses were interred with the man in Pazyryk 1, whose body had been destroyed by looters. Remaining in the grave with him were only gilded leather birds appliqués glued to his coffin (Fig. 6.9A), fragments of a felt carpet with a border of feline heads on the chamber’s wall (Fig. 6.9B) and a series of leather cut-outs of a playful face with a headdress (Fig 6.9C). The looters had, however, left the horses alone. In keeping with Pazyryk patterning, each was decorated differently. The saddles, bridles and costumes were well worn, with even the most elaborate showing signs of repair. Also in the horse compartment were two fur pouches, one tubular leather and one made from a lynx or cheetah head and filled with mulched branches of wild plants and pieces of fruit, possibly horse treats. If this were so, it again would point to a schooling approach based upon positivity rather than pain.



Figure 6.9. *Funerary material associated with the man in Pazyryk 1: A-leather appliqués on coffin (Golomshtock and Griaznov 1933, fig. 1); B- felt carpet fragments (Rudenko 1970, pl 148A); C-leather cut-out of a human head with headdress (Rudenko 1970, pl. 139G).*

Bridle Decorations

Although correlated with particular horses by Gryaznov and Rudenko, in most cases we are not absolutely certain which bridle went with which horse/saddle combination. The saddles were left on the horses, but the bridles of all but the one most elaborately decorated horse had been removed and were jumbled in the burial (L. Barkova, pers. comm.), a point

to which I return. Cruppers and breastplates are associated with particular saddles because they were attached to the saddles. In most cases, carvings on the breastplates were matched to carvings on the bridles, so there is some reason to assume they are correctly attributed, but not with entire certainty. I therefore do not analyze them as aspects of the costumes, *per se*, although I later return to query their removal.

Saddle Structure and Working Roles

Two of the horse outfits were quite large and complex, consisting of saddles with long, hanging felt pendants, mane and tail covers made of felt, leather and horse hair, and large headdresses with masks. The remaining eight horse outfits were less elaborate, and varied in terms of the size and complexity of their decorative elements, both constructional and iconographic.

I have ordered the ten horses from Pazyryk Kurgan 1 according to increasing levels of complexity of patterning—the type, size and elaborateness of their decorations and constructional elements (Table 6.1).

HORSE	Age	Hanging Element: Motif (#)	Seat Motif (#)	Head- dress	Mane/ Tail Cover	Shield
#1 (1G/7R)	10-11	fringe	feline attacking twisted argali(2)	no	no	no
#2 (2G/9R)	no age	fringe	lion attacking twisted mt. sheep (2)	no	no	no
#3 (6G/8R)	10	fringe	griffin/winged lion fighting (2)	no	no	no
#4 (4G/4R)	no age	fringe	lion attacking elk (2) both twisted	no	no	yes
#5 (7G/1R)	9	pendants: human heads (12)	eagle attacking twisted moose (2)	no	no	yes
#6 (8G/10R)	17	pendants: argali heads (8)	argali heads (8)	no	no	no
#7 (9G/6R)	16-17	pendants: fish/mt. sheep heads	lion heads (4)	no	no	no
#8 (3G/2R)	no age	pendants: argali heads (6)	griffin attacking twisted mt. sheep (2)	no	no	yes
#9 (5G/3R)	18	pendants: fish (12)	lion attacking moose (2)	yes	yes	no
#10 (10G/5R)	20+	pendants: lion heads/legs (4)	lion, full body (2)	yes	yes	no

Table 6.1. *The horses of Pazyryk 1, ranked by complexity of outfit. (Numbers in parentheses in “Horse” column refer to the numbering systems of M. Gryaznov 1950 and S. Rudenko 1970. All further references are to author’s numbering. Numbers in parentheses indicate the number of times the motif occurs.)*

The outfits can be broadly differentiated as follows: Set One (horses 1-4): the saddles with leather fringe (Fig. 6.10); Set Two (horses 5-8): the saddles with short felt pendants (Fig. 6.11), and Set Three (horses 9-10): the very elaborate costumes of the masked horses (Fig. 6.12). When organized this way, another pattern can be noted: there is a correlation between costume complexity and a general trend upwards in age. This correlation suggests a logical continuum of training wherein the horse is entrusted with riskier activities as his level of schooling, reliability and trustworthiness are proven. I suggest that the increasing saddle complexity, relating as it does to the age of the horses, also might reference divisions of labor, to the type of activities for which particular horses were used—their working roles

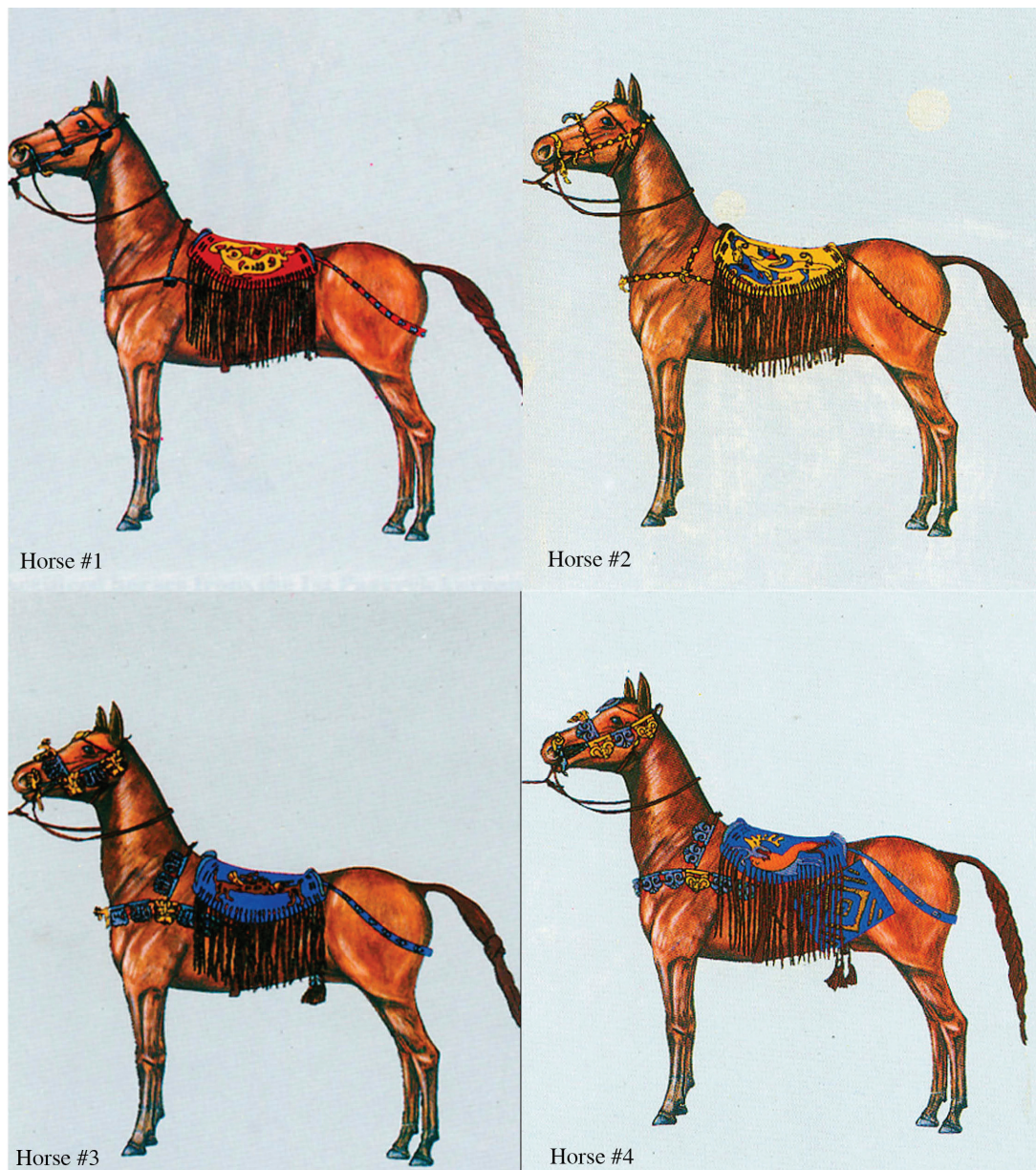


Figure 6.10. *Set One: Horses #1–4 of Pazyryk 1, as numbered by author (after Gryaznov 1950 and Rolle 1989)..*

within the community—as follows.

Set 1: The Set One horses, aged 10-11, wear saddles with simple leather fringe hanging down to about the horse’s belly (Fig 6.10). Compared to the saddles in later sets, these crupper and breastplate adornments are smaller and simpler, but increase in size as the saddle and decorations increase in complexity. All of these saddle seats are decorated with predator/prey iconography appliquéd in felt on the seats.

Horse #1 was 10-11 years old. On each side of his saddle a feline attacks an argali with a body twisted in the “animal style” (2). The saddle of horse #2 (no age) is decorated with a (winged?) feline attacking a twisted mountain sheep (2). The saddle seat of horse #3 (10

years old) has a griffin and lion or possibly another griffin fighting (2). A lion attacking an elk (2), both twisted, adorn the saddle of horse #4 (no age), and one of three shields found in the burial is also associated with this horse.

Considering the mountain taiga environment, the fringe on this set, as opposed to the longer pendants in sets three and four, would not entangle in brush or tree branches. The simpler, smaller crupper and breastplate decorations are more durable than larger ones, and would not be as bothersome to a horse unaccustomed to them. All of these saddle seats are decorated with predator/prey appliqué iconography. Based upon these elements, these could belong to hunting horses, those with schooling beyond the “stage of plain usefulness” (Wynmalen 1952: 20), and with considerable proven reliability.

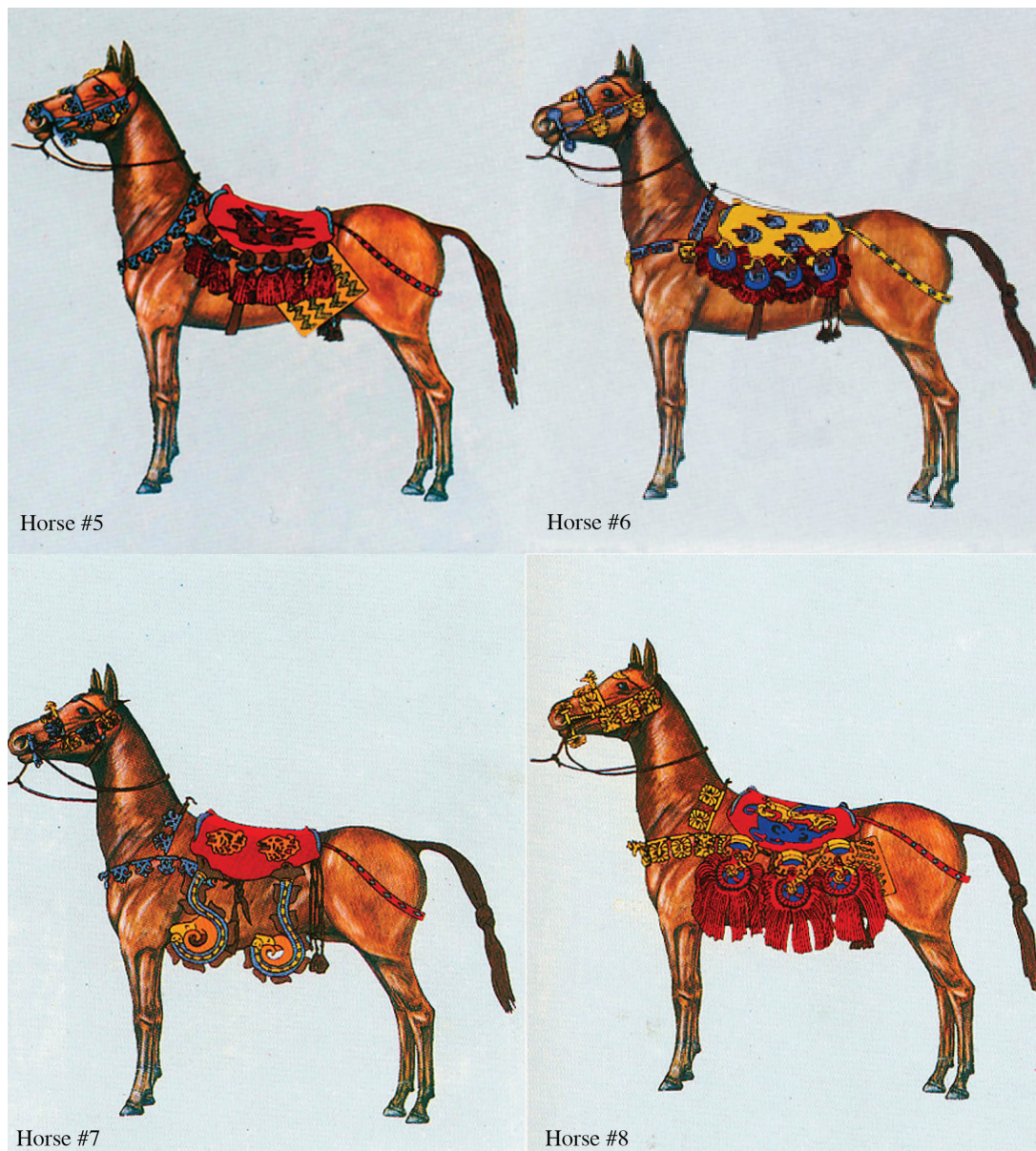


Figure 6.11. Set Two: Horses #5–8 of Pazyryk 1, as numbered by author (after Gryaznov 1950 and Rolle 1989).



Figure 6.12. Saddle from horse #5, Pazyryk 1, with predator-prey leather seat appliqué and downward-hanging human head pendants.

Set 2: The saddles of the Set Two horses, aged 9- 17, all have short felt pendants which hang above (horses 5 and 6) or slightly below (horses 7 and 8) the horses' underlines, and the crupper and breast-plate carvings increase in size as the saddles increase in complexity (Fig. 6.11).

The seat on saddle horse #5 (9 years old)

holds a leather appliqué of an eagle attacking a twisted moose (2). Pendants of human heads (12), with horse hair where the human hair would be, hang from the saddle seat upside-down, one of very few representations of humans within the burial complex (Fig. 6.12). A shield was attached to the saddle. Horse #6 (17 years old) has singular motifs of argali heads (8) on the saddle seat. Argali-head pendants (8) with horse hair inserts on them hang, head down. Horse #7 (16-17 years old) has lion heads (4) on the saddle seat, very similar to those on the carpet remnant found on the man's burial chamber wall (Fig. 6.9B), and pendants of stylized fish (4) wrapping around argali heads (4). Horse #8 (no age) has predator/prey appliqué on the saddle seat of a lion attacking a twisted horned sheep or goat, similar to those of the fringed saddles, and a shield was attached to this saddle (also Fig. 6.2). The argali-head pendants (6) hang head downward, similar but larger than those of horse #6.

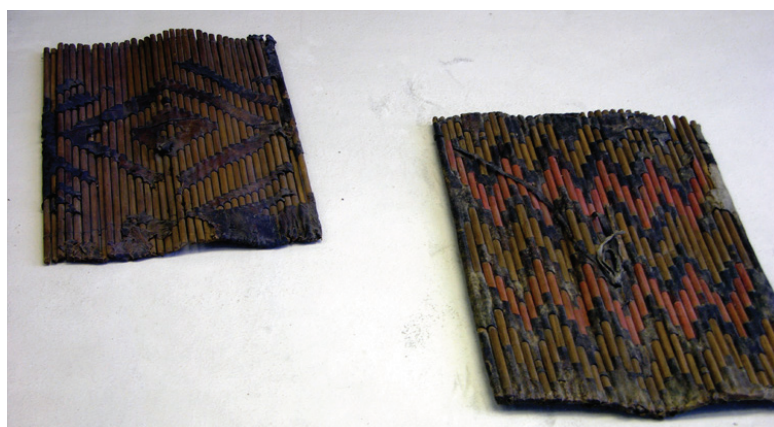


Figure 6.13. Shields from Pazyryk 1.

Two of the saddles (5 and 8) have predator/prey images on the saddle seats similar to those of the fringed saddles, and shields were associated with these two horses (Fig. 6.13). Of the three shields, two are associated with this set. This set of saddles could be for war use, where the iconography—which includes human heads—and pendants presented a fearsome sight to the enemy. If ridden and schooled regularly, horses in this age range would

have developed the dependability necessary for the dangers of battle.

Set 3. The Set Three horses, aged 18 and 20+, are elaborately caparisoned with masked headdresses and longer saddle pendants (Fig. 6.14). On both horses, the manes were cut and a plain felt covering stitched to the remaining hair (Fig. 6.15). Over these were stitched and strapped the decorative mane covers, which were topped with horse-hair inserts, dyed red (Fig. 6.16). Their tails were also sheathed with leather covers.



Horse #9



Horse #10

Figure 6.14. Set Three: Horses #9–10 of Pazyryk 1, as numbered by author (after Gryaznov 1950 and Rolle 1989).



Figure 6.15. Pazyryk 1 horse with clipped mane and felt covering.



Figure 6.16. Mane cover, Pazyryk 1.

Horse #9 (18 years old) wears a saddle with fish pendants (12), and a seat cover with a lion attacking a moose (2). Atop his headdress is a griffin, the back legs and tail coiled on the horse's jaw, its back coming up behind his eyes and ears, and its head between the horse's ears. The griffin has two little horns that terminate with gold balls and wings protruding from its shoulders which go upwards past the horse's ears. The mask's face is covered in gold foil. The headdress has leather ear covers with holes in the front to allow for hearing, and possibly served to both keep insects out of the horse's ears, a problem in summer months, and stabilize the headdresses (Fig. 6.17).

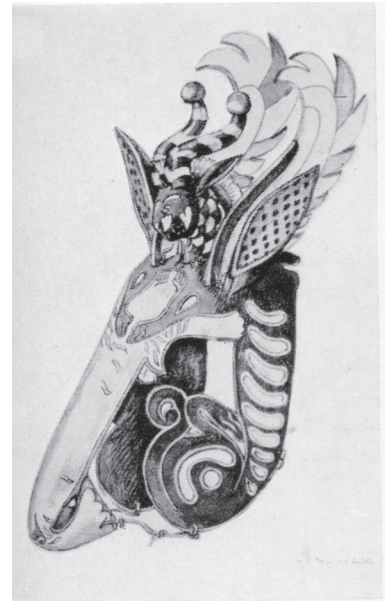


Figure 6.17. Reconstruction of headdress from Pazyryk 1, horse #9 (Rudenko 1970, fig. 122b).

The saddle on horse #10 (20+ years old) contains a single appliqué of a lion on each side of his saddle seat (Fig. 6.18). The pendants (4), which drape more than halfway down the length of the horse's legs, each culminate in a feline's head, with horse hair attached as if a mane. He wears a mask depicting a blue fur leopard (made of squirrel skin) with gold-leaf spots, its head on the horse's forehead, front legs wrapped around the eyes, back legs around the horse's nostrils (Fig. 6.19). His headdress is topped with natural-sized horns of an Altai maral (*Cervus canadensis sibiricus*), similar to the North American elk (Gryaznov 1950: 39, often misstated as reindeer horns e.g., Vitebsky 2005: 8). The tube-shaped branches culminate in red horse-hair inserts. His ears are covered like horse #9. His breastplate carries the largest and most weighty decorations.

These horses would have had the most schooling, including special gentle instruction to desensitize the flight response such unnatural, heavy and vision-restricting outfits would engender. These horses were veterans, retired from hard service and

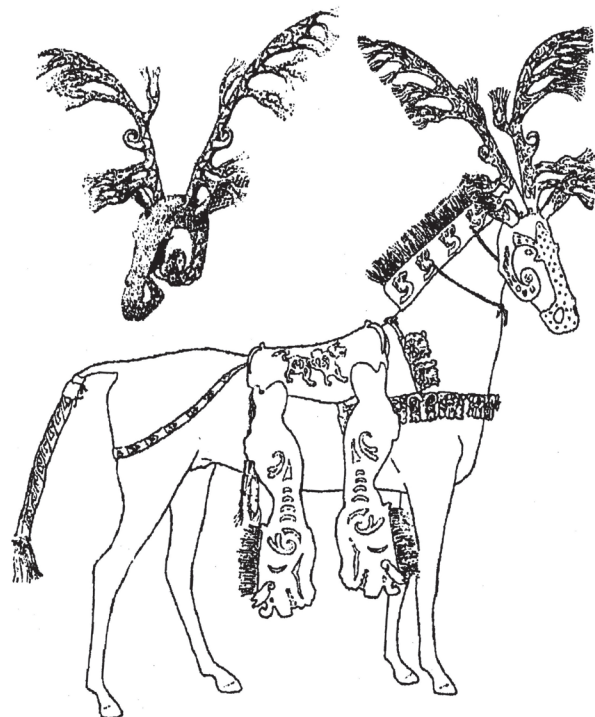


Figure 6.18. Pazyryk 1, horse #10, costume and headdress (reconstruction by Gryaznov 1950, figs. 16, 38).

entrusted now to carry their elaborate and significant outfits.

The Set Three horse outfits, although well-worn and in some places mended, are impractical for everyday use. The saddle pendants of horse #10 hang low and would catch and tear if worn in any but open vegetation. These outfits probably were reserved for ceremonial use—and due to their being well-worn, such use was common. What might these elaborate costumes have been used for? Humphrey (1995: 142, citing ethnographer Szyrkiewicz 1986: 19) notes of contemporary Mongols that:

the journey between camps is felt to be an event outside the ordinary run of life; people... put on special clothes and use festive harness for their horses, [and during which]... ‘young men compete with one another, showing off their horsemanship and prowess’.



Figure 6.19. *Mask from horse #10, Pazyryk 1.*

Horses are reported ethnographically to be dressed for other festivals. The guests are noted in a Mongolian wedding song to “have arrived on horses, swinging their deer antlers decorated with sable necklaces” (Galdanova 1992: 80, in Cheremisin 2005: 131). Perhaps these costumes were reserved for similar purposes—the Pazyryks’ seasonal changes of camp and other alternate or additional ceremonies significant to the community—where the horses were important participants. Whatever the ceremony, if performed ritualistically (Humphrey and Laidlaw 2007) it would have fostered and cemented belonging and beliefs (Marshall 2002). It is significant that here the horses were not only included, their presence and participation were influential to the ritual.

The correlation between age and costume complexity suggests a logical continuum of training and divisions of labor, the type of activity for which the horse was used in support of human subsistence: for hunting, battle, or ceremonial purposes. As the horse ages, his schooling progresses, as do his reliability and trustworthiness; as these increase, he is entrusted with both riskier activities and a more elaborate costume. This interpretation is



Figure 6.20. *Carriage horse bridle, Pazyryk 5.*

supported by the outfits of the carriage horses in the Pazyryk 5, who wore had the most uncomplicated trappings; very simple bridles with hemispherical disks on front, and no other adornments (Fig. 6.20). As I have noted, it takes very little to train a horse to traction, and very little is required of them in this role.

The idea that saddles vary based upon type of use—the horse’s working role—is functionally rational. Today, for instance, distance or endurance saddles used for riding in rough and vegetated terrain are sleek and light, with no elements that could catch on branches or brush. Saddles for jumping, where the horse only moves forward, weigh very little and have no extraneous elements, while Western saddles used in activities with fast turns have horns, cantles and pommels de-

signed to help keep the rider in place. At the most complex end of the spectrum, the most decorated are “parade” saddles, which are not subjected to hard use and in many instances are quite cumbersome and intricately ornamented.

In societies that use horses for a variety of purposes, different horses are used for different tasks, and specialization by ability and discipline is common today, as it is in other and past cultures. The Plateau Blackfoot of North America, for instance, categorized their horses based upon a hierarchy of ability and training: herd horses, traction horses, regular riding horses, hunting horses, war horses (Ewers 1955: 197, 40, 228). It can be seen that the danger inherent to the rider increases along this continuum of activities, requiring a better schooled and highly trusted equine partner for more difficult activities. For Plateau Blackfoot warriors, so important were the war horses that they rode common riding horses to the battlefield, leading the war horses to save their strength (Ewers 1955: 197).

It is important to note that these proposed categories are not entirely distinct; there is crossover between sets. For instance, two of the shields are associated with Set Two (horses # 5 and 8), but one with Set One (horse #4). Also, all Set One fringed saddles have predator-prey motifs, but so do two of the four with pendants from Set Two (horses #4 and 5), and one in Set Three (horse #9) (Fig. 6.21). This argues that as the horse moved along the continuum of schooling, as his roles changed, his tack was amended or changed as well. For the horses, there is a fluidity of roles, based upon knowledge, ability and accomplishment.

When viewed this way, rather than as having been brought as funeral gifts from various sub-communities or relating to any totemic associations, although the earmarks indicate they may (or may not) have belonged to someone else, the ten horses can be seen as the



Figure 6.21. *Pazyryk 1 predator-prey iconography associated with, clockwise from upper right, horses 5, 4, 1 and 9, as numbered by the author (Gryaznov 1950, fig. 35).*

horses of this one man (cf. Rudenko 1970: 118-119); a band with varying degrees of instruction, a work in progress which shows a training regimen through which successful co-action with people is acknowledged and rewarded with increasing responsibility and represented by increasingly complex decoration.

Saddle Iconography, Accomplishment and Statuses

Having discussed saddle structure as it may relate to roles, I now turn to specific iconography associated with the horse outfits. Various interpretations have been made of the outfits. Polosmak (1995: 109) and Samashev *et al.* (2000) suppose the horse decorations served as amulets with apotropaic functions (also Nakamura 2005 and Sutterlin 1989 on the apotropaic aspects of artifacts). Under this view, “according to the magic interactivity of the ancient people, the brightest, positive and distinctive qualities of depicted animals are transferred to carriers of these images” (Samashev *et al.* 2000, *Berel*: 34). Following this line of reasoning, the semantics of the iconography is protective and projective, temporally representing present and future events and wishes: “May this protect you from danger” or “May you be fleet like this ram on your saddle” or “May you be brave like a lion.”

I propose an alternative or complementary explanation that both inverts the concept of the iconography’s *projective* functions, and brings the analysis down to a level of daily practice and conjoint, relational action. I suggest that in addition to the saddle types reflecting the horses’ roles within the human-horse community, the costume iconography might reflect the abilities and accomplishments of the horses themselves. Here, iconographic variation within the costume set could relate to attributes of individual horses not as projective to the future, or as representative of grand abstract schemes, but as reflective of the past: the horse with the rams on his saddle has proven himself to be strong and fleet like one (horse #6); the horse with the human heads as decorations helped slay many enemies (horse #5). The outfits of the ornately masked and costumed horses could mirror spectacular actions or attributes of those particular, special horses—bravery, speed, strength, etc.

Viewing horse #10 more closely, stepping back from the detail of the four long pendants which each culminate in a feline's head, an additional perception becomes apparent: the entire saddle-and-pendant composition appears as if a deceased large feline *were* being carried home by this horse (Figs. 6.14, 6.18, 6.19). The detail of the lions' heads at the bottom of the pendants is lost, and they appear as four legs draped over the horse's back, as a large feline. This awareness is conveyed through the size and proportion of the arrangement, and also through the manner in which a horse could be understood to carry such a heavy and large animal. Further, in addition to the full-bodied lion appliqué on the seat, the feline theme is carried through with the leopard mask on his face (Figs. 6.18, 6.19).

This particular horse outfit has been suggested to represent "an episode of a torture plotline" related to the hypothetical idea of pan-Indo-European horse sacrifice (Cheremisin 2005: 135), and as transforming the horse "into an antlered deer attacked at its head by a feline," where he becomes "in effect, a vehicle for carrying the signs of transformation in his body" (Jacobson 2007 67). Such notions reduce the function of the iconography down to entirely abstract human concerns.

The elements of this outfit taken together, rather, could reflect this horse's past courage in a successful encounter with a large feline. This special horse was exceptionally brave because he "faced down" and carried home such a cat. This would be an extraordinary feat, as large felines are horses' only true predators; after millennia of domestication, the situation most likely to send any horse into blind, running fear is a noise above and behind them, from where a large cat would attack. This courageous horse would have been one on whom high honor was bestowed. Over many years, his person entrusted his body to him in dangers, and he rose to the responsibility. He acted bravely in his own right and for this, through his trustworthiness, he climbed the ladder of stature within the community. For this, he wore the symbols of his actions.

People who live with horses often view their achievements as worthy of recognition in a material fashion (see Despret 2008 on animal breeders' perceptions of animal achievements). Moreover, the manner in which we award achievement today does not differ significantly between humans and equines. Examples include Girl or Boy Scout badges representing accomplishments; the military commander's medals worn on the coat; the ribbons placed upon the show horse's bridle after his win, colors symbolically reflecting judged ability; and the wreath of roses the race winner wears. Further, the more accomplishments one has, the more—and more complex—"medals" one acquires.

That particular images or decorations might have held significance based upon the abilities, accomplishments or activities of the horses is also informed by ethnographic analogy from other communities who lived with horses, the Native peoples of North America. Within these cultures, warhorses were painted and decorated through material adornment

for both battle and ceremonial display (Barclay 1980: 179 citing Dobie 1952: 50; Horse Capture and Her Many Horses 2006). Among the Plains tribes, in addition to warriors, horses were awarded “coups” for bravery in battle. According to Native American historian Caryn Curtis (pers. comm.), “A horse, like a warrior earned his feathers and the kills taken by an individual animal were represented on the horse for planned battles since that animal had earned them and been given them when his master was given his.”

Closer in spatio-temporal context, this view is also supported by one particular motif represented on a series of artifacts—the coiled-feline in metal. The earliest known representation of this image was found on a large (25 cm) metal horse pectoral in the Arzhan I kurgan (c. 800 BCE), where it is also recognized as the earliest example of Scythian “animal style” art (Bokovenko 2000, 2004; Kawami 2005) (Fig. 6.22). The pectoral

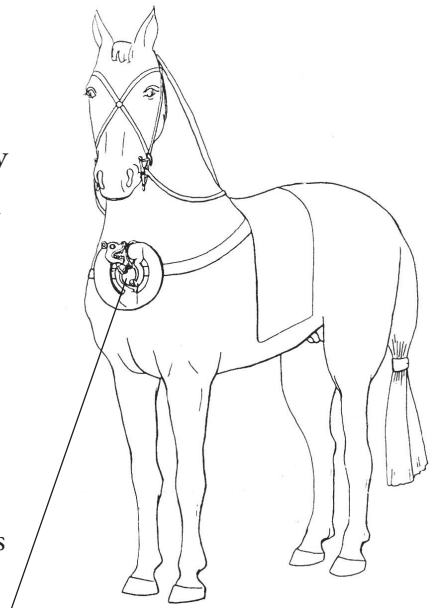


Figure 6.22. *Arzhan 1 horse pectoral (Rolle 1989, fig. 20); as reconstructed on horse (Bokovenko 2000, fig. 4).*

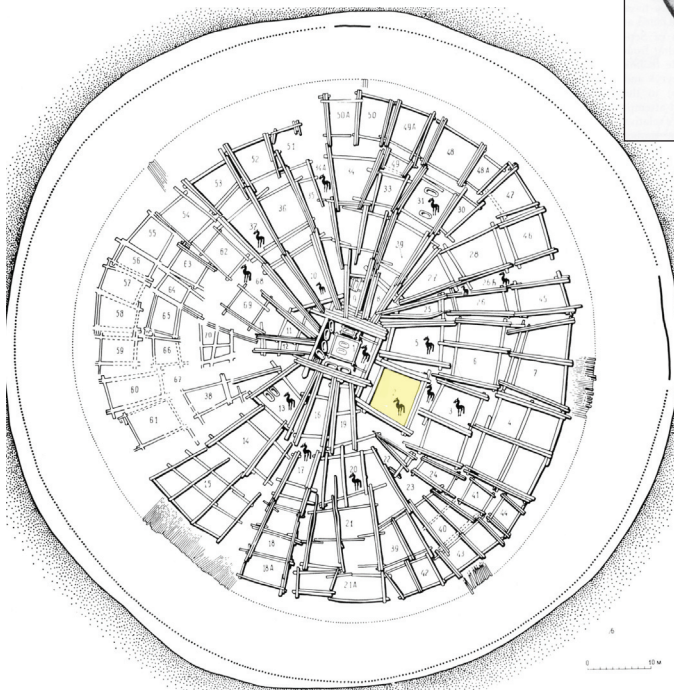


Figure 6.23. *Plan of the Arzhan 1 kurgan, showing the placement of chamber 2 (after Rolle 1989, fig. 18).*

was in chamber 2, which held only horses, 30 in all, all oriented toward the human burials in the center (Fig. 6.23).

The motif appears to move west and south through time, and similar plaques are found in later burials throughout Scythian territory—from the Crimea

to northern China, and all during first millennium BCE (Fig. 6.24). Kawami (2005) has noted that this coiled feline motif appears always associated not with a human, but with a horse, and they are only associated with only one horse per burial.

Here, a particular horse, not a human, is singled out as the carrier of a particular motif. In this context, Kawami (2005) posits that this image, materially depicted and deposited with a horse, “could indicate a particular status of the inhumed human as part of a widespread elite or perhaps a warrior cohort.” Following my argument, rather than viewing the horse solely as an object carrying human meanings, this apparently archetypal motif could also—perhaps based upon an archetypal accomplishment—be indicative of characteristics or ability of the horse, proven through achievements. Perhaps the horse had to earn such a “medal” by passing through some test or rite before it was granted this valuable and prestigious award. It is interesting that this large feline—associated widely with courage through time—is placed upon the chest of the horse, near the heart, where bravery is thought to reside.

Before leaving this discussion of complexity, working roles and achievement, and lest we myopically view these aspects as the only things worth looking at—as many archaeologies with Marxist, functionalist, or domination-through-pain slants do—I want to address the notion of value. Certainly the effort spent schooling these horses would have made them quite hard to replace, and in this sense value seems attested to in the effort spent designing and producing their costumes. But “value” is not tied solely to functional or economic concerns universally. The Navajo of the North American southwest, for instance, ascribe great value to beauty (Witherspoon 1977). Beyond that, when humans and animals “accomplish things together” they are “situations of the extension of subjectivity” (Despret 2008: 129).

With respect to intersubjective relationships, horses, to people who live with them, have not only functions, but identities as well. Working riders and ridden horses necessarily know each other intersubjectively. Riders know that horses vary widely in psychological traits such as volatility, patience, work ethic, sensitivity and emotionality. They refer to particular horses as “honest,” “honorable” and “responsible” (and, so as not to mislead about their nature, certainly also possibly as “sullen,” “stubborn” and “crabby”), and other riders know exactly what they mean. Yet to write of this academically, I feel compelled to put



Figure 6.24. *Eurasian coiled feline horse pectorals, 1st millennium BCE (Bokovenko 2004, fig. 4).*

such terms in scare quotes. Riders understand horses this way not out of misguided logic or intellectual naivety of the perceived pitfalls of anthropomorphism. They do so because—having been *carried by* them, having necessarily understood them as other beings, not as objects or academic constructs—it is the only way to do so that truly makes any sense at all (cf. Hearne 2007). Viewing the Pazyryk horses biographically, as individuals, has allowed alternative interpretations to explain the variability of their outfits. Each of these horses was a unique being the Pazyryk riders knew over the course of many years of working together. For humans, longer-term relationships involve greater empathy and emotional investment, and it is not out of line to suggest that the older, more-adorned Pazyryk horses were not simply more valued because of functional and economic considerations. Under a working-rider view, they would also hold more worth because of the quality of the developed and shared bond between the two. Indeed, it is depth of trust and understanding, shared experiences and personal histories that cause us to believe our long-term relationships are larger, stronger and more impressive than those with others we know only superficially. Because of these emotional elements, they are worth more.

Interspecific Roles, Statuses and Identities in the Pazyryk Community

With a clearer picture of the Pazyryk people's materialized relationship to their horses, I want to return to the concepts of roles and statuses within the interspecific, co-created Pazyryk community. The fluidity of the working roles I have suggested for the Pazyryk horses would also imply the same for the Pazyryk humans: with certain of these horses, the Pazyryk 1 man hunted, with others he perhaps fought, and with others still he participated in ceremonies, perhaps imbued with cosmological or religious meanings, but certainly with significance to community cohesion and identity. There were also probably horse-specific roles within the community: those with specific knowledges or expertise of bit and bridle making, conceptualizing and creating the fabric and carved decorations, and herding, healing and training, among others, and these roles would have fed into individual senses of accomplishment, the “need to feel that one is a competent, responsible person” (Schutz 1966: 20), and thus identities and senses of self.

I have noted (Ch. 5) that horses, too, recognize material objects as representing different activities and thus “roles.” Therefore, it is probable that within the Pazyryk human-horse community as humans' and horses' roles were co-acted and co-created, they were also co-understood. This may also be the case with status. None of the above discussions are meant to suggest that the horse outfit decorations and iconography did not also contain elements related to the person's status and accomplishments, or to the horse-rider pair. Although the burial contexts indicate the Pazyryk horse outfits and Eurasian coiled feline plaques belong to the horses, their abilities would have been schooled by humans. Certainly there is an

amount of prestige associated with having schooled a horse (or horses) to a high level of precision, or having co-accomplished certain risky activities, and high-achieving horses are highly valued in whatever context. But beyond that, how might issues of accomplishment and achievement be framed within a co-created community where close, interspecies interaction was an aspect of most every part of life?

For humans, prestige, authority and status may accrue through many channels including, for example, kinship, age, acquired roles, skills, and attributes such as courage (e.g. Rudenko 1970: 227; Zvelebil 2003: 20), and it seems likely that within the Pazyryk community a human's horse-related abilities will have been one of these values. I have noted (Ch. 5) that within the equine social system "rank" is based upon multiple factors, including age, association (as a foal with a high-status dam) and personal characteristics such as athletic ability and strength (Boyd and Keiper 55-82; Sigurjónsdóttir, *et al.* 2002; also Krueger and Heinze 2008). Thus, there are overlapping criteria for human "statuses" and horse "rank"—age (and thus wisdom?), personal characteristics and abilities, and association and/or kinship—comprehended by each within their own species. Although we differentiate these concepts today, it is not a given that they were so separated in Pazyryk society (cf. Schwabe 1994: 36; Thomas 1996: 29; Whitley 1998: 16). Let us label this concept—whether attributed to human or horse—"stature" within the human-horse community.

For humans, clothing carries with it "the sense of wearing it" (Durham 1999: 389). For instance, blended as horse and human seem to have been, riding a "decorated" horse in a ceremonial cavalcade would have engendered powerful and pleasurable feelings for the humans. It is also possible that material representations of the honors achieved by the horses were given to them with the humans' understanding that the horse both deserved them, and also at some level comprehended and took pleasure in them. Whether or not horses experience the emotion of pride, they understand how their "clothes" relate to their roles, and they certainly appreciate focused human attention (Proops and McComb 2010). The prancing and excitement of horses in parades is due less to rider influence than to equine enthusiasm for human attention and recognition, and entraining to the group activity. Such attention would have accompanied both the ritual awarding of achievement and the outfitting for ceremony. But beyond this, the horse understands stature *by association*, and may well have understood that his place within the community was related to his connection to the human with whom he "belonged." Thus, it is not beyond credence to propose that both mutually understood shared human-horse identities, and also a joint hierarchy of stature, developed between the human "community" and horse "herd." This implies that our present species-specific distinctions between these concepts may have been differently conceived as more permeable and blended by the Pazyryk.

I do not suggest that the structural and iconographic horse outfit elements—tied to singular or joint subjective traits, actions, relationships and statuses—lead to the only logical interpretations of elements of the horse outfits. They might, for instance, as Jacobson (1995: 64) has noted of Scythian art, have been merely decorative. This, however, seems unlikely. Although none of the iconography on any of the horse costumes is the same, the similarity lies in the structured model of complexity and size of the saddles and decorations, and the fact of the masking of the more complex costumes. Each is distinct, but distinct within a structured framework of “common principles of order and meaning” which existed across the Iron Age Altai, Sayan and Tien Shan (Jacobson 2007: 64), to which I now turn.

Saddle Elements and Cosmological Framework

Despite attempts to fit Scythian-Pazyryk iconography into Indo-European cosmology in a top down fashion (e.g., Kuz'mina 1977), the Pazyryk actions of sacrificing and burying their riding horses seem entirely unrelated to the hypothetical type of IE horse sacrifice tied to the coronation of sovereigns or seasonal rites (Doniger 1990; Mallory 1981; Puhvel 1970b, 1987). We see no material culture remains, like cups, related to sovereignty, and no overtly obvious evidence of the other alleged IE concepts of force or fertility noted by Baldick (2000: 12-13, 168).

I have noted (Ch. 3) that based upon the iconography and placement of the decorations Bokovenko (2000) attributes the semantics of the Pazyryk horse trappings to the sky, earth and underworld of the pan-Asian or Boreal worldview often associated with sub-recent Inner Asian shamanism (Baldick 2000; Basilov 1989; Hoffecker 2005; LeMoine *et al.* 1995; Martynov 1991; Zvelebil 2003). Bokovenko's (2000) observation appears valid. Bokovenko (2000) connects the iconography on the upper part of the horse (birds and stag's antlers) with the upper world; those on the middle of the horse (herbivores being attacked by predators) with the “regular world”; and the decorations hanging down from the saddle (fish and defeated animals) with the lower world. Here it is not only the iconography, but also its placement, that are symbolically reflective of the tripartite universe. Thus, the wings on the headdress of horse #9 and the antlers on horse #10 both depict elements of these “upper world” animals and are placed on the upper parts of the horse; the predator-prey elements on the saddle seats show animals of the middle world on the middle of the horse; and the downward-hanging rams, human heads and felines on the pendants of horses #5, 8 and 10, respectively, signify through both their inverted imagery and placement on the lower part of the horse that they belong to the underworld (i.e., are dead).

Here again, as with the placement of the kurgans and bodies, position seems of high importance (Ch. 2), where the actual represents the conceptual. The underworld is the place of not only animals that live underground or in water, but of death for the body.

Above the world of those who walk on earth—animal and human—in the upper world of the sky live animals who fly or live “high” in the mountains or have parts (i.e., antlers) which reach upwards from the earth, toward the heavens. What emerges is a materially represented rhetorical system in which the horses themselves are adorned as avatars of the tripartite cosmos; embodied upon them are Pazyryk beliefs about the world, life and the afterlife.



Figure 6.25. *Bridle with human heads, Pazyryk 1.*

To explore how these concepts might play out more broadly, I now turn to an assessment of other horse-related funerary material: the representations of humans and horses, and the motifs of other animals adorning humans and horses.

Representations of Humans and Horses

Representations of both humans and horses are scant on artifacts from the original Pazyryk burials (cf. Parker Pearson 1999: 67). No human bodies, and only three clearly anthropomorphic figures of human heads are depicted: the felt cut-outs (Fig. 6.9C), the saddle with similar pendants, in which the heads hang downward, topped by horse hair (Fig 6.12), and the carved wooden decorations on one bridle (Fig 6.25), all from kurgan 1.



Figure 6.26. *Felt carpet or wall hanging from Pazyryk 5.*

Horses on Personal Objects

Unlike in other Pazyryk-era cemeteries, where some small carvings of horse heads and full bodies were located (Cheremisin 2005; Polosmak 1994b), in the original Pazyryk cemetery there were found only a few representations of horses. The first two depict ridden horses on the pile (Fig. 3.3) and felt carpets found in Pazyryk kurgan 5 (Fig. 6.26). The third is an 8-inch wooden whip handle, colored red, associated with the horses in Pazyryk 2. Here the horse's front legs are extended, brought tight against her jaw, while her hindquarters are twisted 180 degrees in the animal style (Fig. 6.27). A figure of a crouching feline, not visible in this photograph, curls around the horse. The fourth item, a similar whip handle from Pazyryk 4, includes only the horse from hips forward, and not twisted.

The fifth item is a delicate 1.6-inch silver belt cap, at the ends of a 32-inch leather belt with gold dots, associated with the woman in Pazyryk 2, and similar in design to the whip handles (Fig. 6.28). Like the whip-handle horses, this little horse has his ears flattened



Figure 6.27. *Carved wooden whip handle from Pazyryk 2.*



Figure 6.28. *Silver belt terminal from Pazyryk 2.*

against his head. The position of the horse on the kurgan 2 whip handle has been described as “rushing” (Rudenko (1970: 186), and the one on this belt ornament as “jumping” (Hancar 1952: 182). Neither is the case. In movement a horse will never have both feet to the fore at once, nor will the feet

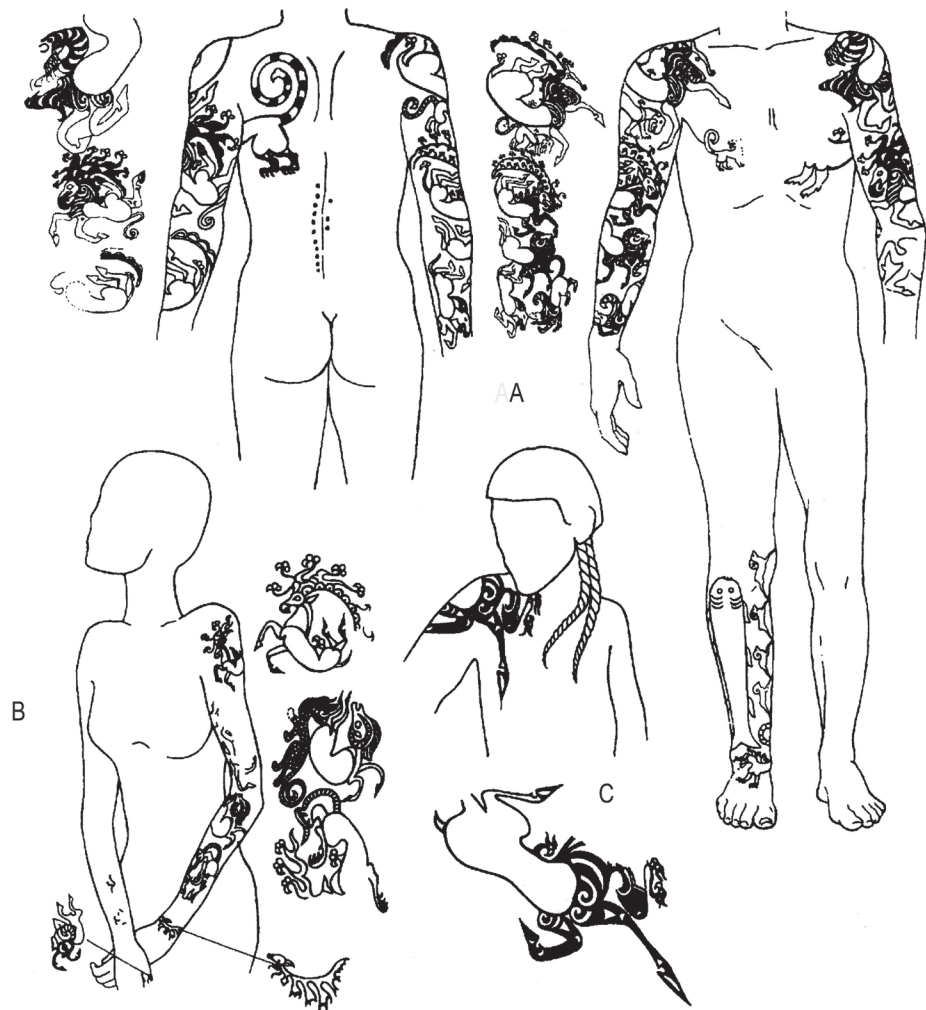


Figure 6.29. Pazyryk tattoos: A-the man from Pazyryk 2; B-the woman from Ak-Alakha 3-1; C-Verh-Kaldzhin 2-1 (after Polosmak 2000, fig. 1).

be close to the face. When horses jump, they bend their front legs at the knee and fetlock (ankle) and tuck them with the hoof bottom facing up and back. In only one instance in a horse's life will she be so positioned, ears flattened, feet pointing forward: as she emerges from the mare during the birth process. This is also conveyed through the proportions of the horses' scant bodies but large heads and long legs; the elongated, “squeezed” look of the bodies; the set of their mouths; and the soft, foal-fur mane represented in curved, round curls. While their shape might be questioned to be limited by material or style, all the factors combine to argue that, clearly, these are foals, being born.

Horses on Tattoos

Initially, real and fabulous theriomorphic animals were only found tattooed on the surviving skin of the elder male from Pazyryk kurgan 2 (Fig. 6.29A). Then the discovery

of the “princess” of Ak-Alakha 3-1 (Fig. 6.29B) and the Verkh-Kaldzhin male “warrior” (Fig. 6.29C) brought the total to three tattooed bodies. With such scant evidence, it was originally thought that not all Pazyryk mummies were tattooed; that an elite population of high-status individuals were only allowed to bear tattoos (Polosmak 2000: 101). However, more recent research has uncovered tattoos not visible to the human eye on other bodies, the female from Pazyryk 2 and the male and female from Pazyryk 5, using infrared light (Barkova and Pankova 2005). Therefore, although the number, size and placement vary on the different mummies and might have meanings associated with status, tattooing *per se* seems to not have been reserved for any special Pazyryk group.

The tattoos feature animals including birds, argali, deer, felines and possible theriomorphs as well as plant motifs. Although some of the tattoos are clearly fantastical blendings of many animals into one being, I suggest that some may be representations of horses, although they have often been misidentified otherwise. Space does not permit a full analysis of all the various tattooed animal images, but I will focus attention upon the tattooed forms representing horse bodies.

There are three identifiable types of horse bodies—all in the twisted animal-style S-shaped reverse spiral with hindquarters facing upwards, all in profile with forelegs raised and bent, one higher than the other and hindlegs separated as well. On each body, they are similarly rendered and placed at the same place on the various bodies. Moving up the arms, the first type of horses on the lower arms of various mummies are conveyed naturally and unadorned (Fig. 6.30).

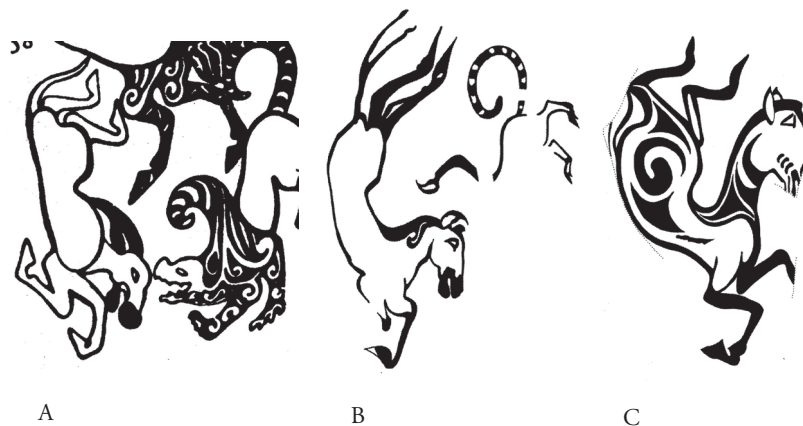


Figure 6.30. Horse tattoos, Set One: A-Pazyryk 2 man, lower forearm, also visible in 6.29 (after Rice 1957, fig. 58); B- Pazyryk 5 man, lower forearm (Barkova and Pankova 2005, fig. 6); C-Pazyryk 5 man, hand (Barkova and Pankova 2005, fig. 5).

The second type of horses are on the middle arms: two on Pazyryk 2 man's left and right biceps (6.31A-B), a little higher up on the Ak-Alakha 1-3 woman's left arm (Fig. 6.31C), and an incomplete or degraded image on the Pazyryk 2 man's upper right forearm. These horses are larger and, moving up the arms, generally have more detail to them, particularly on the forequarters. It is noteworthy that Figures 6.31B and 6.31C appear similar in composition and proportion in all regards but for a degree of more detail on the man's tattoo,

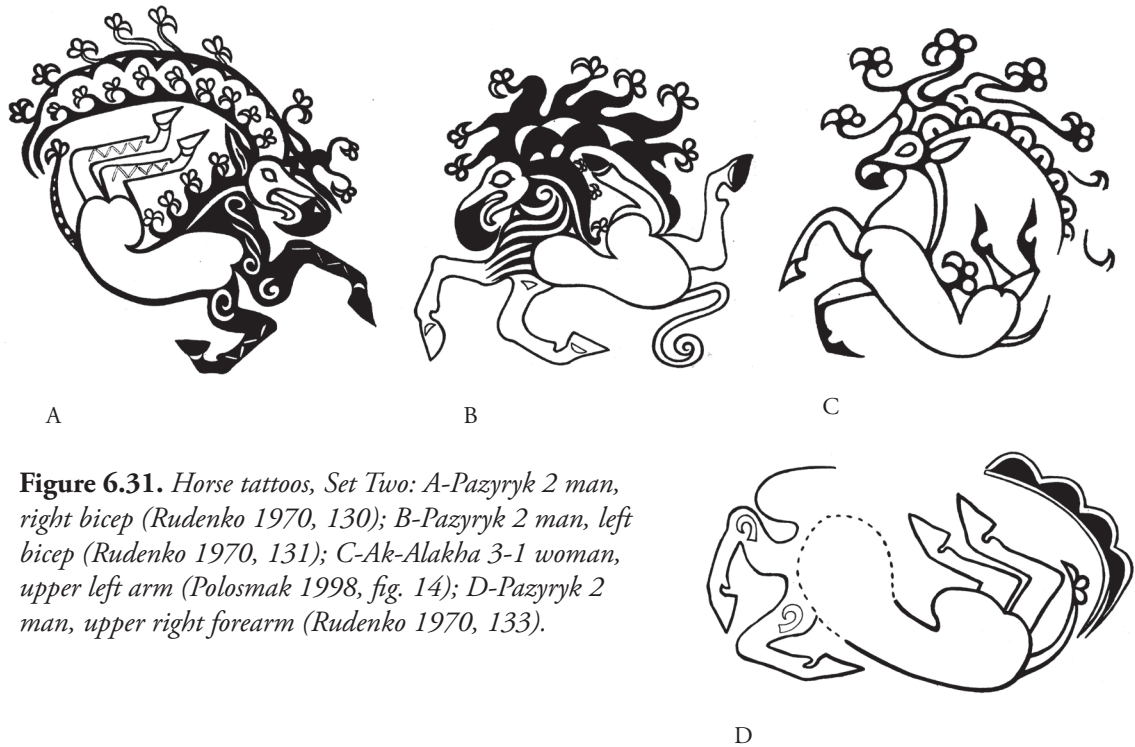


Figure 6.31. *Horse tattoos, Set Two: A-Pazyryk 2 man, right bicep (Rudenko 1970, 130); B-Pazyryk 2 man, left bicep (Rudenko 1970, 131); C-Ak-Alakha 3-1 woman, upper left arm (Polosmak 1998, fig. 14); D-Pazyryk 2 man, upper right forearm (Rudenko 1970, 133).*

and for a stylized feminization of natural sexual dimorphism which renders the woman's tattoo as a more delicate horse, perhaps a mare, and the man's as a more substantial one.

The final type of horses are tattooed on the shoulders. They are the largest, with the back of the horse wrapping from the back of the shoulder, the horses' heads near the neck, and with one front leg extended and one back (the same as the more flatly represented horses) on the front part of the chest (Fig. 6.32A-C). Figure 6.33 shows Figures 6.29C and 6.32C

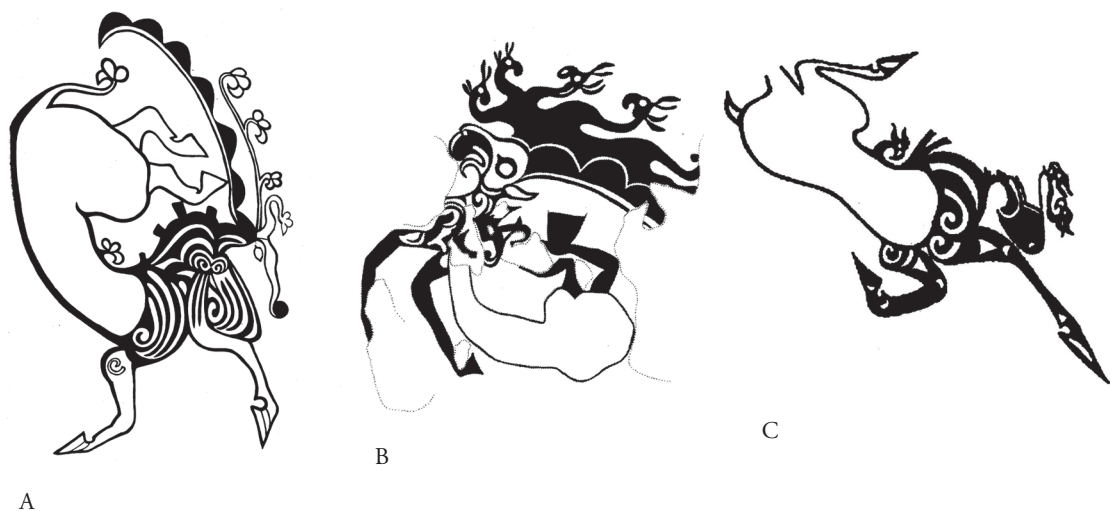


Figure 6.32. *Horse tattoos, Set Three: A-Pazyryk 2 man, right shoulder (Rudenko 1970, fig. 132); B-Pazyryk 2 woman, left shoulder, either less expertly applied or degraded (Barkova and Pankova 1995, fig. 2.1); C-Verh-Kaldzhin 2-1 man, right shoulder (enlargement of Polosmak 2000, fig. 1).*



Figure 6.33. Horse tattoo on the right shoulder of the Verh-Kaldzhin 2-1 male mummy on display in Berlin (photo: Axel Schmidt /AFP/Getty Images).

in-situ on the shoulder of a mummy from the Ukok cemetery of Verh-Kaldzhin 2-1, a blond man buried with one horse nicknamed the “warrior” (Bogucki 1996). Although the heads that wrap around the shoulders were difficult to reconstruct due to wrinkling and defects of the skin,

other similarities allow that they are larger versions of the mid-arm tattoos.

The second and third set of tattoos have been described as depicting deer or ungulates (Bogucki 1996: 150; Polosmak 1998: 153, 2000: 95; Rudenko 1970: 110-112), reindeer (Vitebsky 2005: 9), or theriomorphs: “stags with griffon beaks and enormous antlers” (Hancar 1952:189); “fantastic monster[s]... deer with the beak of an eagle and the tail of a cat” (Rudenko 1970: 263). Clearly, on closer inspection these can be seen to be horse bodies. The hooves with fetlocks above, the bends and reflected move-



A



B

Figure 6.34. A. Roe deer (*Capreolus capreolus*) (Wikipedia editors 2007); B. Reindeer (*Rangifer tarandus*) (photo: Hancocks, n.d); C. Horse (*Equus ferus caballus*), Sunspot’s Eclipse with legs in the same position as the Pazyryk tattoos.



C

ment of the legs, the differences in muscling, the density of bone, and the entire shape and proportions echo horses, not deer (Fig. 6.34A) and certainly not reindeer (Fig. 6.34B). Indeed all the horse tattoos placed the horses, in all but the twisted aspect, in the middle of the particular motion rearing playfully (Figure 6.34C).

The second and third sets of tattoos depict not so much theriomorphs, but actual, masked horses, as horse #10 in Pazyryk kurgan 1, but with headdresses topped in many cases by ibex (*Capra siberica siberica*, a large wild mountain goat) rather than elk horns (Fig. 6.35). Actual horses with headdresses topped by wooden ibex horns were found in burials at Berel 11 (Fig. 1.1) and Tuekta 1 (Fig. 6.36A) and 2, and on rock art dated to the Bronze Age (Fig. 6.36B), where a person appears to hit the horse in the head with an axe (Francfort 1998: 314). The ibex horns are visible in Figs. 6.31C and 6.31D, where part of the horse is obscured but the horns are visible; in 6.32A; and elements of 6.32B. In Figs. 6.31A-C, the ibex horns appear less actual, and more referenced with the repetitive loopy bumps. In Figs. 6.31 A-C and 6.32A-B another set of seemingly fanciful, branched upper horns, the ends tipped with birds or plant motifs, are added as an element above the more literal ibex horns (see also Rudenko 1970, pl. 142D).

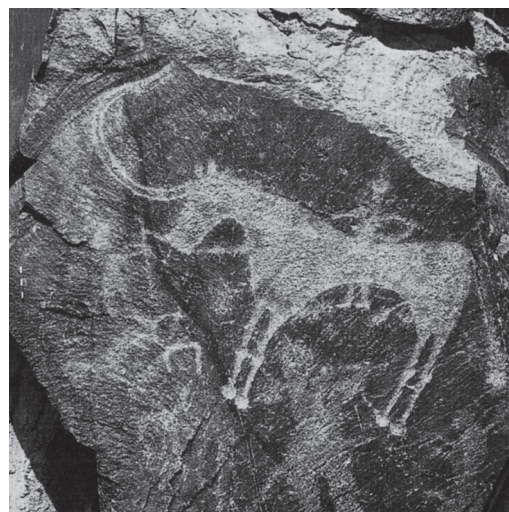
Francfort (1998: 315) holds of these Inner Asian horned horses—both actual and as portrayed in the Tamgaly petroglyph—that “a shamanistic substratum in the broad sense



Figure 6.35. *ibex* (*Capra siberica siberica*) (photo: Ries 2007).



A



B

Figure 6.36. *Horses topped with ibex horns: A-Headdress from Tuekta 1; B-Tamgaly-III petroglyph site, Kazakhstan* (Francfort 1998, fig. 17.11).

gives... the best possible explanation of this theme: the image of a magic mount for a journey to the other world.” Here the actual horned horses are sacrificed for the purpose of carrying the souls of the dead to the Otherworld. These may be partial meanings. Yet if the Berel and Tuekta costumes are similar to the well-worn Pazyryk ones I handled, they apparently were not simply reserved for sacrifice at the human burials, but were used for other occasions and then, when the time came, placed upon the horses. What other meanings, perhaps more nuanced and syncretic, might be represented on the Pazyryk tattoos?

Life, Death and the Marking of Time

Parker Pearson (1999: 64) discusses the importance of skin as a boundary in the Pazyryk burials, where both its surface and the covering of it hold symbolic importance. It was the skin and bones that the Pazyryks preserved through embalming; the flesh and brains were discarded. The skin represents the interface between the self and the world, and tattoos upon it serve to bring into consciousness images and ideas that are culturally or personally important. Through time, tattoos have been applied for purely decorative purposes, to celebrate a significant event or life achievement, to mark rites of passage, to memorialize loved ones who have died, and to mark various types of ethnic, religious, or ideological group membership (Cains and Byard 2008: 197, 206-210). Parker-Pearson (1999: 65) and Hanks (2003: 96) hold the tattoos were meant to be apotropaic, while Polosmak (1998:153) supposes that both the fact of Pazyryk tattooing and the iconography itself, rather than solely relating to personal attributes or meanings, was of broader significance to the community as a whole. Clearly the similarities and regularities I have pointed out within this small set would support Polosmak’s interpretations. But neither of these suggestions rule out specific, personal meanings of the horses on the tattoos.

In the way that the coiled feline might represent equine accomplishment of a certain degree, perhaps so the actual horned headdresses served a similar purpose for actual Pazyryk horses. These living horses might have been so adorned because they were particularly adroit at negotiating perilous mountain passes (which not all horses naturally do) in the manner of the graceful and surefooted ibex, an animal traversing the upper, mountainous realms of earth. If this were the case, then perhaps these tattoos are not images of theriomorphs but of actual, biographical horses who belonged with the tattooed person, horses who had somehow proved themselves in an archetypal fashion, in life masked and dressed with horns connoting their abilities or actions.

The horse tattoos are all twisted in the S-shaped spiral. Given the consistency of the horse outfits with the tripartite universe, we might fruitfully look to elements of the Boreal and shamanistic worldview in interpreting the tattoos. Within the shamanic context, the Oth-

erworld is the reverse of this one; there things are inverted, upside-down, backwards (Eliade 1964: 190-204). The spiral:

... bears the imprint of the cosmological paradigm, the transcendental cavity tunneling to the *axis mundi*, which joins the antipodal centers of this World and the Other. It demarcated an existential place or point, wherein the arcana of creation and entropy are but reflected images of each other—both, at once, self-generating and self-destructive (Ripinski-Naxon 1993: 33).

Thus, the *reverse* spiral might represent life and death simultaneously. According to Jacobson (2007: 65), “A twisted animal referred inevitably to either the act of predation or to the impact of predation...probable death.” Within the tattoos, the “...deer, goats and horses twist within their tattooed figurations, conveying the slamming of one body into another, a kind of ‘moment of truth’ in which life in one form became another” (Jacobson 2007: 65). While the two-animal predation scenes are seen in various depictions, within Pazyryk artwork horses never appear in these scenes, such as those on the saddle covers. In some few places they appear worried by predators: the one whip-handle foal bothered by the feline (Fig. 6.27), and two lower hand tattoos (Fig. 6.30A and possibly B). More often they appear as singular animals, and on the personal items—the whip handles (Fig. 6.27) and belt terminal (Fig. 6.28) carrying the twisted foals—and most of the tattoos, they are unharrassed.

In addition to being twisted, generally, the upper-arm and shoulder horse tattoos are more detailed on the front parts of their bodies, which face down toward the earth. Their hind-quarters drift upwards as if floating, outlined but undefined, not filled in. I suggest that the twisting of the horses in the tattoos represents neither predation nor “probable” death, but the actual act of death, the moment at which the soul or life force leaves the body. This is consistent with the Inner Asian shamanistic tenet that black is associated with lower world, and white with the upper world (Basilov 1990: 37). Conveyed in the tattoos seems the notion that at death, the *substance* of life, the detail, leaves the body and as the ephemeral spirit is freed of this weight, it glides amorphously upward, to the upper world, where spirits reside. In this way—twisted, at the point of death—the actual horse is memorialized, yet the power of his ascending spirit remains as well. Jacobson (2007: 65) has noted that in Pazyryk iconography, the twisted motif must be “joined with the bird-tree symbolism to transform the result from death to rebirth,” and this is perhaps the point of the second set of antlers above the ibex horns (Figs. 6.31A-C, 6.32A-B). Depicted in the tattoos at the moment of death, life and death, the earthly and the spiritual, appear in the same image. The horse is always alive, always dead, always with the person and visible to the community.

According to anthropologist Agnieszka Halemba (pers. comm.) in the Altai today, horses measure a person's time. A man will have several horses over his lifetime, a gentle one as a young boy, then one he trains himself. Halemba notes that this latter horse is sometimes called *ergine mal*, meaning "highest treasure"—the co-bonded "horse of a lifetime" I have previously discussed. When a person's horse dies, it is a noted time, a time of transition to another phase of his life (Halemba, pers. comm.). If the tattoos represented biographical horses, it is possible to imagine that they were applied over time, beginning with the hands and moving upwards—in the direction of "higher" and "better" apparent in other aspects of Pazyryk funerary practice—to the shoulders. The less-defined and unadorned lower horses on the hands may have been that first horse, the older, steady but not materially commended "babysitter" who taught the youngster to ride, now dead (perhaps killed by predators as in Figs 6.30A and possibly B?); the masked horses of the middle arms those who shared and reflected human-horse accomplishments; and the "highest" horses, on the shoulders, the "highest treasures." As the horses themselves marked significance events in the human's lives, so the horses' own events were marked: their births were marked in material culture that humans wore or used, their lives' accomplishments were materialized in their costumes, and their deaths were inscribed upon their humans' bodies.

If this is the case, then painfully etched upon the most important part of the body for these Pazyryk humans—the part worth preserving through embalming for the life in the Otherworld—are the histories of the horses of their lifetimes, both commemorated and marking time. In this way, Pazyryk cosmological, social and personal meanings coalesce in the horse tattoos. The horses are no longer of flesh and blood and hair, but of soot implanted into human skin. Yet the importance of the actual horses seems not reduced by these archetypal images, but heightened. Although each image is still one horse, and remembered as one horse, each is more. Each also becomes "horses," both creative of and embedded within communal corporeal, cognitive and spiritual experiences and identity, multiplied in significance.

Representations of Other Animals

I have argued that the Pazyryk horses were dressed as cosmological avatars of the three-tiered universe, where certain animals were understood as belonging to actual and conceptual spaces. But does this model only hold for the horse outfits, or also for other aspects of material culture? I would like to expand upon this as it relates to broader issues of cosmology, to a more general Pazyryk typology of animals, and to where horses might be situated within it. For this I now turn to the representations of other animals on items worn by humans and horses.

Animals on Clothing and Personal Items

In cases where human clothing has been preserved, they do not generally include animal iconography (but see the woman's apron and boots from Pazyryk 2, Rudenko 1970: figs. 35, 39), but rather repetitive geometric or floral patterns (Fig. 6.37). The exception is on headgear, not all but many of which have animals upon them.

Figure 6.38A depicts a woman's remarkable hat/head-dress from Pazyryk 2. Like other Pazyryk clothing, it is decorated with repetitive geometric leather cut-out designs, regularly placed. Atop the creation is a "diadem" of ten leather cut-outs of cocks, cleverly rendered three-dimensionally (Fig. 6.38B).



A



A



B

Figure 6.37. *Pazyryk clothing iconography: A-sole of the woman's boot, Pazyryk 2 (Rudenko 1970, pl. 152c); B-border of man's stocking, Pazyryk 2 (Rudenko 1970, pl. 153b).*

Although the material of the hats is not noted in many cases, the Pazyryk 2 woman's headgear is remarkable in



B

Figure 6.38. *A-Woman's headdress from Pazyryk 2, reconstructed (Hermitage materials); B-leather cocks (Rudenko 1970, pl. 65b).*

that it is covered with fur of a colt, and it has pendants or flaps of sable fur dangling down from the browband including, at the place of the woman's ear, ones shaped like horse ears. The silver twisted-foal belt terminal (Fig. 6.28) was associated with this woman, and the whip handle with the foal being harried by a feline was (Fig. 6.27) with the horses in the "shaman's" kurgan she shared with the man presumed to have been the shaman. Perhaps these artifacts share meaning, where an anticipated or special foal was lost to predation and memorialized; perhaps this woman held particular skill with socializing foals into human-horse society, and was perceived as the Pazyryk equivalent of a "horse whisperer."

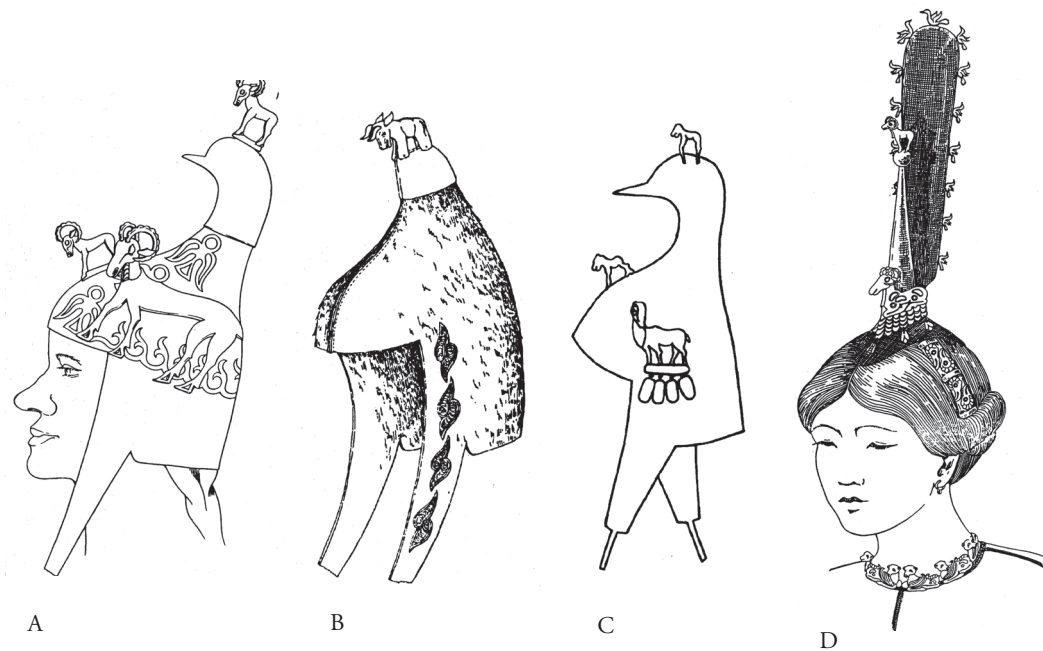


Figure 6.39. Human headgear reconstructions: A-man's hat from Ak-Alakha 1-1 (Polosmak 1994b, fig. 38); B-woman's or child's(?) hat from Ak-Alakha 1-2 (Polosmak 1994b, fig. 81); C-man's hat from Verh-Kaldzhin 2-1 (after Cheremisin 2009, fig. 1); D-woman's headdress from Ak-Alakha 3-1 (Polosmak 1998, fig. 11).

Hats from Ukok cemeteries echo the avian theme, with the addition of split-hooved, horned wild ruminants (order, *Artiodactyla*; suborder, *Ruminantia*), ibex and perhaps argali (Fig. 6.39). The avian-ruminant theme continues to the horse headgear, as noted in Pazyryk 1 horses #9 (Fig. 6.18) and 10 (Fig. 6.21), the mane covers from these horses with cock's combs (Fig. 6.17), and the headgear from other Pazyryk kurgans (Fig. 6.40).

As with the horse clothing, both human and horse hats portray animals of the upper realms of the actual world: animals who either fly or live in the high mountains. The mammals are those who bound with all four feet into the air as if flying themselves. These animals are placed upon the upper parts of the attire. All of these animals, placements or functions reside in or are surrounded by air, and relate to "upper" or "higher-than." This connection

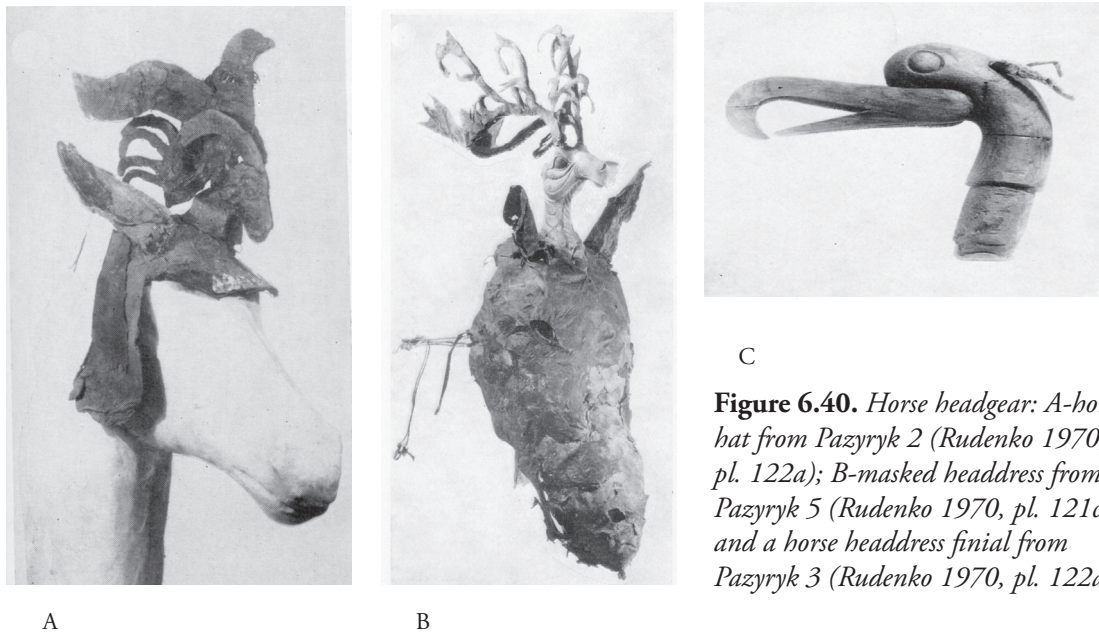


Figure 6.40. Horse headgear: A-horse hat from Pazyryk 2 (Rudenko 1970, pl. 122a); B-masked headdress from Pazyryk 5 (Rudenko 1970, pl. 121c); and a horse headdress finial from Pazyryk 3 (Rudenko 1970, pl. 122a).

appears to carry over to other artifacts, as evidenced by the expressive, sculptural felt swans which topped the carriage canopy in kurgan 5 (Fig. 6.41).

Viewing other Pazyryk funerary clothing, it is apparent that not only the horses are “dressed” as avatars of the three-part universe, humans and other objects are also ornamented in this fashion. The entire Pazyryk material world is infused with similar images. Yet this seems to express more than a cosmological vision of how the world is structured; the three conceptual spaces appear not to have held equal value. In relation to the placement and structure of the burials, and the apparent favoring of the taller humans and horses (Ch. 2), the upper end of verticality appeared to matter. Within contemporary Kazakh worldview, the upper world is the home of good spirits,



Figure 6.41. Felt swans topping the carriage canopy from Pazyryk 5 (Rudenko 1970, pl. 166).

the lower world of the dead and unfriendly spirits, and the middle world is where both good and evil spirits dwell, along with human, animals (Koško 2002: 14) and also “numerous spirit-owners of lakes, rivers, mountains, localities, individual objects, and natural phenomena” (Alekseev 1990: 101). What emerges is a sense of the upper world, the world of spirits, as a valued place for the Pazyryk, a place to aspire to. It is not, for instance, animals of the underworld that adorn the coffin of the man placed in the ground in Pazyryk 1, but cutouts of birds (Fig. 6.9A), reflecting perhaps the belief or hope of the soul’s ultimate residence in the upper world. The human and horse headdresses are very unwieldy and only useable at all due to clever design—yet this clumsiness is accommodated in the desire to obtain height, to make one’s self (or one’s horses) higher. Here, form follows not actual, but *perceived*, function. This argues that the value of height, of “upwardness” was truly significant, worth the added effort of materializing in this manner. As with the tattoos, as with the taller decorations on the older horses, time moves upwards, the events of one’s life move upwards, culminating at the spiritual release of death, when one’s soul floats to the firmament, assisted in its journey perhaps best by the animals who reside close to it.

Materials, Agency, Transformations and Temporality in the Pazyryk Worldview

In an attempt to extend possibilities of the Pazyryk worldview, because of the resonances between Pazyryk iconography and the tripartite universe, it is appropriate to turn to more recent accounts within which this concept appears—the shamanistic worldview of Inner Asia. It first should be noted that it is difficult to speak of a singular “shaman” in any sense as a full-time, solitary profession with narrowly defined functions. Humphrey (1995: 138) notes various socio-cultural categories with super-natural (as defined in Western terms) abilities, among them “midwives, smiths, bone-setters, diviners, hunters, astrologers,” and Polosmak (1998: 163) points out that among contemporary Altai-Sayan peoples there are apparently at least 30 designations for various societal roles that possess special, secret knowledge (see also Alekseev 1990: 84, 107; Czaplicka 2003: 196, 233, 238, 280; Diachenko 1994: 269; Hoppál 2001; Humphrey and Onon 1996: 26; Potapov 1996: 113). Thus, here I address not shaman-ism, but the shaman-istic worldview, understood as inherent in Central and Inner Asian beliefs.

An ideological premise within this belief system is that physical shapes and selves are not bounded in the sense of Western understanding—people, animals and objects can exchange qualities with one another (Furst 1994: 2-3; as in other contexts, see Conneller 2004; LeMoine *et al.* 1995). Brentjes (2000: 259) views Iron Age animal-style art as shamanistic, represented by the theriomorph, in which elements in nature are special forces and have their own power, and where balance of power is arranged by the shaman, who as a specialist can communicate with these special forces. The shaman called upon animals, or combinations

of animals, as assistants and representations of them, empowered with the force of the real, were used on the costume, applied through tattooing, painted, carved, etc. This concept is confirmed by Jordan (2001b: 90) who notes that within contemporary Khanty shamanism “material objects may also come to be regarded as being animate if, through their physical form, they resemble other animate beings....” Objects *become* animate and powerful through resemblance (Jordan 2001b: 90) and, through putting on the object, an animal mask or skin, one *becomes* the animal, with its attendant powers (Kubarev 2002: 104). Identities can be altered through material means like masking (Pollock 1995), qualities can move and change, and attributes are mutable.

From this vantage point, the horse tattoos might not only represent actual horses, and “horseness,” but also “spirit assistants” (Sorokin 1978: 184), which imbue the wearer with the admired and supernatural (to humans) attributes of horses. In this context, the Pazyryk concern with height might reflect their understanding that for both humans and horses the clothing and iconography—hats and headdresses themselves, or as adorned with upper world animals—one doesn’t only *appear* taller, but actually *becomes* higher, a part of the world of the good spirits.

In the sense of such transformations, all tenses of time might be represented simultaneously. The horse tattoos might reflect both linear and non-linear time, and the structure and iconography of the horse equipment might be understood simultaneously as commemorative awards (e.g., *You have been*, in the past, agile like an ibex), as representations of qualities in the present tense (e.g. *You are*, now, agile like an ibex), and as apotropaic amulets (e.g., *May you be*, in the future, agile like an ibex), representing a fluidity not only of attributes, but also of temporality.

With these transformations of bodies, attributes and time, the Pazyryk worldview appears not to have placed human culture outside of the natural realm: “[T]he shamanic worldview assumes no human superiority over the rest of nature: people, like other life forms, exist within and depend upon nature and the goodwill of the spirits that animate and rule over the environment” (Furst 1994: 2-3). Nor does it present as one in which the domination of nature (including animals) by humans was assumed. Following Tani (1996), Campbell (2005) notes that within Siberian-Mongolian ritual practice, pastoralists have a set of conceptions about animals’ place in the universe which does not incorporate the human dominance of nature, but rather holds that “the reproduction of the animal world is independent of human control and protection, even if this independence might be vulnerable to the human desire to violate it” (Tani 1996: 410). If this were the case for the Pazyryk, how might the “animal world” have been structured?

Pazyryk Animal Typologies

The Pazyryk appear to have had a scheme for categorizing animals very different from Judeo-Christian delineations between humans and “other” animals, from Marxist economic or domination models, and from Linnaean morphological taxonomies. Each of these paradigms presents as unidimensional; animals are reduced to resources or morphological shapes and functions. Pazyryk categorizations, instead, were likely to some degree reflective of the animals’ actual and metaphorical attributes and abilities intertwined within other meanings.

As evidenced by the number of types of species depicted on the saddles, the bestiary of the Pazyryk people was large, and some animals were perceived as more important than others. Clearly favored were birds and animals with “upper” vertical natural domains, specifically ibex and argali. These mammals bound with all feet off the earth at once, and leap onto precipices, sure-footedly negotiating their lives’ paths in ways humans cannot. Yet these mammals are also of the middle world, as they appear on the saddle seats in predator-prey scenes, along with another group who do not appear in “upper” contexts—herbivores and carnivores of the forests. In the saddle predator-prey scenes of the middle world, the upper world animals are “brought down,” they fall upon the earth at death in twisted spirals, and then appear as animals of the lower world, dead, heads hanging upside-down from the saddles.

It is important to note that these favored mammals, although herbivores, are not only adroit, but also powerful. Male ibex and argali can weigh up to 220 and 440 pounds respectively, and would have been not only difficult to hunt in their steep habitats, but also intimidating and probably dangerous prey to bring down, whether by humans with bows and arrows or by other predators (Figs. 6.35 and 6.42A). The



A



B

Figure 6.42. *A-Argali* (*Ovis ammon ammon*) (photo: Reznichenko 2010). *B-Altai maral* (*Cervus canadensis*) (Wikipedia editors 2006).

male Altai maral (Fig. 6.42B) represented on horse #10's headdress, can weight up to 700 pounds. All of these males engage in powerful and noisy, head-butting clashes at mating time.

The point to make about the predator-prey distinction is that these wild herbivores seem highly valued, not merely as a food source, but for other attributes. This is at odds with Western distinctions today, where larger herbivores are institutionally slaughtered “animate vegetables” (Clutton-Brock 1994: 34), and the predator is more highly esteemed, a point to which I return in the following chapter. This is not to say that the predator's ferocity was not highly regarded—as perhaps evidenced by the tattoo wrapping the Pazyryk 5 man's shoulder (Fig. 6.43)—but to point out that proportionally, in relative numbers and sizes of images and in apparent import of placement within this admittedly small set, prey take precedence in Pazyryk iconography across all datasets examined here.

Other than the horses on the tattoos, the domesticated animals archaeologically associated with the Pazyryk—fat-tailed sheep, goats, large-horned cattle and yaks (Hiebert 1992: 126)—are not represented in their art. The imagery, but for the horse, consists of wild animals. Perhaps in their taming these other domesticated animals lost their admired qualities? Yet this does not seem to be the case with the horses.

In addition to the co-buried riding horses, the burials reveal there were other “categories” of horses who lived with the Pazyryk people, perceived differently based upon their community roles and their relationships with the Pazyryk humans. As evidenced by the koumiss stir-stick in Ak-Alakha 3-1, there apparently were the mares who were milked, who would have been handled regularly and thus were probably both functionally and interpersonally significant to the humans. Sheep's caudal vertebrae were found on the tables near the dead in all kurgans that were preserved, but horseflesh was also found in a similar context in Pazyryk 3, Ak-Alakha 3-1 and Kurtandas 1-1, so some category of horses were killed to be eaten. Perhaps these were *tabun*-kept herd horses. Certainly Arzhan 1 (Fig. 6.23) implies different categories of horses: 138 saddled and bridled horses were found within the kurgan; the central human

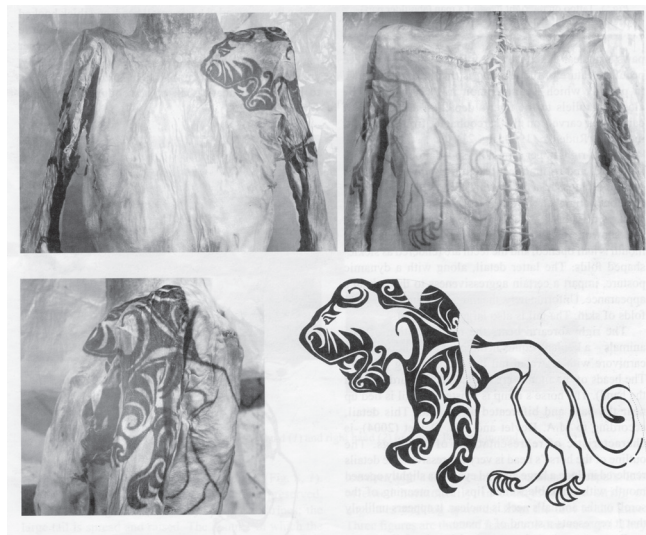


Figure 6.43. *Tattoo of a lion on the Pazyryk 5 man's shoulder (Barkova and Pankova 2005, fig. 4).*

burial chamber floor was covered in horse manes and tails; and surrounding the kurgan, over 300 smaller stone graves each included a hide burial, suggesting a funeral feast (Piggott 1962; 1992: 112-114). This latter practice was quite common across Iron Age Eurasia (Chang *et al.* 2007; Koryakova and Hanks 2006; Olsen 2000; Piggott 1992). In sub-recent shamanistic practice, particular colors of horses were sacrificed to certain deities, for purposes having nothing to do with burial ritual (Alekseev 1990; Eliade 1964; Potapov 1996). Perhaps the similar coloration of all the preserved Pazyryk horses indicates that horses were also classified by color.

With all of these possible types of horses in mind, only the riding horses held the special status of being co-buried with humans. Within the Pazyryk blended and co-created social landscape, for both the men and women the riding horses likely were perceived as differently-abled subjects, with whom the Pazyryk partnered for projects crucial to the community's existence. Beyond functionality, for the humans they phenomenologically enabled altered states of sensuality and perhaps consciousness, marked time, and touched the three worlds with their bodies. Horses also were beings with whom these people necessarily developed ongoing and rich emotional bonds. Then why kill them?

The Sacrifice of the Horses

The effort spent schooling the horses would have made them quite valuable and hard to replace. Their value is also attested in the effort spent designing and producing their costumes. Clearly they were not sacrificed because they were expendable, quite the opposite it seems; they were invaluable in death as in life. Jacobson notes of the Pazyryk horse burials that "in all cases it is apparent that the animals were understood to be in some manner essential either to the passage of the dead person's soul to the next realm or to that person's life when he arrived there" (2007: 65; in the European Iron Age, see Hill 1995: 103). The idea that horses could accompany and assist humans after death implies a belief that horses, too, possessed an afterlife that would allow them to remain useful in some way to the dead. This points to both an importance of spiritual beliefs that outweighed the economic loss of the horses and to an entirely different conception of death than we today hold. But did they "follow the master to the otherworld" (Golomshtok and Griaznov 1933: 41), or did they lead the way? As with the reciprocal nature of the relationship evidenced archaeologically, perhaps in death, as in life, they did both.

People who understand that the horse's abilities negotiating the landscape are better than ours trust the horse more than their own experiences. Horses know the way. They never forget the way home, or a route taken. In carrying us, they care for us, "making judgments and choosing a safe route" (Sharpe 2005: 109). Who better to take the deceased to the Otherworld? Who better could lead the way? The idea of the horse as a spiritual guide within

the Inner Asian Iron Age belief system is highlighted in the legend of the special “dragon stallions,” mentioned earlier (Ch. 4). These stallions were said to be sired by dragons and possessed the powers of their immortal sires, including the ability to fly and carry the souls of their owners to the heavens. This legend can be traced back to the later Iron Age Tien Shan region (Argent 2005; also Banks 1989; Beal 1884: vol. 1, 20; Esin 1965: 170, 210; Gladitz 1997: 32-44; Kessler 1993: 56-58). The transformative powers of horses is further recognized in the efforts of Chinese emperor Han Wu-ti (156-87 BC) in obtaining “heavenly horses”—horses with ability to fly and to carry the dead to the next world—from the Wu-Sun in the Tien Shan mountains (Creel 1965; Christian 1998; Sinor 1990; Waley 1955).

In the context of the Pazyryk concern for height, it is not unremarkable that in riding a horse, one is elevated, taller than one can ever be alone, and indeed already “closer to the Cosmos” (Gabitov 2001). On board their riding horses, these people were higher, and were thus advantaged both functionally and spiritually. In this sense, the horses were vehicles for travel, both mundane and transcendental, safely carrying their people in life on the earth and—with the most agile, the wisest and most trusted, with the horns of animals of the heights to help—leading the way on the figurative path into the afterlife above.

But perhaps they were followers as well. Horses, through time, have been “esteemed for their sensitivity and responsiveness to human concerns” particularly as related to the deaths of their people (Lawrence 2004: 64). Caesar’s horse is said to have “shed tears for two days before the hero’s death” (Lawrence 2004: 64 citing DeGubernatis 1872: 349-350), and Patroclus’ horses’ sorrow upon his death was noted by Homer in the *Iliad*: “Therefore, these two horses stand here and grieve, and their manes, Are swept along the ground as they stand with hearts full of sorrow” (Il-23.283-4).

Certainly justifications for self- or other-sacrifice can be seen to be culturally determined. According to anthropologist Ludek Broz (pers. comm.), for the Altai people today, “the slaughter of a horse is a rather emotional thing.” However, the killing of a horse is thought of differently from when a horse dies. “Horses could sacrifice themselves on behalf of the owner. No one laments the sudden death of a horse as this is regarded as self sacrifice that saved the owner from things like illness or the evil eye” (Broz, pers. comm.). A line from an Altaic epic poem, on the relationship between humans and horses, reads: “When we are alive, you are my wings. When we are dead, we have one grief” (Olga Ignatieva Kopeishik, Russian Museum of Ethnography, pers. comm.). There is a sense here of a belief that the inherent generosity of the horse in life carries over to death; that the horse-human bond is that strong.

It is possible that the Pazyryk people held views similar to these. Certainly, as anyone living with horses has, they witnessed their horses’ grief—or “depression,” as called by veterinarians, or “behaviors which would indicate grief if they were human” as might be called

by behaviorists—following the loss of a foal, or a co-bonded horse or human friend. The reasons for the sacrifice of horses as grave escorts could have included not only the need for their services on the way to or in the otherworld, but also a belief that the mutual bonds between human and animal were indissoluble, unrepeatable and untransferable to other people, and thus should be maintained in death as in life.

Serpell (1986: 189) has noted of the human killing of animals that “on the whole, the amount of effort needed to maintain detachment increases the closer—in every sense of the word—the animal is to people.” I will not bother with the euphemism “euthanized”; I have, out of what I believe was necessary kindness, “killed” horses who belonged to me, horses to whom I belonged. Sentimentality aside, it is a powerful and compelling event to witness, much less to have called into action. They do not die easily. The ground moves as their commanding bodies fall, the silence following the last, loud breath from their large lungs is magnified and palpable, and the air seems to lighten as the presence of their impressive life-force disappears. The psyche senses a shift in temporality. Despite the knowledge of the necessity of the action, the world feels, after those final moments... less full, minimized for the loss. As “close” as these people and horses were, it is likely that although perceived as necessary, the horse sacrifices at the burial site were not without a strong emotional component for the Pazyryk people.

This seems born out by the archaeological evidence. In Pazyryk burials with more than one horse, usually the “main” horse, the most highly decorated, was put into the grave first (Polosmak 1994b: 72) and only this horse was fully outfitted—the others had the saddles on but not the bridles. Why might this have been the case? To answer this, I want to attempt to reconstruct the funeral sacrifice scene, phenomenologically, as experienced by the Pazyryk people... and horses.

Well-treated and trusting horses that they were, all would have come willingly to the burial site and—with their keen ability to recognize and memorize patterns of practice and artifacts—perhaps were excited about the dressing and ritual to come, relating it to the practice of past, pleasurable cavalcades. But following the first execution, that of their respected elder, collective pandemonium would have ensued. Horses fear and, in their own way, think about death. When horses have died naturally, I have watched their band-mates approach the body, snort and run away. They return again and again, snorting and smelling, quivering, tense, looking for any movement, any sign that their friend is still there but only resting, then slowly comprehending that she is gone.

...[H]orses have their own grammar of time. They can't say anything that requires past, present or future tense, but that doesn't mean that without us they live in eternity, in the present tense only. Their concept of time might be expressed by saying

that the names of their tenses are ‘not yet, here and gone.’ You can’t make appointments with such tenses, but you can remember, and you can anticipate the future with no little anxiety. That is to say, horses do have some sensitivity to the knowledge of death, and that makes them nervous, just as it makes us nervous (Hearne 2007: 164-165).

Following the first horse sacrifice at the Pazyryk burial site, the other horses smelled the blood, heard the struggle and saw the pain of their respected elder. They would have revolted, confused at the unimaginable violence enacted upon them by the human partners they trusted, people who taught them and were taught by them, their people. The bridles with their valuable adornments were removed so as not to be damaged as they panicked and tried to escape. With no bridles on they were physically restrained by the humans betraying them, and because they were fighting for their lives, this would have taken many people. While the battleaxe blows to the head would cause quick collapse and death, as moving targets, they were not always dispatched with one blow (Fig. 2.14). The entire scene would have been tremendously violent, bloody and chaotic; the smell of the blood and fear and exertion, for the horses and perhaps the people as well, alarming; the soundscape of screaming horses and struggling humans, haunting. Time stretched as one by one, as the people and horses watched—some fighting with each other, something they had never done in life—the people did the same to them all, until all were “gone.” With this enactment in mind, the killing first of the most decorated horse might be seen as an act of respect for this statured, esteemed horse, to spare him the pain of witnessing the chaos to come.

The Pazyryk burial materials and possible reconstructed burial sacrifice convey seemingly conflicting elements of belief. On the one hand, the burial goods reveal that engaging with horses in a cooperative manner was a structuring principle in the Pazyryk community. There were gentle, respectful relationships with the horses, and attempts—as evidenced by the killing with the “honorable” battleaxes and at the most vulnerable point, and the dispatching of the most honored horse first—at providing equally respectful deaths. Yet the fact remains they were killed, and violently so. Perhaps these inconsistencies were thought about with both degrees of unsettling cognitive dissonance (Festinger 1957) and emotional conflict.

Of course burials are carried out by the living. A prominent member of society has died, and everything is in turmoil, the universe is out of synch. The crisis of losing a member of the community, mediated by the ritual of burying him or her, could be seen to further cement the important position of horses within the Pazyryk community. In sacrificing the riding horses—known *by* community members *as* community members—it is not only the human who has departed the middle world. The horses were gone as well, and perhaps were honored as a part of the burial ritual, which served the purposes of reaffirming cosmologi-

cal values, balance and order, and also of realigning both human and horse roles and statuses within the community. The horses, at least, would have grieved for those humans and horses who were “gone,” and perhaps the people mourned the loss of both as well. Perhaps the belief in an afterlife for both humans and horses helped serve, for the people, as an anodyne to the loss of both. In the “pastures of heaven” (e.g., Polosmak 1994b: 9; Samashev et al. 2000, Berel: 10), close to the Otherworld in the sky where good souls go upon death, the horses rested—and perhaps journeyed—with their people, essential, indispensable and mutually interdependent in death as in life.

Conclusion and Implications

An approach focused upon relationality—whether considering human-human or human-animal interactions and social structures—allows for a fuller understanding of the importance of our connections to others in both past and present societies. The evidence from the funerary materials demonstrates that these Pazyryk people’s relationships with these horses extended well beyond epicurean and technological interests, and clearly fell outside the domination model; the lives of these people and these horses were interdependent on many levels and, barring the ends they met, there is nothing to suggest the horses were cruelly treated in life.

Culturally significant messages are conveyed multicodally (Hoppál 1993: 82); “if two sign systems function within one culture then at a certain level they should be analogously structured; that is, they should operate under the same system of cultural logic, using the same symbols” (Rozwadowski 2004: 43; also Renfrew 1994: 53). We have seen this message redundancy, “that which is predictable or conventional in a message” (Fiske 1990: 10), in the symbolic representations across different media of specific attributes of the Pazyryk worldview. Both the grammar and syntax of the Pazyryk “meta-message” (Gimbutas: 1989: xv) give the sense that in the Pazyryk “cognitive constellation” (Renfrew 1998a: 265) of beliefs, horses played various highly significant roles within social, cultural and cosmological frameworks.

In this chapter I have explored the relationships between the people of Pazyryk and their horses as evidenced through the funerary materials, the range of roles the horses may have played in their lives and cosmologies, and what that might mean for interpretations about both human and horse roles and statuses. I now turn to how these inter-species relationships might be seen to recursively play further into formulating and maintaining Pazyryk group identity and ideologies.

CHAPTER SEVEN

AT HOME, WITH THE GOOD HORSES: GROUP IDENTITY AND IDEOLOGY IN IRON AGE INNER ASIA

We are face-to-face, in the company of significant others, companion species to one another. That is not romantic or idealist, but mundane and consequential in the little things that make lives.

—Donna Haraway (2008: 93)

We come to feel towards great horses like we feels towards great people; we wish they could live forever.

—George B. Hatley (Haddle 1975: 12)

Introduction

In the previous chapter, I explored numerous ways that Pazyryk human roles, “statures” and personal identities may have been bound up with horses—who themselves had roles, statures and identities—within Pazyryk society. This chapter accomplishes further goals. First, I tie up some of the various threads and build upon some of the theoretical themes brought out in this thesis. Second, I answer several questions brought up in this thesis: How might the close relationships between the people and horses implied by the archaeological materials have influenced broader issues of group identity and ideology for the Pazyryk people?; and the original research question posed by this study, What did the horse mean to the people of the Pazyryk archaeological culture? Finally, I pose some new questions about the ethical implications of this work for archaeological discourse.

To accomplish these goals, I return to the relational approach I have taken in this thesis, which posits that relationships between humans and animals are recursively co-constructed (Birke *et al.* 2004: 170-171). I have argued throughout this thesis that the relationality between humans and horses is not a linear phenomenon in which humans solely act upon horses, but rather a multi-directional web of interchanges and understandings through which horses act back as participants, subjects and actors. It is from this perspective that I now explore these final topics.

Theoretical Constructs and Models

Ideology and Group Identity

I begin by clarifying the recursive nature of self and group identities and ideology. Self-identity concerns the question “Who am I?” and cannot be separated from the group because the self is not bounded, but created through our interactions with others (cf. Thomas 1996: 52; see also Brück 2004; Casella and Fowler 2004; Cross and Gore 2005; Edmonds 1999; Fowler 2004a, 2004b; Hodder 2000; Hogg 2005; Mead 1967). That is, the individual does not have “...any fundamental or essential character which precedes the constitution of the social or cultural collectivity” (Thomas 1996: 54). Senses of self within the community vary across cultures, and range on a continuum between independent and interdependent (Cross and Gore 2005: 538).

Regarding “ideology,” the Marxist view approaches ideology from an epistemological stance in which it serves as a “‘false consciousness,’ a distinct set of *untruths* about the world which are concocted by the dominant class and imposed upon the rest of the community” (Thomas 2000: 12); as “cultural constructions which misrepresent or deny a contradictory social reality” (Shanks 1991: 39). Rather, my use of the term follows Parker Pearson (1982: 100) as “a system of beliefs through which the perceived world of appearances is interpreted as a concrete and objectified reality.” But I would add that ideology concerns not so much “worldview” beliefs as the *manifestations* of the beliefs in actions and behaviors. This ties social identity to ideology as “... that aspect of the self-concept that derives from group membership and is associated with cognitive, motivational, and social processes *that are associated with group and intergroup behaviors*” (Hogg 2005: 474, my emphasis). Thus, beliefs, group identities and ideologies operate dynamically and recursively, and reference: “We are this kind of people. This is how we behave.”

“Ideology” cannot be approached as has been done in recent archaeological discourses of the horse in Iron Age Inner Asia by limiting it to but one area of study among three—the functional/economic, religious/cosmological, and social/ideological (Ch. 3)—because horses appear fundamental in all three of these constructed spheres. Furthermore, both ritual and religion serve in the creation and maintenance of identities (see Fogelin 2007; Insoll 2004: 10; Lehmann and Myers 2000: 414; Renfrew 2007: 113), as does daily practice which might relate to functional/economic concerns, because “human beings become aware of themselves and their surroundings in the context of everyday life: we find ourselves in the course of living” (Thomas 1996: 234). Ideology therefore must be approached more holistically (cf. Whitley 1998: 16; Thomas 1996: 29; Schwabe 2000: 36). Thus, I view ideology as visible through behaviors, as accomplished through embodied living in the “world of

actual experience” (Merleau-Ponty 1962: 66), and as “a means of enhancing the solidarity of distinct group consciousness” (Thomas 2000: 12).

The challenge at hand is to attempt to infer from the Pazyryk archaeological materials the actions that reflect underlying beliefs. In other words, if we can ascertain how the Pazyryk *behaved*, we might have a glimpse into the beliefs funding those behaviors: their ideologies and group identities. Because the ridden horse inhabited all three spheres of Pazyryk endeavor, it is appropriate to return one last time to expand upon the recursive nature of rider-ridden horse interactions, as these might be seen to have impacted Pazyryk identities and ideology.

Cultural Learning and Apprenticeship

I have discussed (Ch. 6) how Pazyryk humans and horses together interacted within an interspecies social mindscape based upon a blended *habitus* (Bourdieu 1977) within which interacting cooperatively with horses was a structuring principle for the Pazyryk, and how horse-human roles and social statuses might have been blended within this “co-created... conjoint world” (Birke *et al.* 2004: 175). I now turn to how such a world is shared, culturally transmitted, and perpetuated.

Where humans and horses live together in a joint world, both species are socialized into the community and recreate it (cf. Birke *et al.* 2004: 175). With the aspect of riding, it would be illogical and dangerous for any society to try to recreate the entire ontogeny of horse training each time, and this is not what happens. Rather, this method of cultural learning is best described as an “apprenticeship” process (cf. Podhajsky 1968: 4). In this process, the nascent “rider” works with a trainer, who at one point was a nascent rider who worked with a trainer, to learn the embodied “language” shared with horses. From the human side, the rider learns how to sit, and how to speed up or slow down, but more importantly learns an attitude that means “thinking from the point of view of the horse, knowing what the horse feels, what he likes, what difficulties he has to overcome, and how he, too, is influenced by moods or the surrounding atmosphere” (Podhajsky 1968: 3).

It is not only within the human sphere that this knowledge resides, or solely the chain of humans through which it passes. There is an axiom among working riders: “Green horse, seasoned rider; green rider, seasoned horse” (cf. Dorrance and Desmond 1999: 16). This means that an unschooled horse should be brought to the process of riding by a human who can do so effectively, without causing physical or psychological damage to the horse. Conversely, a new rider should be “taught the ropes” by a patient, honest horse, well-familiar with the process, and forgiving of the myriad miscommunications clumsy new riders will make in learning the shared language and necessary mindset. In many equestrian disciplines today, these older, well-schooled, veteran horses are termed “schoolmasters.” They, like the

“babysitters” previously discussed (Ch. 5), “fill in for a person who lacks experience” (Dorance and Desmond 1999: 16), and the value of such good horses’ judgment is reflected today in their often enormous monetary value. These horses have the constitution, ability, knowledge and—important to an understanding of equine agency—willingness to teach humans. Not all horses can, or choose to, take this role.

Working riders recognize that good schoolmasters bring unique techniques to their work: “She would never spook or buck, although she would play tricks on beginner riders, such as walking around in circles, refusing to trot, or walking back to the mounting block and stopping!” (Sanger 2010: 1). The message from the horse in this instance is clear: “I know how this is supposed to go, and you’re not getting it right. Once you figure it out, we’ll do it your way, but in the meantime, I’ll keep letting you know you’re not there yet, but in ways that won’t hurt you.”

Horses treated violently may retaliate dangerously (McGreevy and McLean 2005), and will not be good teachers (Podhajsky 1968: 12). In cultures which use harsh measures and implements, their use necessitates the ongoing need for such methods and equipment, perpetuating a culture of inter-species conflict. This type of interaction might be inferred from the archaeological materials of the past societies that used harsh and painful bits (Ch. 6, Fig. 6.8), where human dominance over horses, and thus nature, is the underlying belief.

Within this process, knowledge of “riding” in the functional sense of “how to ride” for the human, and “how to be ridden” for the horse, concerns also the relational aspect of “how we understand and approach each other.” Such knowledge is not only passed from one rider to the next, but in an unending chain from horse to rider to horse to rider. Thus, through apprenticeship, individually, and through the shared culture it fosters, communally, horses both create and pass along shared meanings.

Redefining Interspecific “Culture”

I mentioned (Ch. 4) several problems with current models of domestication. In light of the evidence and arguments put forth since then, I would like to modify and expand Clutton-Brock’s (1999: 32) definition of “culture” in human-animal interactions: “A way of life imposed over successive generations on a society of humans or animals by its elders. Where the society includes both humans and animals then the humans act as elders.” As defined within the human-ridden horse context, a better definition is: “A way of life within a con-specific society which is acquired over successive generations from its elders, which can be human or horse. Within this context, both horses and humans will have their own elders, and there will be elders of both species who ‘cross-over’ to teach the others to carry on the interspecific aspects of the culture.”

My definition entirely blurs and blends the concepts of “nature,” where animals are situated in most current Western archeological discourse, and “culture,” which I argue in this case cannot be perceived as a human-only endeavor. Under this viewpoint, culture is “... a technology which allows the production of meaning through the concerned dealings which human beings have with their world” (Thomas 1996: 236), but where both *human* beings and *horse* beings contribute and have their own and also shared meanings. I now turn to how these notions of horses-as-teachers and co-created culture might have played into issues of Pazyryk ideology and community identity.

Pazyryk Ideology

I have noted that in terms of Pazyryk ideologies, two models have been proposed (Ch. 3). The first is the widely held militaristic model of the “fierce warriors,” wherein horses are seen as resources whose exploitation influenced identity and ideology, allowed the facilitation of social change, and fostered the propagation of military-based social structures (Bokovenko 1995b: 292, 1995c: 266; Hanks 2002: 187, iii; Lamberg-Karlovsky 1998; Samashev 2007: 44; Van Noten and Polosmak 1995: 76). Under the spiritualist model, horses are seen as objects whose bodies are draped with magical or cosmological motifs reflecting human cosmological concerns (Bokovenko 2000; Brentjes 2000; Kurochkin 1993 cited in Cheremisin 2007: 91). Viewing the Pazyryk burial materials from the bottom up, without an agenda of fitting them into either of these profiles (Ch. 6), points to the incredible amount of energy expended on cosmological concerns, which seem to have pervaded all aspects of Pazyryk life. Before concluding that Pazyryk ideology generally fits this latter proposed model, however, I return to the archaeological materials to specifically query from the top down what evidence of battle might be seen.

Archaeological Evidence of Battle

While archaeological evidence indicates the Scythians of the Black Sea were well armored (Fig. 7.1), the Pazyryk kurgans contained no human body armor of any kind. Pazyryk weaponry included knives, “fighting” axes, bows and bone, antler and bronze arrowheads (Bokovenko 1995b: 289); no swords have been found. Even in the undisturbed graves, “armaments” are scant (e.g., Polosmak 1994c, 1995, 1997; see Appendix 1). Many of the knives were found with meat on the tables in the inner chambers, and knives were found with women as well as men. Except for the class of weapons labelled as so-called “battle axes,” all items deemed “weaponry” rather might be considered to be implements necessary for daily living: the daggers as “cutlery” and bows and arrows as hunting tools.

Pazyryk bits demonstrate that metallurgy was a well developed technology, yet they did not produce metal shields, but wooden or woven ones (Fig. 6.14). In my small kurgan

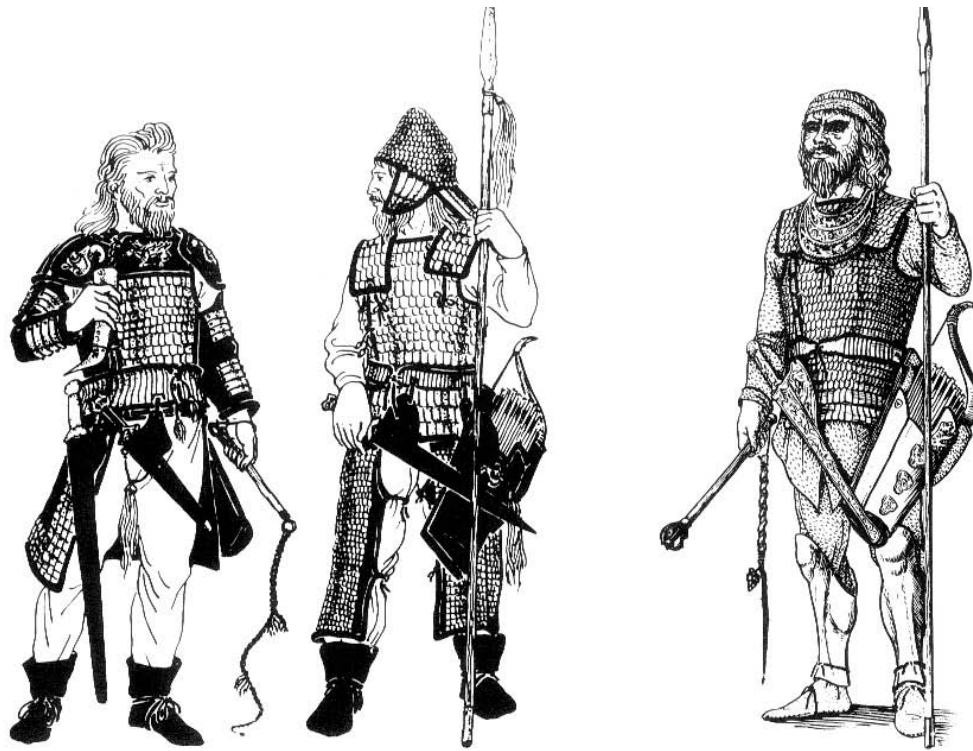


Figure 7.1. *Scythian armor and weaponry* (Rolle 1989, fig. 42).

dataset, shields were not present in all burials, and in those with them the proportion of shields to horses is low (see Appendix 1): Pazyryk 1 (3/10); Pazyryk 2 (2/7) ; Pazyryk 3 (3/14); Pazyryk 4 (2/14) Pazyryk 5, (remains/13); Ak-Alakha 1-1 (3/9); Berel 11 (1/13). If they were made for battle, it was certainly not an everyday occurrence. Moreover, although personal belongings and weaponry were placed inside the inner chambers with the human body, the wooden shields were found with the horses interred outside the burial chambers, implying they belonged to the horses. If they were for human protection, then why were they placed with the horses?

The causes of death of the preserved bodies can be interpreted in several ways: the Verkh-Kaldzhin 2-1 “warrior” died from a stomach wound that either could have occurred in battle or been caused by an animal (Bogucki 1996: 150); wounds to the Berel 11 male’s head could have been attempts to remove clots from a battle wounds, or to posthumously remove the brains during embalming (Samashev 2007: 40); and for the Pazyryk 2 male who had similar wounds and was scalped (Rudenko 1970: 221), and the Pazyryk 2 female who was trepanned, the same is possible (Fig. 7.2). The horse bodies bore no evidence that they fought; no battle wounds or scars. Of course this could mean that horses were indeed used in war, but died on the battlefield and were subsequently not buried with the humans.

Finally, Pazyryk goods appear to have been obtained through trade, not looting (Rudenko 1970: 222-223). Although there was certainly role-related social differentiation, the



Figure 7.2. *Male and female mummies from Pazyryk 2, left and right, showing wounds or trepanning (Rudenko 1970, pl. 44A, C).*

dating of the original ten Pazyryk burials date to only 50 years of each other rules out the notion of a generational “chief” (Hiebert 1992: 124); there is no evidence to suggest a warrior-based hierarchical social structure within this small dataset.

It might be adequate at this point to conclude that the archaeological evidence does not support the “fierce warrior” model of Pazyryk ideology, and that the “spiritualist” model is more appropriate. However, neither of the two proposed models take into account the mutually impactful, lived relationships and shared culture between the Pazyryk humans and horses, which might provide additional insight into an answer. Along these lines, I have discussed (Ch. 4) that some researchers are beginning to ask different questions of animals. These include asking not “How smart are animals (compared with humans)?” but rather “How are animals smart?” If the Pazyryk people asked the same question of horses, what might they have observed? What meanings and understandings beyond “riding” might have been passed along from the horses to the riders of Iron Age Inner Asia?

Prey Wisdom and War Stories

I have noted (Ch.6) that Pazyryk iconography represented in various media (horse and human clothing, and human tattoos) clearly contains a preponderance of depictions of prey animals. Indeed, but for the theriomorphic griffin (which seems to be referenced as a predator in many, but not all, contexts) on the Pazyryk 1 horse #9 (Fig. 6.17), the horse head-dresses are topped not with predators, but with references to animals of the heights, all prey animals: maral antlers, ibex horns, and cock wings (Figs. 6.18, 6.19, 6.40).

If, indeed, animals are chosen as totems because they are “good to think” (Levi-Strauss 1963: 89), then what do such emblems reflect about the beliefs behind the choices? While we certainly do not today believe we are the offspring of certain animals, countries worldwide all have national animal “emblems.” Other than France and Spain, Western national identities are linked with predators; most European countries use the lion as their symbol (Table 7.1). This could imply that these national identities were established with a focus

which placed value on the attributes of the predator, and that these values continue to influence ideologies in the present. What country today in the Western world, for instance, wants their tribe identified with a chicken or a deer? They are food; they are weak. For the Pazyryk people, identifying with prey animals can be seen to contradict the “fierce warrior” ideological model: Would not fierce warriors identify with—and consistently represent—fierce animals?

The predominance of prey animals in the Pazyryk iconography suggests an ideological outlook based not solely—or even primarily—upon force and might, but rather incorporating the value of yielding and collaboration learned from the observation of all prey animals generally, and from working closely with the horses, specifically: a blending of predator and prey images and attributes with a leaning toward the prey aspects. Baldick (2000: 167) has noted that “...animals [in Inner Eurasian ideology] grant, above all, guidance: they lead

COUNTRY	Carnivore	Herbivore	Omnivore	Mythical
England	Lion			
Scotland	Red Lion			
Denmark	Lion			
Sweden	Lion			
Norway	Lion			
Finland	Lion			
Belgium	Lion			
Netherlands	Lion			
France		Rooster		
Germany	Black Eagle			
Italy	Wolf			
Spain		Bull		
Poland	White Eagle			

Table 7.1. *National animal emblems sorted by feeding habits.*

humans on their migrations, and by being observed they grant vast amounts of knowledge.” I suggest that the Pazyryk people valued not only the attributes of prey animals, but also their ways of engaging with the world—their tactics in conflict—and that

this also can be read in proto-historical accounts of conflict across the region.

Although we have no proto-historical reports of the Pazyryk people’s tactics in war, we do have accounts of the battle tactics of the Scythian (*Histories* IV: 118-142), which are contemporaneous with the Pazyryk burials. In that the Scythians shared with the Pazyryk many aspects of material culture (exported Pazyryk bits and the Scythian triad of grave goods), we might assume similar structuring principles of human-horse interactions, and look to their reported ways of coping with inter-group conflict; behaviors which reflect ideological beliefs. These reports describe Scythian warriors around the Black Sea as having no qualms about retreating from a battle.¹

¹ The Xiongnu between the Altai and China were also noted by the Chinese to behave in this manner (Grousset 1999: 21-22).

In the 5th century BC, Darius I (“the Great”) of Achaemenid Persia undertook a campaign into Scythian territory. The Scythians did not stand up and fight, but fled, leading Darius’ army into the wilderness, wearying and demoralizing his soldiers. “Instead of standing and fighting, they retreated into their endless land, leading the enemy on until he starved or despaired.... Instead of defending the walls of a city or capital against an invader, the Scythians simply dispersed” (Ascherson 1995: 54). According to Herodotus (*Histories* IV: 126):

This had gone on so long, and seemed so interminable, that Darius sent [to them] the following message: ‘Thou strange man, why dost thou keep on flying before me, when there are two things thou mightest do so easily? If thou deemest thyself able to resist my arms, cease thy wanderings and come, let us engage in battle.’

The Scythians were viewed as disdainfully cowardly for retreating thusly, but the effectiveness of the tactic was apparent: Darius eventually left the area, unsuccessful. I suggest that the Scythians watched, understood, and adapted prey animals’ tactics to their own battle strategies. The survival strategy of a herd of horses is to flee and disperse when attacked, confusing the predator and making it likely that the least amount of damage will be done to the herd as a whole (cf. Kohanov 2001), although when threatened by wolves they will circle together with the weak in the center, face inwards and kick with their hooves (Ch. 5; Kiriushkin and Tishkin 1987). An ideological rhetoric embracing the wisdom of the horse might be read in these proto-historical accounts of the Scythians. When asked to join the fight against Darius I, several Scythian leaders declined, one stating:

We, on our part, did no wrong to these men in the former war, and will not be the first to commit wrong now. If they invade our land, and begin aggressions upon us, we will not suffer them; but, till we see this come to pass, we will remain at home (*Histories* IV: 119).

In these two encounters we see the Scythian “fierce warriors” following exactly the logic of the horse, horse “ideology,” as ways of behaving reflective of worldview: protect the people not the land; when attacked, flee when it is possible; when it is not possible, then gather together and present your hooves to the wolves. Furthermore, multiple horse bands often inhabit overlapping geography, and within this larger herd there are complex inter-band hierarchies (Boyd and Keiper 2005: 55-56). It might be coincidental, irrelevant or highly significant that Scythian society was structured around smaller community units which when necessary “banded together” into a larger confederacy. Here, as Fowler (2004a: 148) has suggested regarding later Mesolithic Scandinavia, “the embedded nature of hu-

man existence in the animal world meant that social activity might have been understood through reference to animal sociality.”

Thus, the Scythians in these cases might be seen, like horses, as less expansionistic than defensive warriors, and an examination of Pazyryk funerary materials leads to similar, but stronger, interpretations. It is perhaps not insignificant that the metal pectorals of carnivorous coiled felines associated with Iron Age horse burials from the Crimea to northern China (Figs. 6.22, 6.24) appear to have bypassed the Pazyryk, where archetypes of the herbivorous, yet powerful, ibex abound.

When taken together, the Pazyryk archaeological evidence and Scythian proto-historical accounts indicate that although Pazyryk people identified within this study may—or may not—have feuded, there is certainly nothing to imply that they engaged in warfare, “organized aggression between autonomous political units” (Thorpe 2003: 171). Here, assumptions that battle was a daily way of life might be seen to reflect both the Western (over-) concern with power, predation and domination, and social evolutionary beliefs in the “territorial imperative” (Layton and Barton 2001: 13; Thorpe 2003). If this is the case, perhaps we are self-limiting in defining a Pazyryk “warrior ethos” under the terms of today’s Western identities and ideologies which, as referenced by the national animal emblems, seem predator-based. If this is so, we might question the notion of the cruel, warlike Pazyryk, as Woodward (2000: 101) has in relation to an earlier characterization of Bronze Age British culture as a “wealthy chieftain-led society.” In that situation, “It can now be understood that [the] original exclusively hierarchical and militaristic model of [the] Early Bronze Age ... may have been influenced by the political and militaristic ambience current in this country [at the time the characterization was made] between the World Wars” (Woodward 2000: 103). With this in mind, prior interpretations regarding the “fierce warriors” of the Eurasian Iron Age might be viewed as the result of the context of the interpreters, within which include “... tendencies to emphasize thought over emotion, logic over intuition, territory over relationship, goal over process, and force over collaboration” (Kohanov 2001: xvii).

Pazyryk Identities and Rhetorical Communities

The archaeological evidence can be interpreted such that—barring the tribulations of daily life in the Iron Age in what was presumably then as now a climatologically harsh environment—the Pazyryk deceased were presented for burial as having led lives that were focused upon spiritual matters. It would, however, be negligent to assume that opposing cruel warriors against pacifistic spiritualists is the only way to view this complicated society, as such dualisms “constitute a discourse of static uniformity that prevents us from appreciating the transformations of personhood that create social belonging” (Casella and Fowler 2004: 6). By accepting interpretations of the identities of past cultures as fixed and solitary

we miss other, more subtle, aspects which may have played equally or contradictorily into issues of identity and ideology.

In his work on symbolic convergence theory, Ernest Bormann (1972, 1983) discusses “rhetorical communities”—groups through which shared history and experience foster collective “rhetorical visions,” somewhat similar to Renfrew’s (1998: 260) notion of “cognitive constellations,” which are perpetuated through themed narratives (cf. Hodder 1995: 165). Such rhetorical communities through which people create and draw identity can vary in scale, and individuals within a society will subscribe to multiple, sometimes conflicting, rhetorical visions. In this sense, identities are not static and singular, but complex, plural and fluid (generally, Casella and Fowler 2004).

Across many societies that live closely with the horse, Western and traditional, past and present, “engaging in dynamic interaction with them, the horse often imparts back to people a sense of identity” (Lawrence 1984: 198; also Bloodberg 1939: 305; Bormann 1988; Cassidy 2009; Esin 1965; Gladitz 1997: 112; Lawrence 1984: 40; Maj 2009; Miller 1984; Potapov 1996; Theodoratus 1977). Horses pervaded all aspects of the Pazyryk archaeological materials: their co-burial with people, their outfitting similar to the people with iconography representing similar concerns, the tattooing of them on the humans. This clearly shows that for the Pazyryk, fundamental to all of the other ways they may have seen themselves, they were “people of the horse,” and because of the way they approached them, the riding horses were “horses of the people.” What other rhetorical visions might have existed within the Pazyryk cultural landscape?

It is not a new observation (Bokovenko 2000; Brentjes 2000; Kurochkin 1993 cited in Cheremisin 2007: 91) that the Pazyryk placed importance on cosmological concerns (Ch. 6). However, these authors came to this conclusion by assessing the Pazyryk funerary materials related to the horses as reflecting entirely human abstract concerns. The implications of considering the agency of the horse—embedded as teachers and participants in a mutually impactful culture—points to a revised view of Pazyryk group identities which I suggest, rather, draws from the horses themselves.

As evidenced archaeologically, the focus upon finding the “right” bridles and bits (Ch. 2) shows that the Pazyryk were astute observers of equine behavior. That they sought the mildest bit type possible indicates they desired a cooperative relationship (Ch. 6). The koumiss stir-stick found with the Ak-Alakha 3-1 “princess” (Ch. 2) shows they milked horses, and they would have understood that those who milk horses are advantaged because the oxytocin release through milking fosters positive feelings (Olmert 2009). They tacked and mounted their horses from the left (Ch. 6) understanding that horses are lateralized to the left eye and thus less reactive when handled from the left (Farmer *et al.* 2008). They understood, as working riders know and recent behavioral studies show, that positive human-

mare relationships influence their foals' perceptions of people (Henry *et al.* 2005); that foals handled sympathetically grow up to be good, trusting partners (Polito *et al.* 2007); that horses appreciate positive human attention (Proops and McComb 2009); and that positive interactions with humans lead to lasting positive memories in horses (Sankey *et al.* 2000). The results of these current ethological studies were obtained through scientific method, but such findings are not difficult to come by through living with horses. The Pazyryk likely came to the same conclusions. But they were not conclusions bumbled upon in some pseudo-evolutionary hit-or-miss fashion. Rather, the Pazyryk people listened to what their horses told them; the horses taught the Pazyryk people how they wished to be treated. Because of this, they may have been the Iron Age version of "horse whisperers."

Schwabe (1984: 53) has argued that the first sheep herders were "humanized" through their involvement with these animals; that keeping them fostered feelings of "gentleness, caring, compassion, responsibility, [and] nonviolence." For the Pazyryk, this may also have been the case, as directly related to aspects of the horses, themselves. Horses mirror both the movements and emotions of the people around them (Ch. 5), and thus encourage in those dealing with them the development of levels of empathic intelligence equal to theirs: "Matching neural representations or mimicking another's posture may facilitate understanding of, or belief about, another's state and thereby induce other-oriented feelings" (Batson 2009: 10). The con-sensual embodied experience of *riding with* them in the shared brain-wave state of entrainment (Ch. 5), and the cooperation necessary to co-act in corporeal synchrony cannot be faked, but must be authentic (Smuts 2008: 144). In this way, through both the physical and psychological aspects of moving together synchronously, the Pazyryk horses called on the people to act toward them in generosity, kindness and cooperation, and the archaeological evidence entirely supports that the people did so. Perhaps engaging with horses in a cooperative manner influenced other ways the Pazyryk occupied and thought about the world and themselves.

Considering the phenomenological experience of riding a horse (Ch. 5), also provides insight into how aspects of this might have been perceived as numinous, and translated to cosmological beliefs. Experiencing the altered state of consciousness fostered by the embodied entrainment of riding—which riders today say promotes a connection with something greater than themselves—the horses allowed them to be "higher" in both literal and psychological senses, and perhaps encouraged the Pazyryk to seek a connectedness with the "upper," spiritual world. If this is so, because "the body is not a container that we *live in*, it is an aspect of the self which we *live through*" (Thomas 1996: 19), then the embodied engagement of the Pazyryk people with their horses fed powerfully into not only cosmological beliefs, but also their senses of self, group identities and ideology.

This thesis, then, supports the view of this narrow set of Pazyryk people as spiritualists. But this was not in the sense that they merely marked their horses with their cosmological abstractions. Instead I argue that interacting with horses in the ways they did helped *create* the beliefs; the beliefs were *contingent upon* the ways they interacted with horses. Rather than operating from an expansionistic militaristic ethos, these people of the Pazyryk community preferred to stay “at home”—not in walled citadels, but in a communal conceptual and rhetorical mindscape. They stayed at home, with their good horses, where they focused upon collaboration, relationship, intuition and empathy, where they pondered cosmological matters and strove for the heights of the upper world, and where they conceptualized and created artwork reflecting those concerns. If this is so, then Pazyryk symbolic meanings about horses were not arbitrary, but were based upon “iconic” elements (Hodder 1989: 259), where the abilities and behaviors of horses played a crucial part in not only how the horses were conceptualized and materialized (cf. Birke *et al*, 2004: 172), but also how the people conceived of themselves as fitting into the larger world.

Good Horses, Social Change and Continuity of Practice

As evidenced by the change in burial style in the Altai from the early to middle of the first millennium BCE (Ch. 2), the bringing of the horses into the graves by that time reflects that horses were brought closer to humans in other aspects. These changes are situated within the broader Eurasian Bronze to Iron Age shift toward nomadic pastoralism, which changed the cultural landscape of Eurasia (Anthony 2007; Creel 1965; Franchetti 2004; Liu 2001; Mair 2003; Yelts 1934). This “revolution” has been attributed to riders then being in “control” of their horses (Drews 2004: 74). I suggest that this Iron Age revolution in horsemanship on the Eurasian steppes and Inner Asian mountains stemmed not from issues of rider “control,” but rather from the special relationship these people developed with their horses:

Anyone with a modicum of experience with horses knows that a spirited mount will not perform at its best unless there is a great deal of rapport between horse and rider. And it is doubtful that the great mass of Chinese cavalymen could compare, in establishing such rapport, with the nomads who rode from infancy and lived with and on their horses (Creel 1970: 185).

I argue that more important than living “with and on” them, these peoples were greatly advantaged because they listened to what their horses had to tell them, and thus developed the human-horse relationship to its fullest. Within the rhetorical vision of “how we treat our horses,” as the Pazyryk people exported their bits (Ch.2) perhaps they also exported

their knowledge, leading to an Inner Asian conspecific diaspora through which was disseminated—by humans and equine schoolmasters alike—the sense of this cooperative social relationship. Although this is not to discount autochthonous development of horse “domestication” in other areas of the world (e.g., Jansen *et al.* 2004), by the Bronze age there was a great deal of globalization across Eurasia (Franchetti 2007), with the exchange of goods and ideas across vast distances.

This rhetorical vision, perhaps materialized in the “Scythian triad” of grave goods—horses and/or horse riding equipment, artifacts decorated in the “animal style,” and weaponry (tools for daily living?)—may have stretched across an enormous region and resided alongside other, differing, historically and culturally particular visions and identities held by diverse peoples and communities. If this were the case, perhaps the success of the military expansionist societies—coming always out of but never into Inner Asia, and many of whom were indeed hierarchically structured societies with warring ideologies (Fig. 7.3)—might rest in part on the fact that they subscribed to that particular diasporic rhetorical vision. In doing so they were thus advantaged in war against others who treated horses differently, those whose bits reflect the belief that humans can successfully dominate horses. This is because when treated with respect, trusting, co-bonded horses will use their minds, bodies and agency to contribute to the action at hand; they will “think well and bravely” in battle (Hearne 2007: 149). They will think, and they will act against their own interests, to take care of their riders in ways that mistreated horses never will.

Moreover, we might see continuity of Inner Asian horse-related practices and beliefs today in the snaffle bits we use, in our mounting horses from the left, and in the funeral processions of important military leaders where the symbolic sacrifice of the “riderless horse,” a black horse dressed in black in mourning, includes placing the saddle or boots in the

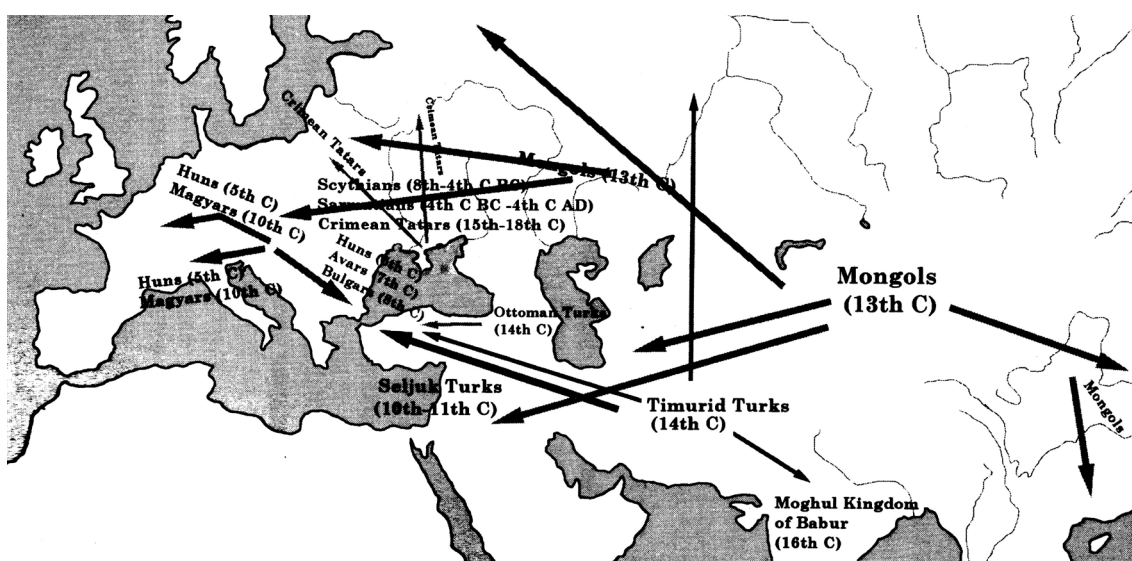


Figure 7.3. Map of military incursions coming out of Asia (after Hildinger 1997, vi).

Figure 7.4. *Riderless horse with boots reversed, funeral procession of U.S. President Ronald Reagan (photo: Peterson 2004).*



stirrups backwards. This latter practice can be seen as “in direct imitation of the Central Asiatic custom where it was believed the rider would enter heaven riding backwards” (Barclay 1980: 364), based upon the reverse aspects of the Otherworld in Inner Asian cosmology (Eliade 1964: 190-04) and evidenced in the S-shaped spiral represented on Pazyryk artwork and tattoos (Fig. 7.4). In this way, the chain of apprenticeship begun in Pazyryk culture—the chain in which every other link is a horse—might continue through to the present.

Horses, Narrative and Communal Memory

Humans conceptualize identities through narrative (Thomas 1995: 211; also Bormann 1972, 1983; Casella and Fowler 2004: 3; Edmonds 1999; Hodder 1993, 1995; Pluciennik 1999; Thomas 1996: 51-52). As Renfrew (1994: 48) notes:

Every religion, by definition, involves a system of beliefs which offers answers to profound existential questions.... The ‘answer’ takes the form of a history, a kind of historical narrative. But the personages are not simply historical people. They have a greater significance, indeed for the community or culture in question a universal significance.

Within a rhetorical community, the “personages” Renfrew speaks of need not be connected to religious endeavors. Rhetorical communities centering on various other human concerns besides religion are bound together through stories that perpetuate shared rhetorical visions and identities. Nor do these personages—in human-horse, or more broadly human-animal, communities which conceptualize nonhumans as individuals—need to be human.

In the co-created Pazyryk culture, there was a confluence through patterns of daily life, of hunting, traveling and perhaps sometimes battle, in which both species found comfort; time-space routines through which the people and the horses found in each other “‘how to go on’ in the world” (Tilley 1994: 16). Pazyryk horses showed the people *where* to go and also *how* to go, in life and death. They were esteemed for their actual and metaphorical abilities, as travelers both across the landscape and through the unknown liminality to the next world. The horses were arguably a part of every significant human act, and as such would have been part of the community’s narratives.

I now return to the initial research question posed by this thesis: What did the horse mean to the people of Pazyryk? I have come to realize that this question cannot be adequately addressed without attempting to answer a similar question: What do well-treated horses mean, *with their actions*? To answer this, I return to the narrative I have developed in this thesis about horses, their abilities, motives and places in the world of humans. Are these factors essential, immutable? Is my view of horses in line with that of the Pazyryk people? Can we ever know how horses factored into Pazyryk narratives, what the horses *meant* to them? Perhaps not. But perhaps the Pazyryk men and women warmed themselves by their fires—as did the tellers of Buchephalus’ final brave action for his Alexander, as did the writers of the Eurasian epics with the named horse-heroes who spoke to the people and had souls, and as do horse people sit today around our kitchen tables—and with reverence and pride told stories of valiant horses they had been privileged to know. Let us at least suppose this is so.

The horses in these stories went beyond the level of normal endurance despite pain or hardship to take care of the people with whom they belonged. They jumped into the river not knowing its depth, and they faced down their not-insignificant fears to face down the mutual enemy—whether race track or mountain trail, lion or warrior—not because they were beaten or bullied, but simply because they were asked. They agreed, not out of stupidity, but out of generosity, because as silly and unreasonable as our requests seemed to them, we were their people and that is what friends do for one another. Thinking from the point of view of the horses, these people know what these actions took and what they cost, and speak with awe and admiration of how these horses—not through instinct or conditioned response—reached into their souls and actively chose to answer, as partners. They name and describe the brave actions of not only heroes, but also the horses of heroes, the horses who *belonged with* the heroes, because in these “narratives of belonging” (Casella and Fowler 2004: 3) the two functioned together and cannot be untangled. They tell the tales over and over again, and in the telling they share again in the glories of the heroes, both human and horse, singly and as part of the community, and the community’s shared memory and iden-

tity. Etched in memory, as the horses were etched on the Pazyryk bodies, the narratives carry on the shared rhetorical vision of the good horses who helped their people.

The people around the fires and the kitchen tables speak of these horses' "heart," "loyalty" and "courage." They call their actions "honorable" and perhaps even "divine," and they do so without putting scare quotes around the words. They do so because—stepping outside the contemporary paradigms that separate humans from animals—they understand that "in many ways we are them and they are us" (Bekoff 2006: 81). They do so because they realize we are cut from the same fabric, we and these horses; that we come from and go to the same place. They recognize that while in the middle of all that, through both the mundane and consequential of the middle world, moving together on shared paths entrained in synchrony (Fig. 7.5) means listening to each other, and implies a social contract (Oma 2007a, 2010) through which both must do the best we can do for each other. And in that generosity and loyalty—in the midst of the monumental messiness of daily life and in spite of bloody endings—there is indeed honor, and perhaps a type of divinity as well.



Figure 7.5. *Pratt's Desert Dove and Sunspot's Sunflower*
(photo: John Kreider).

Closing Thoughts

What has emerged from this assessment of the Pazyryk funerary materials—when approached with a better understanding of horses, themselves, and what the human-horse relationship can be—is a historically particular and unique culture with a rhetorical complex of messages about the nature and abilities of horses that belie assumptions that their value consisted of mere functionality alone. The picture that appears is one of specific cultural meanings and beliefs about the horse that were multifaceted, intricate, and interwoven into every aspect of Pazyryk culture. Both humans and horses were respected, important citizens in a shared community which was interspecifically intersubjective and co-created and perpetuated by humans and horses alike. The human-horse relationship was embedded within the ways the Pazyryk people interacted not only with the horses, but also with the world around them. The space they shared with horses was liminal—in the borderlands of the hybridity of bodies, wills and abilities, identities and ideologies. The boundaries between human and animal, the living and the dead, this world and the next, and the past, present and future were blurred, permeable, and in every sense included horses.

The process of this relationality moves beyond both the dominance-submission model, and species-level biological-evolutionist discussions of mutuality or commensalism, into a clear consideration of interactions among agents. With the Pazyryk people, the riding horses were named, individual partners, beings with their own biographies and agential qualities, perhaps heroes, but certainly compatriots, watchdogs, babysitters and schoolmasters. They were beings with superior abilities who helped them safely travel the world in life, and with spirits who did the same in death. Clearly, they fall outside the realms of “material culture,” and the more-vague sense of the “environment.” They were not some-things; they were each, individually, someone. In scenes both daily and epic, the Pazyryk horses were more than mere props supporting the human storyline. They were key actors.

If rather than emphasizing animals as passive “bundles of instincts” to be *acted upon* we instead look at their abilities “a different story emerges—one in which individuals (or social groups) actively engage with environments. They are not essences, acting out an inevitable role, rather, they are constantly becoming, and changing their environments” (Birke and Parisi 1999: 63-64). They, like we, are “mutual becomings” (Oma 2007a), “creative processes of coming to be” (Game 2001: 1). We change, and are changed by, each other.

In approaching animals as “minded and self-aware participants in collective action with their human associates” (Sanders 2007: 330), I have rejected the explicit or implicit focus in some archaeological approaches upon power, domination and control as the sole means by which humans and animals—and humans with each other—engage meaningfully. This has allowed an appreciation of the pro-social attitudes both bring to their interchanges, and how those interchanges powerfully impact both individuals and societies. While human

beings can indeed behave malignly, nefariously and manipulatively toward others, this is not how we always act. I have shown in this thesis, using the Pazyryk archaeological materials as a rich case study, that an archaeology of relationality which includes other animals can offer fresh interpretations of their impacts on human cultures in the past, interpretations very different from those previously asserted.

“Whatever we learn about people’s lives in the past should make us reflect upon the context within which we conduct archaeology in the present, and vice versa” (Thomas 1996: 234). A relational archaeology which includes animal others as impactful agents in the past requires a reassessment of our responsibility to animals in the present. Animal studies scholar Cary Wolfe (2003: 7) has raised the question:

If our work is characterized in no small part by its duty to be socially responsible to the ‘new social movements’ (civil rights, feminism, gay and lesbian rights, and so on), then how must our work itself change when the other to which one tries to do justice is no longer human?

In light of what I have shown about horses in this thesis, it can no longer be supported that, in a Heideggerian (1962) sense, “nothing in the world ‘shows up’ in a meaningful way for any kind of creature which is not human” (Thomas 1996: 17). Arluke and Sanders (2007: 68) have noted that “the behaviorist perspective allows humans to maintain the psychological distance necessary to exploit animals ruthlessly, untroubled by feelings of guilt while still retaining a view of humans as a qualitatively unique category of being.” In the same way, Euro-American archaeological and anthropological approaches which portray animals in past or other societies as unminded objects allow us to step back from our actions in the present. Such narratives about the past generate not only representations of reality, but also perpetuate the realities those representations depict, feeding into and supporting a broader meta-theoretical rhetorical vision which has the result of allowing the ongoing exploitation of animals in the present.

Thomas (1996: 17-18) has noted:

The distinction between humans and animals is ...categorical, although in a sense this argument does not preclude a creature with an ‘animal’ body from ‘being human.’ We may eventually have to accept that some species other than *Homo Sapiens* are ‘human,’ in the sense of being engaged in a meaningful world.”

While it might be confusingly impractical to call horses “human,” Thomas’ general point is clear. If, as I hope I have shown, horses (among other animals) engage in co-created *meaningful* worlds—with each other and with us—then I suggest the time for that acceptance is now.

Limitations and Suggestions for Future Research

This thesis has shown that there are ways to conceptualize animals archaeologically that can be added to those conventionally used. My purpose has been to explore how human-horse relationships challenge prevailing narratives about domination, agency, culture and nature. These conventional narratives are not wrong; horses can indeed function as food sources and conscripted workers, where they are objectified as resources. They can also certainly be imbued with meanings as symbolic identity markers, where they serve as nodes of contact for human political and cultural hierarchies. They can also, as I have shown in this thesis, be explored as subjectified, impactful others with whom humans develop deep, ongoing and “interpersonal” connections. Furthermore, they can exist as various of these examples simultaneously or consecutively during their lifespans. This suggests that broadening archaeological analyses to include more nuanced understandings of horses—and other animals—as beings with whom humans relate can enlighten different, new and important aspects of those societies within which they appear in the archaeological record.

Future research toward this end might take several trajectories. Firstly, clearly the very tight focus of this thesis’ exceedingly small dataset might mean that my conclusions apply to only a very limited segment of the Pazyryk society, and no more broadly than that. This is a limitation that might be overcome through the application of the principles I have developed to the analysis of broader and larger archaeological assemblages which include horses and/or other animals. This raises also the issue of the richness of the Pazyryk funerary assemblage, which is rare indeed. The challenge for future research along these lines will be to explore the feasibility of interpreting relationships from probably vastly more limited archaeological data.

Secondly, such work will encounter methodological difficulties, not the least of which concerns the nature of archaeological analysis. “Standard practice now is decentralisation of site interpretation, where material is divided and sent to separate specialists for analysis. This is, no doubt, efficient in many ways, but it appears to potentially lead to significant missed correlations between specialist areas” (Cross [pending]). In this regard, closer collaboration between bioarchaeologists and interpretive archaeologists might lead to fuller explorations of human-animals relationships in the past as manifested in funerary and other contexts.

Thirdly, defining how to include animals as subjects in archaeological studies remains theoretically difficult. This is because archaeological research which takes non-human agency as a starting point is still rare. Conceiving of animals as something other than material culture or a segment of the environment requires further theoretical refinement, a major paradigm shift in research agendas, and an expanding of typologies of animals in archaeology to include interspecific relationality and its effects on humans. A theoretically informed

contextual approach which incorporates considerations of how the animals with whom the humans under consideration interacted—and the interactions themselves—might have influenced issues of identity and ideology should prove a potentially highly rewarding, if challenging, endeavor. Here, future work combining ethnographic, post-colonial archaeological and human-animal studies approaches might offer one route to such research.

Finally, archaeologists who write about horses might benefit from collaboration with those who know and understand them—or with live horses. It is worthwhile to note, without going into specifics, that I have found that scholars who have not been actively involved with live horses often make errors in writing about them. Anthropologist Harold Barclay (1980: xii) noted this problem:

[T]he subject of the horse generates experts in horsemanship, riding and gear who are novices and amateurs in history and ethnography, as well as historians and ethnographers who write of the horse, but are not horsemen.... Clearly there is a need for closer interaction between the non-academic professional horseman and the historian or anthropologist. The horse journals and popular horse books are too full of gross historical and ethnographic errors and the historians and anthropologists who deal with horses sometimes hardly know the difference between a crupper and a collar.

If in bridging this gap this thesis serves to clarify some of the misconceptions that are perpetuated in archaeologies that concern horses—and this in turn might factor into better treatment for horses generally—then I consider it a personal success.

APPENDIX 1

Appendix 1. *Original Pazyryk cemetery excavation and selected Pazyryk-era kurgans, dates and summary of characteristics.*

Location	Excavator	Size (d x h meters)/ features	Date BCE (floating)	Humans	Horses and Equipment	Grave goods	Weaponry/ Shields
Complex-kurgan							
Ulagan							
Pazyryk 1	Gryaznov 1929	47 x 2.2	5th-3rd (k5-48)	M, body destroyed by looters	10 w/ tack; 2 w/ full headdresses, masks	looted. Cut-out felt human head with headdress, remains of felt wall hanging looted. "Shaman burial." string instrument; hemp smoking apparatus; pouches w/ human hair and fingernails; clothing	None/ 3 large rectangular shields
Pazyryk 2	Rudenko 1947-48	36 x 3.75 single coffin	5th-3rd (k5-49/50)	M-60, tattoos, scalped, battleaxe wounds to head (?) F-40, tattoos, shaved head, embalmed, trepanned	7 w/tack; 2 w/ partial headdresses w/ finial, whip with wooden handle	looted. textiles. horseflesh	iron knife 2 antler arrowheads/ 2 rectangular smaller shields
Pazyryk 3	Rudenko 1948	36 x 2.6	5th-3rd (k 5-11)	M skeleton	14 w/ tack; 2 w/ head finials	looted. textiles. horseflesh	24 arrow shafts/ 3 convex shields
Pazyryk 4	Rudenko 1948	24 x 1.5 two coffins	5th-3rd (k5-41)	M F skeletons	14 w/ tack; 1 w/ head finial	looted.	none/ remains of 2 rectangular, smaller shields
Pazyryk 5	Rudenko 1949	42 x 3.75 two coffins	5th-3rd (0)	M-55-60 tattoos, shaved head; F-40-50, shaved head Embalmed	9 w/tack: 4 carriage; 5 riding; 1 w/full headdress, mask	looted. carriage; felt carpet; pile carpet; hemp smoking apparatus F, wooden headdress as in felt carpet; odd saddle covers	None/ remains of smaller shields

Pazyryk 6	Rudenko 1949	15 x .7	5th-3rd	F(?) and girl skeletons	3 + skeletons	looted. "Chinese" mirror; beads, shells	knife
Pazyryk 7	Rudenko 1949	Small; chamber floored and roofed with timbers	5th-3rd	Infant's leg bones and skull	No	looted. clothing; bits of gold; antler tine	none
Pazyryk 8	Rudenko 1949	14 x .65	5th-3rd	F	1 bones	copper plates; gold-covered bead	none
Ursal							
Tuekta 1	Rudenko 1954	1954	6th-5th	M	8; 1 w/headress w/ibex horns	millet	
Tuekta 2		two coffins	6th-5th	M-F			
Ukok							
Plateau							
Ak-Alakha 1-1	Polosmak 1990-1991	17 x .3 two coffins	4th-3rd	M 45-50, disabled? F 16-17 both dressed as men	9; at least 4 w/tack (decayed)	Looted. clothing; headress	M/F daggers, battle axes, bone arrowheads (M-5, F-7), compound bows/quivers/3 wooden shields
Ak-Alakha 1-2	Polosmak 1990-1991	8 x .5	4th-3rd	F or child	1	headress	
Ak-Alakha 3-1	Polosmak 1993	18 x .57	4th	F 25, 5'6" 2" hole in head; shaved; embalmed tattoos	6	Unlooted. "princess." headress, wig, clothing, horn vessel, stir-stick for making koumiss; mutton, horseflesh	knife
Ak-Alakha 5-3	Polosmak 1993		5th-3rd				

Verkh-Kaldzhin 2	Molodin Polosmak 1995		5th-3rd	M- 25-30, wound to stomach; tattoos F 20-30	1; richly decorated	“warrior”	bow and arrows, axe, knife
Kurtandas 1-1	Polosmak 1993					Cane? mutton/horseflesh	
Buktarma Valley							
Berel 11	Samashev, Francfort 1998-1999	33 x 1.7	4th-3rd	M 35-40, battleaxe wound(?) to head, incomplete trepanning, healed broken ribs, embalmed F 60-70, buried later; DNA shows relationship	13; 4 w/ full headresses, masks w/ ibex horns		1 shield
Berel	Francfort et al. 2000		3rd	M	13 (8-20 y/o) horns?		
Tuva							
Arzhan 1	Gryaznov and Mannai-Oool 1971-1974	120 x 4	9th-8th	M F (main) 15 in surrounding cells	6 (main) ≠150 facing center towards human burial, 2-30 each cell, w/ tack 14	Earliest examples of animal-style art; one horse with coiled feline pectoral	
Arzhan 2	Chugunov, Parsinger, Nagler 2001		7th-6th	M F (main)			

BIBLIOGRAPHY

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- Adler, R.B., Rosenfeld, L.B. and Proctor, R.F., 2003. *Interplay: The Process of Interpersonal Communication*. USA: Oxford University Press.
- Ahern, L.M., 2001. Language and agency. *Annual Review of Anthropology*, 30, 109-137.
- Ainslie, T. and Ledbetter, B., 1980. *The Body Language of Horses*. New York: Wm. Morrow.
- Alekseev, N.A., 1990 [1987]. Shamans and their religious practices. In: M.M. Balzer, ed. *Shamanic Worlds: Rituals and Lore of Siberia and Central Asia*, 3-48. Armonk, N.Y. and London: M.E. Sharpe, Inc.
- Alinei, M., 2003. Interdisciplinary and linguistic evidence for Palaeolithic continuity of Indo-European, Uralic and Altaic populations in Eurasia, with an excursus on Slavic ethnogenesis. Expanded version of a paper read at the conference, Ancient Settlers in Europe, Kobariid. Forthcoming in *Quaderni di semantica*, 26.
- Allen, C. and Bekoff, M., 1997. *Species of Mind: The Philosophy and Biology of Cognitive Ethology*. Cambridge, Mass.: MIT.
- Anderson, R. and Ross, V., 2002. *Questions of Communication: A Practical Introduction to Theory*. 3rd ed. Boston: Bedford/St.Martin's.
- Antikas, T., 2006. Symbols of heroism: Horse burials in royal and common Macedonian tombs. In: M. Mashkour, ed. *Equids in Time and Space*, 203-209. Oxford. Oxbow Books.
- Anthony, D.W., 1986. The 'kurgan culture,' Indo-European origins and domestication of the horse: A reconsideration. *Current Anthropology*, 27(4), 291-313.
- Anthony, D.W., 1995. Horse, wagon and chariot: Indo-European languages and archaeology. *Antiquity*, 69, 554-565.
- Anthony, D.W., 1996. Bridling horse power: The domestication of the horse. In: S.L. Olsen, ed. *Horses through Time*, 57-82. Boulder: Reinhart.
- Anthony, D.W., 1998. The opening of the Eurasian steppe at 2000 BCE. In: V.H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 94-113. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Anthony, D.W., 2007. *The Horse the Wheel and Language: How Bronze-Age Riders from the Eurasian Steppes Shaped the Modern World*. Princeton: Princeton University Press.
- Anthony, D.W. and Brown, D.R., 2000. Eneolithic horse exploitation in the Eurasian steppes: Diet, ritual and riding. *Antiquity*, 74, 75-86.

- Anthony, D.W. and Brown, D.R., 2003. Eneolithic horse rituals and riding in the steppes: New evidence. *In*: M.A. Levine, C. Renfrew and K. Boyle, eds. *Prehistoric Steppe Adaptation and the Horse*, 55-68. Cambridge: McDonald Institute for Archaeological Research.
- Argent, G., 2001. Sacred spotted horses: The symbolic significance of the leopard coat color in eastern Central Asia from the 1st Millennium BC. Accepted by Russian Academy of Sciences for the conference, The Horse and the Rider: Horse-Breeding and Cavalry in Political Genesis, Ashkhabad, Turkmenistan. (conference was cancelled following September 11, 2001).
- Argent, G., 2005. (*invited paper*) The horse in prehistoric art and historical ethnography: Spotting shamanic transformations? European Society for Central Asian Studies Ninth Conference, Sept. 12-14. Krakow, Poland.
- Argent, G., 2010. Do the clothes make the horse? Relationality, roles and statuses in Iron Age Inner Asia. *World Archaeology*, 42(2), 157-174.
- Argent, G. (*forthcoming*). Toward a privileging of the nonverbal: Communication, corporeal synchrony and transcendence in humans and horses. *In*: J.A. Smith and R.W. Mitchell, eds. *Experiencing Animals: Encounters between Animal and Human Minds*.
- Argent, G., Cothran, E.G. and Lobanova, T., 2000. Genetic analysis of horses of the Russian Gorno-Altai Mountains. Unpublished research.
- Arluke, A. and Sanders, C.R., 1996. *Regarding Animals*. Philadelphia: Temple University Press.
- Ascherson, N., 1995. *Black Sea*. New York: Hill & Wang.
- Ashe, G., 1992. *Dawn behind the Dawn: A Search for Earthly Paradise*. New York: Holt.
- Atkinson, T.W., 1860. *Travels in the Regions of the Upper and Lower Amoor and the Russian Acquisitions on the Confines of India and China*. London: Hurst and Blackett.
- Bahn, P.G., 2001. Save the last trance for me: An assessment of the misuse of shamanism in rock art studies. *In*: H.-P. Francfort and R.N. Hamayon (with P.G. Bahn), eds. *The Concept of Shamanism: Uses and Abuses*, 51-93. (Bibliotheca Shamanistica, vol. 10, M. Hoppál, ed.) Budapest: Akademiai Kiado.
- Bailly, M.L.E., Lepetz, S., Samashev, Z, Francfort, H-P and Bouchet, F., 2008. Paleoparasitological study of gastro-intestinal content in horses at a Scythian kurgan (3rd century BC) found in Kazakhstan. *Anthropozoologica*, 43(2), 69-75.
- Baker, C.M.A and Manwell, C., 1983. Man and elephant: The 'dare theory' of domestication and the origin of breeds. *Zeitschrift für Tierzüchtung und Züchtungsbiologie*, 100, 55-75.
- Baldick, J., 2000. *Animal and Shaman: Ancient Religions of Central Asia*. New York: New York University Press.

- Balcombe, J., 2006. *The Pleasurable Kingdom: Animals and the Nature of Feeling Good*. London: Macmillan.
- Balcombe, J., 2009. Animal pleasure and its moral significance. *Applied Animal Behaviour Science*, 118, 208-216.
- Bamshad, M., Wooding, S., Salisbury, B.A. and Stephens, J.C., 2004. Deconstructing the relationship between genetics and race. *Nature Reviews*, 5, 598-609.
- Banks, B.C., 1989. The magical powers of the horse as revealed in archaeological explorations of Early China. Thesis (Ph.D.). University of Chicago.
- Bapty, I. And Yates, T., eds., 1990. *Archaeology after Structuralism: Post-Structuralism and the Practice of Archaeology*. London: Routledge.
- Barclay, H.B., 1980. *The Role of the Horse in Man's Culture*. London: J.A. Allen.
- Barfield, T.J., 1992 [1989]. *The Perilous Frontier: Nomadic Empires and China, 221 BC to AD 1757*. Cambridge, Mass. and Oxford: Blackwell.
- Barfield, T.J., 1993. *The Nomadic Alternative*. Upper Saddle River NJ: Prentice-Hall.
- Barkova, L.L. and Pankova, S.V., 2005. Tattooed mummies from the large Pazyryk mounds: New findings. *Archaeology, Ethnology and Anthropology of Eurasia*, 2(22), 48-59.
- Barrett, J.C., 1988. The living, the dead and the ancestors: Neolithic and early Bronze Age mortuary practices. In: J.C. Barrett and I.A. Kinnes, eds. *The Archaeology of Context in the Neolithic and Bronze Age*, 30-41. Sheffield: Dept. of Archaeology and Prehistory.
- Barrett, J.C., 1991. Towards an archaeology of ritual. In: P. Garwood, D. Jennings, R. Skeates and J. Toms, eds. *Sacred and Profane*, 1-9. Oxford: Oxford University Committee for Archaeology.
- Barrett, J.C., 1992. Comment. *Archaeological Review from Cambridge*, 11(1), 156-162, *In the Midst of Life*.
- Basilov, V.N., 1989. *Nomads of Eurasia*. Los Angeles: Natural History Museum.
- Basilov, V.N., 1990. Chosen by the spirits. In: M.M. Balzer, ed. *Shamanic Worlds: Rituals and Lore of Siberia and Central Asia*, 3-48. Armonk, N.Y. and London: M.E. Sharpe, Inc.
- Bashilov, V.A., and Yablonsky, L.T., 1995. Introduction. In: J. Davis-Kimball, V.A. Bashilov and L.T. Yablonsky, eds. *Nomads of the Eurasian Steppes in the Early Iron Age*, xi-xv. Berkeley: Zinat Press.
- Bates, L.A. and Byrne, R.W., 2007. Creative or created: Using anecdotes to investigate animal cognition. *Methods*, 42, 12-21.
- Batson, C.D., 2009. These things called empathy: Eight related but distinct phenomena. In: J. Decety and W. Ickes, eds. *The Social Neuroscience of Empathy*, 3-15. Cambridge, Mass.: MIT Press.

- Beal, S., trans., 1884. *Si-yu-ki: Buddhist Records of the Western World Translated from the Chinese of Hiuen Tsiang (A.D. 629)*. 2 Vols. (reprinted 1994) Delhi: Motilal Banarsidass Publishers.
- Bekoff, M., 2002. *Minding Animals: Awareness, Emotions, and Heart*. Oxford: Oxford University Press.
- Bekoff, M., 2006. Animal passions and beastly virtues: Cognitive ethology as the unifying science for understanding the subjective, emotional, empathic, and moral lives of animals. *Zygon*, 41(1), 71-104.
- Bekoff, M., 2007. *The Emotional Lives of Animals*. Novato, Calif: New World Library.
- Bekoff, M., Allen, C. and Burghardt, G.M., eds., 2002. *The Cognitive Animal: Empirical and Theoretical Perspectives on Animal cognition*. Cambridge, Mass.: MIT.
- Bekoff, M. and Pierce, J., 2009. *Wild Justice: The Moral Lives of Animals*. Chicago: University of Chicago Press.
- Belenitskiy, A.M., 1978. I Ideologicheskikh Predstavleniyakh Narodov Srednei Azii i Evraziiskikh Stepei v Drevnosti i Rannem Srednevekovy. In: *Rannie Kochevniki: Sbornik Nauchnykh Statei*. (From ancient times to the Middle Ages: The role of the horse in cults and beliefs of the peoples of Central Asia and the steppes of Eurasia. In: *Early Nomads: A Collection of Scholarly Articles and Short Reports*), 31-38. Moscow: Nauka. (Russian.)
- Benecke, N. and von den Driesch, A., 2003. Horse exploitation in the Kazakh steppe during the Eneolithic and Bronze Age. In: M.A. Levine, C. Renfrew, and K. Boyle, eds. *Prehistoric Steppe Adaptation and the Horse*, 69-82. Cambridge: McDonald Institute for Archaeological Research.
- Bennett, D.K., 1998. *Conquerors: The Roots of New World Horsemanship*. Solvang, Calif.: Amigo Publications, Inc.
- Berger, J., 1996. A man holding up a horse's bridle. *Photocopies*, 102-107. London: Bloomsbury.
- Bevan, L., 2003. Stag nights and horny men: Antler symbolism and interaction with the animal world during the Mesolithic. In: L. Bevan and J. Moore, eds. *Peopling the Mesolithic in a Northern Environment*, 35-44. (BAR International Series 936.) Oxford: Archaeopress.
- Birke, L. 2009. Naming names—Or, what's in it for the animals? [online]. *Humanimalia*, 1(1), 1-8. Available from: <http://www.depauw.edu/humanimalia/issue01/birke.html> [accessed 4 Jan. 2010].
- Birke, L., Bryld, M. and Lykke, N., 2004. Animal performances: An exploration of intersections between feminist science studies and studies of human/animal relationships. *Feminist Theory*, 5(2), 167-183.

- Birke, L. and Parisi, L., 1999. Animals, becoming. *In: H.P. Steeves, ed. Animal Others: On Ethics, Ontology and Animal Life*, 55-73. Albany: SUNY Press.
- Bley-Jones, K., 2000. The Sintashta and their western European counterparts. *In: J. Davis-Kimball, E. Murphy, L. Koryakova and L.T. Yablonsky, eds. Kurgans, Ritual Sites, and Settlements Eurasian Bronze and Iron Age*, 126-133. (BAR International Series 870.) Oxford: Archaeopress.
- Bogucki, P., 1996. Pazyryk and the Ukok princess. *In: P.G. Bahn, ed. Tombs, Grave sand Mummies*, 146-151. New York: Barnes & Noble.
- Bohmer, H. and Thompson, J., 1991. The Pazyryk carpet: A technical discussion. *Source: Notes in the History of Art*, X(4), 30-36.
- Bökönyi, S., 1968. Mecklenburg Collection, Part I, Data on Iron Age horses of Central and Eastern Europe. *American School of Prehistoric Research, Peabody Museum, Harvard University Bulletin* 25, 3-71.
- Bokovenko, N.A., 1995a. History of studies and the main problems in the archaeology of Southern Siberia during the Scythian period. *In: Davis-Kimball, J., Bashilov, V.A., and Yablonsky, L.T., eds. Nomads of the Eurasian Steppes in the Early Iron Age*, 255-261. Berkeley: Zinat Press.
- Bokovenko, N.A., 1995b. Scythian culture in the Altai Mountains. *In: Davis-Kimball, J., Bashilov, V.A., and Yablonsky, L.T., eds. Nomads of the Eurasian Steppes in the Early Iron Age*, 285-295. Berkeley: Zinat Press.
- Bokovenko, N.A., 1995c. Tuva during the Scythian period. *In: Davis-Kimball, J., Bashilov, V.A., and Yablonsky, L.T., eds. Nomads of the Eurasian Steppes in the Early Iron Age*, 265-281. Berkeley: Zinat Press.
- Bokovenko, N.A., 2000. The origins of horse riding and the development of ancient Central Asian nomadic riding harness. *In: J. Davis-Kimball, E. Murphy, L. Koryakova and L.T. Yablonsky, eds. Kurgans, Ritual Sites, and Settlements Eurasian Bronze and Iron Age*, 304-310. (BAR International Series 870.) Oxford: Archaeopress.
- Bokovenko, N.A., 2004. Migrations of early nomads of the Eurasian steppe in a context of climatic changes. *In: M.A. Scott, A.Y. Alekseev and G. Zairseve, eds. Impact of the Environment on Human Migration in Eurasia*, 21-33. Dordrecht: Kluwer.
- Bokovenko, N., 2006. The emergence of the Scythians: Bronze Age to Iron Age in South Siberia. The emergence of the Tagar culture. *Antiquity*, 80, 860-879.
- Bonani, G., Hajdas, I., Rouff, U., Siefert, M., Molodin, V. and Sljusarenko, I., 2000. Dendrochronological and radiocarbon dating of the Scythen (sic) burial place in the Pazyryk Valley in the Altai Mountains, South Siberia [online]. ETH Institute for Particle Physics, Zurich, Switzerland. Available from: www.ipp.phys.ethz.ch/research/experiments/tandem/Annual/2000/3.pdf [accessed 1 June 2008].

- Bond, K.E. and Stinson, S.W., 2000-2001. 'I feel like I'm going to take off': Young people's experiences of the superordinary in dance. *Dance Research Journal*, 32(2), 52-87.
- Bormann, E., 1972. Fantasy and rhetorical vision: The rhetorical criticism of social reality. *Quarterly Journal of Speech*, 58, 396-407.
- Bormann, E., 1983. Rhetoric as a way of knowing: Ernest Bormann and fantasy theme analysis. In: J.L. Golden, G.F. Berquist and W.E. Coleman, eds. *The Rhetoric of Western Thought*, 3rd ed. Dubuque, IA: Kendall/Hunt Publishing.
- Borneman, J., 1988. Race, ethnicity, species, breed: Totemism and horse-breed classification in America. *Comparative Studies in Society and History*, 30(1), 25-51.
- Bourgeois, I., Mikkelsen, J.H., van Hoof, L., van Huele, W., Bourgeois, J., Langohr, R., Cammaert, L. and DeCleir, H., 1999. An archeological survey of the Kalanegir Valley (Kosh-Agach Region, Altai Republic): Petroglyphs and Scytho-Siberian kurgans in a discontinuous permafrost area. *Ancient Civilizations from Scythia to Siberia*, 6(1-2), 77-101.
- Bourdieu, P., 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
- Bower, M.A., 2003. Green grows the steppe: How can grassland ecology increase our understanding of human-plant interactions and the origins of agriculture. In: M.A. Levine, C. Renfrew, and K. Boyle, eds. *Prehistoric Steppe Adaptation and the Horse*, 29-41. Cambridge: McDonald Institute for Archaeological Research.
- Boyd, B., 2007. Tails within tales. In: L. Simmons and P. Armstrong, eds. *Knowing Animals*, 217-243. Leiden: Brill.
- Boyd, L. and Keiper, R., 2005. Behavioural ecology of feral horses. In: D.S. Mills and S.M. McDonnell, eds. *The Domestic Horse: The Evolution, Development and Management of its Behaviour*, 55-82. Cambridge: University Press.
- Boyle, K., Renfrew, C. and Levine, M., eds., 2002. *Ancient Interactions: East and West in Eurasia*. Cambridge: McDonald Institute for Archaeological Research.
- Bradley, R., 1992. *Altering the Earth: The Origins of Monuments in Britain and Continental Europe*. (Rhind Lectures 1991-1992. Monograph Series No. 8.) Edinburgh: Society of Antiquaries of Scotland.
- Brandt, K., 2004. A language of their own: An interactionist approach to human-horse communication. *Society & Animals*, 12(4), 299-316.
- Brandt, K. J., 2005. Intelligent bodies: A phenomenological exploration of embodied subjectivity within the human-horse communication process [online]. Paper presented at the annual meeting of the American Sociological Association, Aug. 2005, Philadelphia, PA. Available from: http://www.allacademic.com/meta/p20637_index.html [accessed 24 Feb. 2008].

- Brentjes, B., 2000. 'Animal Style' and shamanism: Problems of pictorial tradition in Northern and Central Asia. In: J. Davis-Kimball, E. Murphy, L. Koryakova and L.T. Yablonsky, eds. *Kurgans, Ritual Sites, and Settlements Eurasian Bronze and Iron Age*, 259-268. (BAR International Series 870.) Oxford: Archaeopress.
- Brown, K.A. and Pluciennik, M., 2001. Archaeology and human genetics: Lessons for both. *Antiquity* 75, 101-106.
- Brown, S-E, 2007. Companion animals as selfobjects. *Anthrozoös*, 20(4), 329-343.
- Brownrigg, G., 2006. Horse control and the bit. In: S.L. Olsen, S. Grant, A.M. Choyke and L Bartosiewicz, eds. *Horses and Humans: The Evolution of Human-Equine Relationships*, 165-172. (BAR International Series 1560.) Oxford: Archaeopress.
- Brück, J., 1999. Ritual and rationality: Some problems of interpretation in European archaeology. *European Journal of Archaeology*, 2(3), 313-344.
- Brück, J., 2001a. Monuments, power and personhood in the British Neolithic. *The Journal of the Royal Anthropological Institute*, 7(4), 649-667.
- Brück, J., 2001b. Reply to Thomas. Monuments, power and personhood in the British Neolithic. *The Journal of the Royal Anthropological Institute*, 7(4), 765-766.
- Brück, J., 2004. Material metaphors: The relational construction of identity in early Bronze Age burials in Ireland and Britain. *Journal of Social Archaeology*, 4(3), 307-333.
- Brumfiel, E.M., 2000. On the archaeology of choice: Agency studies as a research paradigm. In: M.-A. Dobres and J.E. Robb, eds. *Agency in Archaeology*, 249-255. London and New York: Routledge.
- Buckley, H.M., 1974. Clothing as a nonverbal communicator of social and political attitudes. *Family and Consumer Sciences Research Journal*, 3(2), 94-102.
- Budiansky, S., 1992. *The Covenant of the Wild: Why Animals Chose Domestication*. New Haven: Yale University Press.
- Bunker, E.C., 1970. The Animal Style. In: E.C. Bunker, C.B. Chatwin and A.R. Farcas, eds. *'Animal Style' Art from East to West*, 12-15. New York: The Asia Society.
- Bunting, G., 1997. *The Horse: The Most Abused Domestic Animal*. Toronto: University of Toronto Press.
- Burling, R., 1993. Primate calls, human language, and nonverbal communication. *Current Anthropology*, 34(1), 25-53.
- Byers, P., 1977. A personal view of nonverbal communication. *Theory into Practice*, 16(3), 134-140.
- Cains, G.E. and Byard, R.W., 2008. The forensic and cultural implications of tattooing. In: M. Tsokos, ed. *Forensic Pathology Reviews*, 5, 197-220.

- Campbell, B., 2005. On 'loving your water buffalo more than your own mother'. In: J. Knight, ed. *Animals in Person: Cultural Perspectives on Human-Animal Intimacy*, 79-100. Oxford: Berg.
- Campbell, C., 1996. The meaning of objects and the meaning of actions: A critical note on the sociology of consumption and theories of clothing. *Journal of Material Culture*, 1, 93-105.
- Canetti, E., 1960. *Crowds and Power*. New York: Farrar, Straus and Giroux.
- Carpenter, M., Nagell, K., Tomasello, M. and Butterworth, C.M., 1998. Social cognition, joint attention, and communication competence for 9 to 15 months of age. *Monographs of the Society for Research in Child Development*, 63(4), 1-174.
- Casella, E.C. and Fowler, C., eds. 2004. *The Archaeology of Plural and Changing Identities*. New York: Springer.
- Cassidy, R., 2009. The horse, the Kyrgyz horse and the 'Kyrgyz Horse.' *Anthropology Today*, 25(1), 12-15.
- Cassidy, R. and Mullin, M., eds., 2007. *Where the Wild Things Are Now: Domestication Reconsidered*. Oxford: Berg.
- Chang, C., Benecke, N., Grigoriev, F.P., Rosen, A.M. and Tourtellotte, P.S., 2003. Iron Age society and chronology in south-east Kazakhstan. *Antiquity*, 77, 298-312.
- Chang, C., Grigoriev, F.P. and Tourtellotte, P.A., 2007. Farmers, herders, and rich folk: The Issyk burial and the Talgar Iron Age sites. In: C. Chang and K.S. Guroff, eds. *Of Gold and Grass: Nomads of Kazakhstan*, 29-34. Foundation for International Arts and Education.
- Chang, C. and Guroff, K.S., 2007. *Of Gold and Grass: Nomads of Kazakhstan*. Foundation for International Arts and Education.
- Chang, C. and Tourtellotte, P.S., 1998. The role of agro-pastoralism in the evolution of steppe culture in the Semirechye area of southern Kazakhstan during the Saka/Wusun period (600 BCE-400 CE). In: V. Mair, ed. *The Bronze Age Peoples of Eastern Central Asia*, 264-279. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Chard, C., 1963. Soviet scholarship on the prehistory of Asiatic Russia. *Slavic Review*, 22(3), 538-546.
- Chapman, R., and Randsborg, K., 1981. Approaches to the archaeology of death. In: R. Chapman, I., Kinnes and K. Randsborg, eds. *The Archaeology of Death*, 1-24. Cambridge: Cambridge University Press.
- Chatwin, C.B., 1970. The nomadic alternative. In: E.C. Bunker, C.B. Chatwin and A.R. Farcas, eds. *Animal Style' Art from East to West*, 175-184. New York: The Asia Society.

- Chen, C-W., 1998. Further studies on the racial, cultural, and ethnic affinities of the Yuezhi. In: V. Mair, ed. *The Bronze Age Peoples of Eastern Central Asia*, 767-784. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Cheremisin, D.V., 2005. On the semantics of the masked, horned horses from Pazyryk mounds. *Archaeology, Ethnology & Anthropology of Eurasia*, 2(22), 129-140.
- Cheremisin, D.V., 2007. The meaning of representations in the Animal Style and their relevance for the reconstruction of Pazyryk ideology. *Archaeology, Ethnology & Anthropology of Eurasia*, 3(31), 87-102.
- Cheremisin, D.V., 2009. On the semantics of Animal Style ornithomorphic images in Pazyryk ritual artifacts. *Archaeology, Ethnology & Anthropology of Eurasia*, 37(1), 85-94.
- Christian, D., 1998. *A History of Russia, Central Asia and Mongolia*. Vol. 1. Inner Asia from Prehistory to the Mongol Empire. London: Blackwell.
- Chugunov, K., Nagler, A. and Parzinger, H., 2002. Scythian gold: The golden grave from Arzhan [online]. *Minerva*, Jan./Feb, 2002. Available from: <http://www.arzhan2.nw.ru/publ/minerva.pdf> [accessed 12 Jan. 2004].
- Churchill, S.D., 2006. Encountering the animal other: Reflections on moments of empathic seeing. *The Indo-Pacific Journal of Phenomenology*, 6, 1-13.
- Clauson, G., 1965. Turkish and Mongolian horses and use of horses, an etymological study. *Central Asiatic Journal*, 10, 160-166.
- Clayton, H.A. and Lee, R., 1984. Fluoroscopic study of the position and action of the jointed snaffle bit in the horse's mouth. *Veterinary Science*, 4(5), 193-196.
- Clisson, I., Keyser, C. Francfort, H.-P., Crubezy, E., Samashev, Z. and Ludes, B. 2002. Genetic analysis of human remains from a double inhumation in a frozen kurgan in Kazakhstan (Berel site, Early 3rd century BC). *International Journal of Legal Medicine*, 116(5), 304-308.
- Clutton-Brock, J., 1981. *Domesticated Animals from Early Times*. Austin: University of Texas Press.
- Clutton-Brock, J., ed., 1989. *The Walking Larder: Patterns of Domestication, Pastoralism, and Predation*. London: Unwin Hyman.
- Clutton-Brock, J., 1992. *Horse Power*. Cambridge: Harvard University Press.
- Clutton-Brock, J., 1994. The unnatural world: Behavioural aspects of humans and animals in the process of domestication. In: A. Manning and J. Serpell, eds. *Animals and Human Society: Changing Perspectives*, 23-35. London: Routledge.

- Clutton-Brock, J., 1999 [1987]. *A Natural History of Domesticated Mammals*. 2nd ed. Cambridge: University Press.
- Conkey, M. W., 2001. Structural and semiotic approaches. In: D.S. Whitley, ed. *Handbook of Rock Art Research*, 273-310. Walnut Creek, CA: Altamira Press.
- Conneller, C. 2004. Becoming deer. Corporeal transformations at Star Carr. *Archaeological Dialogues*, 11, 37-56.
- Cooper, J.J. and Albentosa, M.J., 2005. Equine behavior and welfare. In: D.S. Mills and S.M. McDonnell, eds. *The Domestic Horse: The Evolution, Development and Management of its Behaviour*, 228-238. Cambridge: University Press.
- Coppinger, R. and Coppinger, L., 2001. *Dogs: A New Understanding of Canine Origin, Behavior and Evolution*. Chicago: University of Chicago Press.
- Coetzee, J.M., 1999. *The Lives of Animals*, A. Gutman, ed. Princeton, NJ: Princeton University Press.
- Coy, J., 1988. Animals' attitudes to people. In: T. Ingold, ed. *What Is an Animal?*, 77-83. London: Unwin Hyman.
- Creel, H.G., 1965. The role of the horse in Chinese history. *American Historical Review*, 70(3), 647-672.
- Creel, H.G., 1970. *What is Taoism?* Chicago: University of Chicago Press.
- Crews, D., 2009. The bond between a horse and a human [online]. *Natureprecedings*. Available from: <http://hdl.handle.net/10101/npre.2009.3454.1> [accessed 27 Nov. 2009].
- Crist, E., 1999. *Images of Animals: Anthropomorphism and Animal Mind*. Philadelphia: Temple University Press.
- Cross, P.J., 2011 (pending). Horse burial in First Millennium AD Britain: Issues of deposition. *European Journal of Archaeology*, 14(1), xx-xx.
- Cross, S.E. and Gore, J.S., 2005. Cultural models of the self. In: M.R. Leary and J.P. Tangnet, eds. *Handbook of Self and Identity*, 536-564. New York: Guilford.
- Czaplicka, M.A., 2003 [1914]. *Aboriginal Siberia: A Study in Social Anthropology*. Oxford: Clarendon Press. Reprinted 2003 Adamant Media Corp. unabridged.
- Darwin, C., 1998 [1872]. *The Expression of Emotions in Man and Animals*. 3rd. ed. Oxford: University Press.
- Datson, L. and Mitman, G., 2005. *Thinking with Animals: New Perspectives on Anthropomorphism*. New York: Columbia University Press.
- Davis, R.S., 1983. Theoretical issues in contemporary Soviet Paleolithic archaeology. *Annual Review of Anthropology*, 12, 403-428.

- Davis-Kimball, J., 1997/1998. Amazons, priestesses, and other women of status: Females in Eurasian nomadic societies. *Silk Road Art and Archaeology*, 5, *Journal of the Institute of Silk Road Studies*, 1, 1-50. Kamakura, Japan: The Ancient Orient Museum.
- Davis-Kimball, J., 1998. Tribal interactions between the Early Iron Age nomads of the southern Ural Steppes, Semirechiye, and Xinjiang. In: V. H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 238-263. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Davis-Kimball, J., 2000. Village life to nomadism: An Indo-Iranian model in the Tien Shan Mountains (Xinjiang, China). *Journal of Indo-European Studies* (Monograph 40), 243-268. Proceedings of the 12th Annual UCLA Indo-European Conference. M.E. Huld, K. Jones-Bley, A.D. Volpe and M.R. Dexter, eds.
- Davis-Kimball, J., Bashilov, V.A. and Yablonsky, L.T., eds., 1995. *Nomads of the Eurasian Steppes in the Early Iron Age*. Berkeley: Zinat Press.
- Davis-Kimball, J., Murphy, E., Koryakova, L. and Yablonsky, L.T., eds., 2000. *Kurgans, Ritual Sites, and Settlements: Eurasian Bronze and Iron Age*. (BAR International Series 870.) Oxford: Archaeopress.
- DeGubernatis, A., 1872. *Zoological Mythology*. 2 vols. New York: Macmillan and Company.
- Dere, E., Kart-Teke, E., Huston, J.P. and DeSouza Silva, M.A. 2006. The case for episodic memory in animals. *Neuroscience and Biobehavioral Reviews*, 30, 1206-1224.
- Despret, V., 2008. The becomings of subjectivity in animal worlds. *Subjectivity*, 23, 123-139.
- Devlet, E., 2001. Rock art and the material culture of Siberian and Central Asian shamanism. In: N. Price, ed. *The Archaeology of Shamanism*, 44-55. London and New York: Routledge.
- Devlet, E. and Devlet, M., 2000. *Dukhvnaya Kutura Drevnikh Narodov Sebernoi I Tsentralnoi Azii. (The Spiritual Life of the Ancient Peoples of Northern and Central Asia)*. Lewsiton-Queenston-Lampeter: Edwin Mellon Press. (Russian.)
- Devlet, E. and Devlet, M., 2002. Siberian shamanistic rock art. In: A. Rozwadowski and M. Kořko, eds. *Spirits and Stones: Shamanism and Rock Art in Central Asia and Siberia*, 120-136. Poznan: Instytut Wschodni Uam.
- DeVito, J.A., 1993. *Essentials of Human Communication*. New York: HarperCollins College.
- DeVito, J.A., 1999. *Messages: Building Interpersonal Communication Skills*. 4th ed. New York: Longman.
- Diachenko, V., 1994. The horse in Yakut shamanism. In: G. Seaman and J.S. Day, eds. *Ancient Traditions: Shamanism in Central Asia and the Americas*, 265-271. Niwot, Colo: University Press.

- Di Cosmo, N., 1994. Ancient Inner Asian nomads: Their economic basis and its significance in Chinese history. *The Journal of Asian Studies*, 53(4), 1092-1126.
- von Dierendonck, M.C. and Goodwin, D., 2006. Social contact in horses: Implications for human-horse interactions. In: von Dierendonck, M.C., ed. *The Importance of Social Relationships in Horses*, 28-44. Proefschrift Universitat Utrecht.
- Dietz, U.L., 2003. Horseback riding: Man's (sic) access to speed? In: M.A. Levine, C. Renfrew, and K. Boyle, eds. *Prehistoric Steppe Adaptation and the Horse*, 189-199. Cambridge: McDonald Institute for Archaeological Research.
- Dobie, F.J., 1952. *The Mustangs*. New York: Bramhill House.
- Dobres, M.-A. and Robb, J.E., 2000a. *Agency in Archaeology*. London and New York: Routledge.
- Dobres, M.-A. and Robb, J.E., 2000b. Agency in archaeology: Paradigm or platitude? In: M.-A. Dobres and J.E. Robb, eds. *Agency in Archaeology*, 3-17. London and New York: Routledge.
- Doniger, W., 1990. The tail (sic) of the Indo-European horse sacrifices. *Incognita*, 1 (1), 18-35.
- Doniger, W., 1999. Reflections. In: J.M. Coetzee, *The Lives of Animals*. A. Gutman, ed., 93-106. Princeton, N.J.: Princeton University Press.
- Dorrance, B. and Desmond, L., 1999. *True Horsemanship though Feel*. Guilford: Conn.: The Lyons Press.
- Dorrance, T. and Hunt Porter, M., 1987. *True Unity: Willing Communication between Horse and Human*. Fresno, Calif.: Pioneer.
- Downes, J. and Pollard, T., 1999. *The Loved Body's Corruption: Archaeological Contributions to the Study of Human Mortality*. Glasgow: Cruthine Press.
- Dressage Appaloosa en liberté, Isabelem, 2008 [online video]. Available from: <http://www.youtube.com/watch?v=VmcVrDM2LL4> [accessed 26 May 2008].
- Drews, R., 2004. *Early Riders: The Beginnings of Mounted Warfare in Asia and Europe*. New York and London: Routledge.
- Durham, D., 1999. The predicament of dress: Polyvalency and the ironies of cultural identity. *American Ethnologist* 26(2), 389-411.
- Dumézil, G., 1958. *L'idéologie tripartite des indo-européens*. Brussels: Collection Latomus.
- Edmonds, M., 1999. *Ancestral Geographies of the Neolithic: Landscapes, Monuments and Memory*. London and New York: Routledge.
- Edwards, M. 2003. Siberia's Scythians: Masters of gold. *National Geographic*, 203(6), 112-129.
- Eid, M. and Larsen, R.J., 2008. *The Science of Subjective Well-Being*. New York: Guilford.

- Eliade, M., 1964 [1951]. *Shamanism: Archaic Techniques of Ecstasy*. W.R. Trask, trans. (Bolligen Series 76.) Princeton, N.J.: University Press.
- Emory University Sciences Center, 2006. First evidence to show elephants, like humans, apes and dolphins, recognize themselves in mirror [online]. *ScienceDaily* Available from: <http://www.sciencedaily.com/releases/2006/10/061030183310.htm> [accessed 29 Oct. 2007].
- Esin, E., 1965. The horse in Turkic art. Proceedings of the VIIth Meeting of the Permanent International Altaistic Conference. *Central Asiatic Journal*, 10(3-4), 167-227.
- Evans, G.E., 2008. *The Horse in the Furrow*. London: Faber and Faber.
- Evans, R. and Franklin, A., 2009. Equine Beats: Unique Rhythms (and Floating Harmony) of Horses and Their Riders. In: T. Edensor, ed. *Geographies of Motion*. Ashgate: Aldershot, Hants UK.
- Ewers, J.C., 1955. *The Horse in Blackfoot Indian Culture: With Comparative Material from Other Western Tribes*. (Smithsonian Institution Bureau of American Ethnology Bulletin 159.) Washington D.C.: Smithsonian Institution.
- Farmer, K., Krueger, K. and Byrne, R.W., 2008. Visual laterality in the domestic horses (*Equus caballus*) interacting with humans [online]. *Animal Cognition*. doi 10.1007/s10071-009-0260-x, 1-10.
- Feinberg, R.A., 1992. Clothing and social identity. *Clothing and Textiles Research Journal*, 11(1), 18-23.
- Fellner, W., Bauer, B. and Harley, H.E., 2006. Cognitive implications of synchrony in dolphins: A Review. *Aquatic Mammals*, 32(4), 511-516.
- Ferguson, S.D., 2008. *Public Speaking: Building Competency in Stages*. Oxford: University Press.
- Festinger, L., 1957. *A Theory of Cognitive Dissonance*. Evanston, IL: Row, Peterson.
- Fey, C., 2005. Relationship and communication in socially natural horse herds. In: D.S. Mills and S.M. McDonnell, eds. *The Domestic Horse: The Evolution, Development and Management of its Behaviour*, 83-93. Cambridge: Cambridge University Press.
- Field, Henry. 1948. *Contributions to the Anthropology of the Soviet Union*. Smithsonian Miscellaneous Collections, 110(13). Washington D.C.: Smithsonian Institution.
- Fiske, J., 1990. *Introduction to Communication Studies*. 2nd ed. (Studies in Culture and Communication Series.) London and New York: Routledge.
- Fogelin, L., 2008. Delegitimizing religion: The archaeology of religion as... archaeology. In: D.S. Whitley and K. Hays-Gilpin, eds. *Belief in the Past: Theoretical Approaches to the Archaeology of Religion*, 129-142. Walnut Creek: Left Coast Press.
- Foote, A.L. and Crystal, J.D., 2007. Metacognition in rats. *Current Biology*, 17, 551-556.

- Forsyth, J. 1992. *A History of the Peoples of Siberia: Russia's North Asian Colony 1581-1990*. Cambridge: Cambridge University Press.
- Fowler, C., 2004a. *The Archaeology of Personhood: An Anthropological Approach*. London: Routledge.
- Fowler, C., 2004b. Identity politics: Personhood, kinship, gender and power in Neolithic and Early Bronze Age Britain. In: E.C. Casella and C. Fowler, eds. *The Archaeology of Plural and Changing Identities*, 109-143. New York: Springer.
- Francfort, H.-P., 1994. The Central Asian dimension of the symbolic system in Bactria and Margiana. *Antiquity*, 68, 406-418.
- Francfort, H.-P., 1998. Central Asian petroglyphs: Between Indo-Iranian and shamanistic interpretations. In: C. Chippendale and P.S.C. Tacon, eds. *The Archaeology of Rock Art*, 302-318. Cambridge: University Press.
- Francfort, H.-P., 2001. Art, archaeology and the prehistories of shamanism in Inner Asia. In: H.-P. Francfort and R.N. Hamayon (with P.G. Bahn), eds. *The Concept of Shamanism: Uses and Abuses*, 244-276. (Bibliotheca Shamanistica, vol. 10, M. Hoppál, ed.) Budapest: Akademiai Kiado.
- Francfort, H.-P. and Hamayon, R.N., (with Bahn, P.G.), eds. 2001. *The Concept of Shamanism: Uses and Abuses*. (Bibliotheca Shamanistica, vol. 10, M. Hoppál, ed.) Budapest: Akademiai Kiado.
- Francfort, H.-P., Ligabue, G. and Samashev, Z., 2000. La fouille d'un kourgane scythe gelé du IV^e siècle av. notre ère à Berel dans l'Altai (Kazakhstan). *Académie des Inscriptions et Belles-Lettres*, 775-806. Paris: De Boccard Edt. (French.)
- Francfort, H.-P., Ligabue, G. and Samashev, Z., 2006. The gold of the griffins: Recent excavation of a frozen tomb in Kazakhstan. In: J. Aruz, A. Farkas and E. Valtz Fino, eds. *The Golden Deer of Eurasia: Perspectives on the Steppe Nomads of the Ancient World*, 114-127. New York: Metropolitan Museum of Art Symposia.
- Franchetti, M.D., 2004. Archaeological explorations of Bronze Age pastoral societies in the mountains of eastern Eurasia [online]. Silkroad Newsletter. Silkroad Foundation. D. Waugh, ed. Available from: <http://www.silkroadfoundation.org/newsletter/2004vol2num1/bronzeage.htm> [accessed 9 Sept. 2004].
- Franchetti, M.D., 2007. Ancient nomads of the Andronovo culture: The globalization of the Eurasian steppe during prehistory. In: C. Chang and K.S. Guroff, eds. *Of Gold and Grass: Nomads of Kazakhstan*, 21-28. Foundation for International Arts and Education.
- Franchetti, M.D., 2008. *Pastoralists Landscapes and Social Interaction in Bronze Age Eurasia*. Berkeley: University of California Press.

- Frye, R.N., 1996. *The Heritage of Central Asia: from Antiquity to Turkish Expansion*. Princeton, N.J.: Marcus Weiner.
- Furst, P.T., 1994. Introduction: An overview of shamanism. In: G. Seaman and J.S. Day, eds. *Ancient Traditions: Shamanism in Central Asia and the Americas*, 1-28. Niwot, Colo: University Press.
- Gabitov, T.H., 2001 Historical development of Kazakh national culture. Central Asian Historical-Cultural Research Center [online]. Available from: <http://www.ara-cah-crc.com/CAHCRC/Gabitov-Kcltr.htm> [accessed 18 July 2005].
- Galdanova, G.R., 1992. Semantika arckhaichnykh elementov svady u tyurko-mongolov. In: *Traditsionnaya obryadnost mongolskikh narodov*. (The semantics of archaic elements of marriage-nuptials among the Turko-Mongols. In: *Traditional Rites among Mongolian Peoples*), 71-89. Novosibirsk: Nauka. (Russian.)
- Game, A., 2001. Riding: Embodying the Centaur. *Body & Society*, 7(1), 1-12.
- Gansell, A.R., 2007. Identity and adornment in the Third-millennium BC Mesopotamian 'royal cemetery' at Ur. *Cambridge Archaeological Journal*, 17(1), 29-46.
- Gell, A., 1998. *Art and Agency: An Anthropological Theory*. Oxford: Clarendon Press.
- Gibson, K.R., 2002. Customs and cultures in animals and humans: Neurobiological and evolutionary considerations, *Anthropological Theory*, 2(3), 323-339.
- Giddens, A., 1984. *The Constitution of Society: Outline of a Theory of Structuration*. Berkeley: University of California Press.
- Gimbutas, M., 1989. *The Language of the Goddess*. New York: Thames and Hudson.
- Gimbutas, M., 1997. *The Kurgan Culture and the Indo-Europeanization of Europe: A Collection of Papers*. Dexter, M.R. and Jones-Bley, K, eds. Washington DC: Institute for the Study of Man.
- Gladitz, C., 1997. *Horse Breeding in the Medieval World*. Dublin: Four Courts Press.
- Gladney, D.C., 1998. Ethnogenesis and ethnic identity in China: Considering the Uyghurs and Kazakhs. In: V.H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 812-834. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Godfrey, J.F., 1979. *How Horses Learn: Equine Psychology Applied to Training*. Lincoln, NE: Authors Guild.
- Goldhahn, J. 2002. Roaring Rocks: An audio-visual perspective on hunter-gatherer engravings in northern Sweden and Scandinavia. *Norwegian Archaeological Review*, 35(1), 29-61.
- Golomshtok, E.A. and Griaznov, M.P., 1933. The Pazyryk burial of Altai. *American Journal of Archaeology* 37(1), 30-45.
- Goodall, D.M., 1977. *A History of Horsebreeding*. London: Robert Hale.

- Goodall, J. 2006. The dance of awe. *In*: P. Waldau and K. Patton, eds. *A Communion of Subjects: Animals in Religion, Science, and Ethics*, 651-656. New York: Columbia University Press.
- Goodwin, D., McGreevy, P., Waran, N. and McLean, A., 2009. How equitation science can elucidate and refine horsemanship techniques. *The Veterinary Journal*, 181, 5-11.
- Gosden, C., 2004. *Archaeology and Colonialism: Cultural Contact from 5000 BC to the Present*. Cambridge: University Press.
- Gosden, C., 2005. What do objects want? *Journal of Archaeological Method and Theory*, 12(3), 193-211.
- Gove, P.P., ed., 2002. *Webster's Third New International Dictionary of the English Language Unabridged*. Springfield, Mass.: Merriam-Webster.
- Grousset, R., 1999 [1970]. *The Empire of the Steppes: A History of Central Asia*. N. Ealford, trans. Brunswick: Rutgers University Press.
- Green, M., 1992. *Animals in Celtic Life and Myth*. London: Routledge.
- Griffin, D.R., 1984. *Animal Thinking*. Cambridge, Mass.: Harvard University Press.
- Griffin, E., 2002. *A First Look at Communication Theory*. 5th ed. New York: McGraw-Hill.
- Gryaznov, M.P., 1950. *Pervyi Pazyrykskii Kurgan. (First Pazyryk Kurgan.)* St. Petersburg: Hermitage. (Russian.)
- Gryaznov, M.P., 1969. *The Ancient Civilization of Southern Siberia*. J. Hogarth, trans. Geneva, Switz.: Nagel.
- Guerrero, L.K., DeVito, J.A. and Hecht, M.L., 1999. *The Nonverbal Communication Reader*. Long Grove, Ill.: Waveland.
- Haddle, J., 1975. *The Complete Book of the Appaloosa*. London: Thomas Yoseloff Ltd.
- Haines, F., 1963. *Appaloosa: The Spotted Horse in Art and History*. Fort Worth: University of Texas Press.
- Hajdas, I., Bonani, G., Sljusarenko, I., and Siefert, M., 2005. Chronology of Pazyryk 2 and Ulandryk 4 kurgans based on high resolution radiocarbon dating and dendro chronology—a step toward more precise dating of Scythian burials. *In*: Scott, E.M., Alekseev, Yu. And Zaitseva, G., eds. *Impacts of the Environment on Human Migration in Eurasia*, 107-116. NATO Science Series IV: Earth and Environmental Sciences, (42). The Netherlands: Springer.
- Hall, E.T., 1966. *The Hidden Dimension*. New York: Anchor.
- Hall, E.T., 1976. *Beyond Culture*. New York: Anchor.
- Hall, E.T., 1983. *The Dance of Life*. New York: Anchor.
- Hall, M.E., 1997. Toward an absolute chronology for the Iron Age of Inner Asia. *Antiquity*, 71(274), 863-875.

- Hama, H., Yogo, M. and Matsuyama, Y., 1996. Effects of stroking on both humans' and horses' heart rate responses. *Japanese Psychological Research*, 38(2), 66-73.
- Hamilakis, Y., Pluciennik, M. and Tarlow, S., eds., 2002. *Thinking through the Body: Archaeologies of Corporeality*. New York: Kluwer/Plenum.
- Hancar, F., 1952. The Eurasian Animal Style and the Altai complex. *Arbitus Asiae*, 15(1/2), 171-194.
- Hancocks, P., n.d. Notable holocene faunal changes [online]. Available from: <http://www.phancocks.pwp.blueyonder.co.uk/naturalhistory/holocene%20fauna.htm> [accessed 5 Aug. 2010].
- Hanggi, E.B., 2005. The thinking horse: Cognition and perception. *American Association of Equine Practitioners, Proceedings*, 51, 246-253.
- Hanks, B., 2000. Iron Age nomadic burials of the Eurasian steppe: A discussion exploring burial ritual complexity. In: J. Davis-Kimball, E. Murphy, L. Koryakova and L.T. Yablonsky, eds. *Kurgans, Ritual Sites, and Settlements: Eurasian Bronze and Iron Age*, 19-29. (BAR International Series 870.) Oxford: Archaeopress.
- Hanks, B.K., 2002. The Eurasian steppe 'nomadic world' of the first millennium BC: Inherent problems within the study of Iron Age nomadic groups. In: K. Boyle, C. Renfrew and M. Levine, eds. *Ancient Interactions: East and West in Eurasia*, 183-197. Oxford: Oxbow.
- Hanks, B.K., 2003. Human-animal relationships in the Eurasian Steppe Iron Age: An exploration into social, economic and ideological change. Thesis (Ph.D). University of Cambridge.
- Haraway, D., 2003. *The Companion Species Manifesto*. Chicago: Prickly Paradigm Press.
- Haraway, D., 2008. *When Species Meet*. Minneapolis: University of Minnesota Press.
- Harms, E., 1938. The psychology of clothes. *The American Journal of Sociology*, 44(2), 239-250.
- Hearne, V., 1994. *Animal Happiness: A Moving Exploration of Animals and Their Emotions*. New York: Skyhorse.
- Hearne, V., 2007. *Adam's Task: Calling Animals by Name*. New York: Skyhorse.
- Hecker, M., 1982. Domestication revisited: Its implications for faunal analysis, *Journal of Field Archaeology*, 9(2), 217-236.
- Heidegger, M., 1962. *Being and Time*. J. Macquarrie and E. Robinson, trans. Oxford: Blackwell.
- Henry, S., Hemery, D., Richard, M.-A. and Hausberger, M., 2005. Human-mare relationships and behaviour of foals toward humans. *Applied Animal Behaviour Science*, 93, 341-362.

- Herodotus, *The Histories*. 1964. G. Rawlinson, trans., H. Bowden, ed. (Everyman Library series.) London: J.M. Dent.
- Hiebert, F.T., 1992. Pazyryk chronology and early horse nomads reconsidered. *Bulletin of the Asia Institute*, 6, 117-129.
- Hildinger, E., 1997. *Warriors of the Steppe: A Military History of Central Asia 500 BC to 1700 AD*. Cambridge, Mass: Da Capo Press.
- Hill, J.D., 1995. *Ritual and Rubbish in the Iron Age of Wessex: A Study on the Formation of a Specific Archaeological Record*. (BAR British Series 242.) Oxford: Tempus Reparatum.
- Hodder, I., ed., 1982a. *Symbolic and Structural Archaeology*. Cambridge: Cambridge University Press.
- Hodder, I., 1982b. Theoretical archaeology: A reactionary view. In: I. Hodder, ed. *Symbolic and Structural Archaeology*, 1-16. Cambridge: Cambridge University Press.
- Hodder, I., 1989. This is not an article about material culture as text. *Journal of Anthropological Archaeology*, 8(3), 250-269.
- Hodder, I., 1993. The narrative and rhetoric of material culture sequences. *World Archaeology* 25(2), 268-282.
- Hodder, I. 1995. Material culture in time. In: I. Hodder, M. Shanks, A. Alexandri, V. Buchli, J. Carman, J. Last and G. Lucas, eds. *Interpreting Archaeology: Finding Meaning in the Past*, 164-168. London and New York: Routledge.
- Hodder, I., 2000. Agency and individuals in long-term processes. In: M.-A. Dobres and J.E. Robb, eds. *Agency in Archaeology*, 21-33. London and New York: Routledge.
- Hogg, M.A., 2005. Social identity. In: M.R. Leary and J.P. Tangnet, eds. *Handbook of Self and Identity*, 462-479. New York: Guilford.
- Hoffecker, J.F., 2005. *A Prehistory of the North: Human Settlement of the Higher Latitudes*. New Brunswick: Rutgers University Press.
- Holekamp K.E., 2006. Questioning the social intelligence hypothesis. *Trends in Cognitive Sciences*, 11(2), 65-69.
- Hooper, F., 1976. *The Military Horse*. South Brunswick: A.S. Barnes.
- Hoppál, M., 2001. Cosmic symbolism in Siberian shamanhood. In: J. Pentikainen, ed. *Shamanhood Symbolism and Epic*, 75-87. (Bibliotheca Shamanistica Vol. 9.) Akadémiai Kiadó: Budapest.
- Horse Capture, G. and Her Many Horses, E., 2006. *A Song for the Horse Nation: Horses in Native American Culture*. Washington D.C.: Smithsonian National Museum of the American Indian.

- Hulsewe, A.F.P., trans., 1979. *China in Central Asia—The Early Stage: 125 BC-AD 23, An Annotated Translation of Chapters 61 and 96 of the History of the Former Han Dynasty*. Vol. 14, Leiden: E. J. Brill.
- Humphrey, C., 1995. Chiefly and shamanic landscapes in Mongolia. In: E. Hirsch and M. O'Hanlon, eds. *The Anthropology of Landscape: Perspectives on Place and Space*, 135-162. Oxford: Clarendon Press.
- Humphrey, C. and Laidlaw, J., 2007. Sacrifice and ritualization. In: E. Kyriakidis, ed. *The Archaeology of Ritual*, 255-267. Los Angeles: Cotsen Institute of Archaeology.
- Humphrey, C. with Onon, U. 1996. *Shamans and Elders: Experience, Knowledge, and Power among the Daur Mongols*. (Oxford Studies in Social and Cultural Anthropology.) Oxford: Clarendon Press.
- Hunt, R. and Hunt, M., 1978. *Think Harmony with Horses: An In-depth Study of the Horse/man Relationship*. Fresno, Calif.: Pioneer.
- Hyland, A., 1994. *The Medieval Warhorse: From Byzantium to the Crusades*. London: Grange.
- Iggers, G.C., 1997. *Historiography in the Twentieth Century: From Scientific Objectivity to the Postmodern Challenge*. Middletown: Westleyan University Press.
- Ingold, T., 1988a. *What Is an Animal?* London: Unwin Hyman.
- Ingold, T., 1988b. The animal in the study of humanity. In: T. Ingold, ed. *What Is an Animal?*, 84-99. London: Unwin Hyman.
- Ingold, T., 1994. From trust to domination: An alternative history of human-animal relations. In: J. Serpell and A. Manning, eds. *Animals and Human Society*, 1-22. London and New York: Routledge.
- Ingold, T., 2000. *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill*. London: Routledge.
- Insoll, T., 2004. *Archaeology, Ritual, Religion*. London: Routledge.
- Irvine, L., 2007. The question of animal selves: Implications for sociological knowledge and practice. *Qualitative Sociological Review*, 3(1), 5-22.
- Jacobson, E., 1983. The Siberian roots of the Scythian stag image. *Journal of Asian History*, 17, 68-120.
- Jacobson, E., 1995. *The Art of the Scythians: The Interpenetration of Cultures at the Edge of the Hellenic World*. Leiden: Brill.
- Jacobson, E., 1999. Early nomadic sources for Scythian art. In: E.D. Reeder, ed., *Scythian Gold: Treasures from Ancient Ukraine*, 59-69. New York: Harry N. Abrams.
- Jacobson, E., 2007. The Issyk headdress: Symbol and meaning in the Iron Age nomadic culture. In: C. Chang and K.S. Guroff, eds. *Of Gold and Grass: Nomads of Kazakhstan*, 65-70. Foundation for International Arts and Education.

- Janhunen, J., 1998. The horse in East Asia: Reviewing the linguistic evidence. In: V. H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 415-430. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Jansen, T., Forster, P., Levine, M.A., Oelke, H., Hurles, M., Renfrew, C., Weber, J. and Olek, K., 2002. Mitochondrial DNA and the origins of the domestic horse [online]. *Proceedings of the National Academy of Sciences*, 99(16): 10905-10910 Available from: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pubmed&pubmedid=12130666> [accessed 17 Sept. 2004].
- Jerolmack, C., 2005. Our animals, our selves? Chipping away the human-animal divide. *Sociological Forum*, 20, 651-660.
- Jettmar, K., 1951. The Altai before the Turks. *Bulletin of the Museum of Far Eastern Antiquities*, 23, 135-223.
- Jettmar, K., 1967. *The Art of the Steppes*. A.E. Keep, trans. New York: Crown.
- Jettmar, K., 1981. Cultural and ethnic groups west of China in the second and first millennia BC [online]. *Asian Perspectives*, 24(2). Available from: The Silk Road Foundation, <http://www.silk-road.com/arti/westchina.shtml> [accessed 28 Aug. 2003].
- Johnson, M.H., 2000 [1989]. Conceptions of agency in archaeological interpretation. In: J. Thomas, ed. *Interpretive Archaeology: A Reader*, 211-227. Leicester: Leicester University Press.
- Jones, A., 2005. Lives in fragments? Personhood and the European Neolithic. *Journal of Social Archaeology*, 5(2), 193-224.
- Jones, A. and Richards, C., 2003. Animals into ancestors: Domestication, food and identity in Late Neolithic Orkney. In: M. Parker Pearson, ed. *Food, Culture and Identity in the Neolithic and early Bronze Age*, (BAR S1117), 45-51. Oxford: Archaeopress.
- Jones, M. 2002. Bio-archaeology and the Proto-Indo-European lexicon: the kurgan hypotheses revisited. In: K. Boyle, C. Renfrew and M. Levine, eds. *Ancient Interactions: East and West in Eurasia*, 293-297. Cambridge: McDonald Institute for Archaeological Research.
- Jordon, P., 2001a. Ideology, material culture and Khanty ritual landscapes in western Siberia. In: J.K. Fewster and M. Zvelebil, eds. *Ethnoarchaeology and Hunter-Gatherers: Pictures at an Exhibition*, 25-42. (BAR International Series 955.) Oxford: Archaeopress.
- Jordon, P., 2001b. The materiality of shamanism as a 'world-view': Praxis, artifacts and landscape. In: N. Price, ed. *The Archaeology of Shamanism*, 87-104. London and New York: Routledge.

- Jordon, P.D., 2003. *Material Culture and Sacred Landscape: The Anthropology of the Siberian Khanty*. Walnut Creek, CA: AltaMira Press.
- Jourdain, R., 1997. *Music, the Brain, and Ecstasy*. New York: Harper.
- Kalenka, P., 2009. *The Horse in Human History*. Cambridge: Cambridge University Press.
- Kalof, L. and Fitzgerald, A., 2007. *The Animals Reader: The Essential Classic and Contemporary Writings*. Oxford and New York: Berg.
- Kalugin, V., 1980. U istokov otechestvennogo konnozavodstva. *J.Konevodstvo y Konny Sport*. (Our country's horse husbandry. *Journal of Horse-husbandry and Equestrian Sport*), 11 (Nov), 38-40. (Russian.)
- Kamberi, D., 1998. Discovery of the Taklimakanian civilization during a century of Tarim archaeological exploration (ca. 1886-1996). In: V. H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 785-811. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Kangxin, H., 1998. The physical anthropology of the ancient populations of the Tarim Basin and surrounding areas. In: V. H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 558-570. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Kawami, T.S., 1991. Greek art and the finds at Pazyryk. *Source: Notes in the History of Art*, X(4), 16-19.
- Kawami, T.S., 2005. The image of the coiled feline in the Eurasian steppes. European Society for Central Asian Studies Ninth Conference, 12-14 Sept. 2005, Krakov, Poland.
- Kazanov, A.M. 1994 [1983]. *Nomads and the Outside World*. 2nd ed. J. Crookenden, trans. Madison: University of Wisconsin Press.
- Keeling, L.J., Jonare, L. and Lanneborn, L., 2009. Investigating horse-human interactions: The effect of a nervous human. *The Veterinary Journal*, 181, 70-71.
- Kelch, T.G., 2007. Toward a non-property status for animals. In: J. Donovan and C.J. Adams, eds. *The Feminist Care Tradition in Animal Ethics*, 230-249. New York: Columbia University Press.
- Kennedy, G.A., 1998. *Comparative Rhetoric: An Historical and Cross-cultural Introduction*. Oxford: University Press.
- Kessler, A.T., 1993. *Empires beyond the Great Wall: The Heritage of Genghis Khan*. B. Birge, trans. Los Angeles: Natural History Museum.

- Keyser-Tracqui, C., Blandin-Frappin, P., Francfort, H.-P., F.-X. Ricaut, F.-X., Lepetz, S., Crube'zy, E., Samashev, Z. and Ludes, B., 2005. Mitochondrial DNA analysis of horses recovered from a frozen tomb (Berel site, Kazakhstan, 3rd Century BC). *Animal Genetics*, 36, 203-209.
- Kiley-Worthington, M., 2004. *Equine Education*. UK: Cromwell Press.
- Kiley-Worthington, M., 2005. *Horse Watch: What It Is to Be Equine*. London: J.A. Allen.
- Kingsley, P., 1995. *Ancient Philosophy, Mystery and Magic: Empedocles and Pythagorean Tradition*. Oxford: Clarendon Press.
- Kingsley, P., 1999. *In the Dark Places of Wisdom*. Inverness: Golden Sufi Center.
- Kiriushkin, U.F. and A.A. Tishkin. 1987. Razvedenie i Ispolzovanie Lomashnikh Zhivotnykh v Panneskifskoe Vremya na Territorii Gornogo Altaya, in *Skifskaya Epokha Gornogo Altaya*. (Breeding and use of domestic animals in the early Scythian time in Altai Mountains. In: *Scythian Epoch of Altai Mountains*), 98-104. Barnaul. (Russian.)
- Kirk, L. and Start, H., 1999. Death at the undertakers. In: J. Downes and T. Pollard, eds. *The Loved Body's Corruption: Archaeological Contributions to the Study of Human Mortality*, 200-208. Glasgow: Cruthine Press.
- Klejn, L.S., 1993. To separate a centaur: On the relationship of archaeology and history in Soviet tradition. *Antiquity*, 67(255), 339-349.
- Knapp, M.L. and Hall, J.A., 2002. *Nonverbal Communication in Human Interaction*. 5th ed. The world: Wadsworth/Thompson.
- Knapp, M.L. and Vangelisti, A.L., 2005. *Interpersonal Communication and Human Relationships*, 5th ed. Boston: Allyn and Bacon.
- Knight, J., ed., 2005. *Animals in Person: Cultural Perspectives on Human-Animal Intimacy*. Oxford: Berg.
- Knowsley, J., 1998. Horses have 300 word vocabulary [online]. *London Daily Telegraph* (July 26). Available from: <http://www.law.utexas.edu/dawson/news/jul98ns4.htm>. [accessed 5 May 2001].
- Köçümkulkizî, E., trans., 2007. The Kyrgyz Epic *Manas* [online]. Available from: <http://www.silkroadfoundation.org/toc/index.html> [accessed 3 Jan. 2007].
- Kohanov, L., 2001. *The Tao of Equus*. Novato, CA: New World Library.
- Koryakova, L., 2000. Some notes about the material culture of Eurasian nomads. In: J. Davis-Kimball, E. Murphy, L. Koryakova and L.T. Yablonsky, eds. *Kurgans, Ritual Sites, and Settlements Eurasian Bronze and Iron Age*, 13-18. (BAR International Series 870.) Oxford: Archaeopress.

- Koryakova, L.N. and Hanks, B.K., 2006. Horse husbandry among Early Iron Age Trans-Ural Societies. *In*: S.L. Olsen, S. Grant, A.M. Choyke and L Bartosiewicz, eds. *Horses and Humans: The Evolution of Human-Equine Relationships*, 275-287. (BAR International Series 1560.) Oxford: Archaeopress.
- Koryakova, L. and Epimakhov, A., 2007. *The Urals and Western Siberia in the Bronze and Iron Ages*. Cambridge World Archaeology Series. Cambridge: University Press.
- Kosintev, P.A., 2006. The human-horse relationship on the European-Asian border in the Neolithic and Early Iron Age. *In*: S.L. Olsen, S. Grant, A.M. Choyke and L Bartosiewicz, eds. *Horses and Humans: The Evolution of Human-Equine Relationships*, 127-135. (BAR International Series 1560.) Oxford: Archaeopress.
- Krueger, K. and Heinze, J., 2008. Horse sense: Social status of horses (*Equus caballus*) affects their likelihood of copying other horses' behavior. *Animal Cognition*, 11, 431-439.
- Kruger, G.G., n.d. The Seat, The Seat, The Seat, Part Three [online]. Garland farms Dressage. Available from: <http://www.gfdressage.com/seat3.html> [accessed 31 Dec. 2007].
- Kubarev, V.D., 2002. Traces of shamanic motives in the petroglyphs and burial paintings of Gorno-Altai. *In*: A. Rozwadowski and M. Koško, eds. *Spirits and Stones: Shamanism and Rock Art in Central Asia and Siberia*, 99-119. Poznan: Instytut Wschodni Uam.
- Kubarev, V.D., 2006. Myths and rituals impressed in petroglyphs of the Altai. *Arcaheology, Ethnology and Anthropology of Eurasia*, 3(27), 41-54.
- Kuper, H. 1973. Costume and identity. *Comparative Studies in Society and History*, 15(3), 348-367.
- Kurochkin, G.N., 1993. Sakralnyi tsentr kochevnikov na Altae (arkeologetnograficheskaya rekonstruktivnaya model). *In*: *Problemy kulturogeneza i kulturnoe nasledie: Materialy Mezhdunar. Konferentsii. Pt. 2: Arkeologiya i izuchenie kulturnykh protsessov Iyavlenii*. (The Sacral Center of nomads in the Altai (archaeo-ethnographic reconstructive model. *In*: *Problems of cultural-genesis and cultural heritage: Proceedings of the International Conference. Pt. 2: Archaeology and the Study of Cultural Processes and Phenomena*), 93-98. St. Petersburg. (Russian.)
- Kuzmin, M.I., 1939. Kazakhskaya Loshad. *In*: *Konskie Resursy CCCP*. (Kazakh Horse. *In*: *Equine Resources of the USSR*), 287-288. All-Union Scientific-Research Institute of Horse Breeding; People's Land Committee of USSR. Moscow. State Publishing House for Collective Farms and Union Farms Literature. (Russian.)
- Kuz'mina, E.E. 1977. Kon v Religii i Iskusstve Sakov i skifov. *In*: *Skify i Sarmaty*. (The Horse in Sak-Scythian Art and Religion. *In*: *The Scyths and the Sarmatians*), 96-113. Kiev. (Russian.)

- Kuz'mina, E.E., 1998. Cultural connections of the Tarim Basin people and pastoralists of the Asian steppes in the Bronze Age. *In: V.H. Mair, ed. The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 63-93. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Kuzmina, E.E., 2000. The Eurasian Steppes: The transition from early urbanism to nomadism. *In: J. Davis-Kimball, E. Murphy, L. Koryakova and L.T. Yablonsky, eds. Kurgans, Ritual Sites, and Settlements Eurasian Bronze and Iron Age*, 113-124. (BAR International Series 870.) Oxford: Archaeopress.
- Kuzmina, E.E., 2003. The origin of pastoralism in the Eurasian Steppe. *In: M.A. Levine, C. Renfrew, and K. Boyle, eds. Prehistoric Steppe Adaptation and the Horse*, 203-232. Cambridge: McDonald Institute for Archaeological Research.
- Kuzmina, E.E., 2008. *The Prehistory of the Silk Road*. V.H. Mair, ed. Philadelphia: University of Philadelphia Press.
- Lamb, R. 2008. Deconstructing Tom Dorrance. *Equus*, 373, 45-47.
- Lamberg-Karlovsky, C.C., 1998. Interview in: 'Ice mummies: The Siberian Ice Maiden' [online]. Public Broadcasting Service. Available from: <http://www.pbs.org/wgbh/nova/transcripts/2517siberian.html> [accessed 26 December 2006].
- Last, J., 1998. Books of life: Biography and memory in a Bronze Age barrow. *Oxford Journal of Archaeology*, 17(1), 43-189.
- Latham, R., trans. 1958: *The Travels of Marco Polo*. New York: Penguin Classics.
- Latimer, J. and Birke, L., 2009. Natural relations: Horses, knowledge, technology. *The Sociological Review*, 57(1), 2-27.
- Latour, B., 1993. *We Have Never Been Modern*. Cambridge, Mass.: Harvard University Press.
- Lawrence, E.A., 1984. Human relationships with horses. *In: R.K. Anderson, B.L. Hart and L.A. Hart, eds. The Pet Connection*, 38-43. Minneapolis: Center to Study Human-Animal Relationships and Environments, U. Minn.
- Lawrence, E.A., 1985. *Hoofbeats and Society: Studies of Human-Horse Interactions*. Bloomington: Indiana University Press.
- Lawrence, E.A., 1989. *His Very Silence Speaks: Comanche, the Horse Who Survived Custer's Last Stand*. Detroit: Wayne State University Press.
- Lawrence, E.A., 1994 [1990]. Rodeo horses: The wild and the tame. *In: R. Willis, ed. Signifying Animals: Human Meaning in the Natural World*, 222-235. London and New York: Routledge.
- Lawrence, E.A., 1998. Human and horse medicine among Native American groups. *Agriculture and Human Values*, 15, 133-138.
- Lawrence, E.A., 2004. The Centaur: Its history and meaning in human culture. *Journal of Popular Culture*, 27(4), 57-68.

- Layton, R. and Barton, R., 2001. Warfare and human social evolution. *In*: J.K. Fewster and M. Zvelebil, eds. *Ethnoarchaeology and Hunter-Gatherers: Pictures at an Exhibition*, 13-24. (BAR International Series 955.) Oxford: Archaeopress.
- Leach, H.M., 2003. Human domestication reconsidered. *Current Anthropology*, 44(3), 349-368.
- LeGuin, E., 2005. Man and horse in harmony. *In*: K. Raber and T.J. Tucker, eds. *The Culture of the Horse: Status, Discipline and Identity in the Early Modern World*. New York: Palgrave MacMillan.
- Lehmann, A.C. and Myers, J.E., eds., 2000. *Magic, Witchcraft, and Religion: An Anthropological Study of the Supernatural*. 5th ed. Mountain View, CA, London, Toronto: Mayfield Publishing Co.
- LeMoine, G., Helmer, J. and Hanna, D., 1995. Altered states: Human-animal transformational images in Dorset art. *In*: K. Ryan and P.J. Crabtree, eds. *The Symbolic Role of Animals in Archaeology*, 38-49. (MASCA Research Papers in Science and Archaeology 12.) Philadelphia: University of Penn..
- Lerner, J., 1991. Some so-called Achaemenid objects from Pazyryk. *Source: Notes in the History of Art*, X(4), 8-15.
- Lévi-Strauss, C., 1963 [1962]. *Totemism*. R. Needham, trans. Boston: Beacon Press.
- Lévi-Strauss, C., 1966 [1962]. *The Savage Mind*. Chicago: University of Chicago Press.
- Levine, M.A., 1998. Eating horses: The evolutionary significance of hippophagy. *Antiquity*, 72(275), 90-101.
- Levine, M.A., 1999. Botai and the origins of horse domestication. *Journal of Anthropological Archaeology*, 18, 29-78.
- Levine, M.A., 2006. mtDNA and horse domestication: The archaeologist's cut. *In*: M. Mashkour, ed. *Equids in Time and Space*, 192-203. Oxford: Oxbow Books.
- Levine, M.A., Bailey, G.N., Whitwell, K.E. and Jeffcott, L.B., 2000. Paleopathology and horse domestication: The case of some Iron Age horses from the Altai Mountains, Siberia. *In*: G. Bailey, R. Charles and N. Winder, eds. *Human Ecodynamics*, 123-133. Assn. for Environmental Archaeology Conference, 1998, University of Newcastle upon Tyne.
- Levine, M.A., Renfrew, C. and Boyle, K., eds., 2003. *Prehistoric Steppe Adaptation and the Horse*. Cambridge: McDonald Institute for Archaeological Research.
- Liberty horse training with Michelle Dennis, 2008 [online video]. Firehorse Inspirations. Available from: http://web.firehorseinspirations.com.au/Firehorse_Inspirations/Movie_%26_DVD.html [accessed 30 Jan. 2010].
- Linderman, F.B., 1930. *American: The Life Story of a Great Indian*. New York: John Day.

- Littauer, M.A. and Crouwel, J.H., 2002. *Selected Writings on Chariots, other Early Vehicles, Riding and Harness*. P. Raulwing, ed. Leiden: Brill.
- Littauer, Capt. V.S., 1934. *Modern Horsemanship for Beginners*. Garden City, NY: Garden City Publishing.
- Liu, X. 2001. Migration and settlement of the Yuezhi-Kushan: Interaction and interdependence of nomadic and sedentary societies. *Journal of World History*, 12(2), 261-292.
- Lymer, K., 2009. Rock art, radiant visions and dreamscapes in Central Asia. *Quadreni di Studi Indo-Mediterranei*, 2, 41-69.
- Lyons, J. 2006. Longe with confidence. *Perfect Horse*, 11 (12), 16-21.
- Mair, V.H., ed., 1998a. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*. 2 vols. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Mair, V.H., 1998b. Priorities. In: V. H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 4-41. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Mair, V.H., 1998c. Die Sprachamobe: An archaeolinguistic parable. In: V. H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 835-856. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum
- Mair, V.H., 2003. The horse in late prehistoric China: Wresting culture and control from the 'barbarians.' In: M.A. Levine, C. Renfrew and K. Boyle, eds. *Prehistoric Steppe Adaptation and the Horse*, 163-187. Cambridge: McDonald Institute for Archaeological Research.
- Maj, E., 2009. The horse of Sakha: Ethnic symbol in post-communist Sakha Republic (Iakutiia). *Siberica*, 8(1), 68-74.
- Malaspina, P., Kozlov, A.I., Cruciani, F., Santolamazza, P., Akar, N., Kovatchev, D., Kerimova, M.G., Parik, J., Villems, R., Scozzari, R. and Novelletto, A. 2002. Analysis of Y-chromosome variation in modern populations at the European-Asian Border. In: K. Boyle, C. Renfrew and M. Levine, eds. *Ancient Interactions: East and West in Eurasia*, 309-313. Cambridge: McDonald Institute for Archaeological Research.
- Mallory, J.P., 1981. The ritual treatment of the horse in early kurgan tradition. *Journal of Indo-European Studies*, 9, 205-226.
- Mallory, J.P., 1989. *In Search of the Indo-Europeans: Language, Archaeology and Myth*. London: Thames and Hudson.
- Mallory, J.P. and Adams, D.Q., eds., 1997. *Encyclopedia of Indo-European Culture*. London and Chicago: Fitzroy Dearborn Publishers.

- Mallory, J.P. and Mair, V.H., 2000. *The Tarim Mummies: Ancient China and the Mystery of the Earliest Peoples from the West*. London: Thames and Hudson.
- Mallory, J.P., McCormac, F.G., Reimer, P.J. and Marsadolov, L.S., 2002. The date of Pazyryk. In: K. Boyle, C. Renfrew and M. Levine, eds. *Ancient Interactions: East and West in Eurasia*, 199-211. Cambridge: McDonald Institute for Archaeological Research.
- Manning, A. and Serpell, J., eds. *Animals and Human Society*, 1-22. London and New York: Routledge.
- Marshall, D.A., 2002. Behavior, belonging, and belief: A theory of ritual practice. *Sociological Theory*, 20(3), 360-380.
- Martynov, A.I., 1991. *The Ancient Art of Northern Asia*. D.B. Shimkin and E.M Shimkin, eds. and trans. Urbana: University of Illinois Press.
- Maslow, J., 1997. The golden horses of Turkmenistan. *Aramco World*, 48 (5), 10-19.
- Mayor, A. and Heaney, M. 1993: Griffins and Arimaspeans. *Folklore*, 104(1/2), 40-66.
- McCauley, R.N. and Lawson, E.T., 2007. Cognition, religious ritual and archaeology. In: E. Kyriakidis, ed. *The Archaeology of Ritual*, 209-254. Los Angeles: Cotsen Institute.
- McGreevy, P. and McLean, A. 2005. Behavioral problems with the ridden horse. In: D.S. Mills and S.M. McDonnell, eds. *The Domestic Horse: The Evolution, Development and Management of Its Behaviour*, 196-211. Cambridge: University Press.
- McNeill, W.H., 1995. *Keeping Together in Time: Dance and Drill in Human History*. Cambridge, Mass.: Harvard University Press.
- McTaggart, Lieut. Col. M.F. c.1913 (n.d.). *Hints on Horsemanship*. Philadelphia: J.B. Lippincott.
- Mead, G.H., 1967 [1934]. *Mind, Self, and Society: From the Standpoint of a Social Behaviorist*. Chicago: University of Chicago Press.
- Mehrabian, A. and Ferris, S.R., 1967. Inference of attitudes from nonverbal communication in two channels. *Journal of Counseling Psychology*, 31, 248-252.
- Merleau-Ponty, M., 1962. *Phenomenology of Perception*. Routledge: London.
- Metzoff, A.N. and Moore, M.K., 1983. Newborn infants imitate adult facial features. *Child Development*, 54(3), 702-709.
- Midgley, M., 1988. Beasts, brutes and monsters. In: T. Ingold, ed. *What Is an Animal?*, 35-46. London: Unwin Hyman.
- Miller, D. and Tilley, C., 1984. Ideology, power and prehistory: An introduction. In: D. Miller and C. Tilley, eds. *Ideology, Power and Prehistory*. Cambridge: Cambridge University Press.

- Miller, R.M., 1984. An equine practitioner's view of human-horse interrelationships. In: R.K. Anderson, B.L. Hart and L.A. Hart, eds. *The Pet Connection*, 44-49. Minneapolis: Center to Study Human-Animal Relationships and Environments, U. Minn.
- Mills, D.S., 2005. Repetitive movement problems in horses. In: D.S. Mills and S.M. McDonnell, eds. *The Domestic Horse: The Evolution, Development and Management of Its Behaviour*, 212-227. Cambridge: University Press.
- Mills, D.S. and McNicholas, J., 2005. The rider-horse relationship. In: D.S. Mills and S.M. McDonnell, eds. *The Domestic Horse: The Evolution, Development and Management of Its Behaviour*, 161-168. Cambridge: University Press.
- Mills, D.S. and McDonnell, S.M., 2005, eds. *The Domestic Horse: The Evolution, Development and Management of its Behaviour*. Cambridge: University Press.
- Minayev, S. (n.d.) Archaeology of the Hsiung-nu in Russia: New discoveries and some problems. Hsiung-nu (Huns of Asia) [online]. St Petersburg: Institute for the History of Material Culture, Russian Academy of Sciences. Available from: <http://hsiongnu.chat.ru/archo.htm> [accessed 28 Aug. 2004].
- Mitchell, R.W., Thompson, N.S. and Miles, eds, 1997. *Anthropomorphism, Anecdotes and Animals*. Albany: SUNY.
- Mitchell, R.W., 2008. Minds: Other and not-so-other. *Interaction Studies*, 9(2), 377-396.
- Mithen, S., 2006. *The Singing Neanderthals: The Origins of Music, Language, Mind and Body*. Cambridge: Harvard University Press.
- Molodin, V.I., Polosmak, N.V, Novikov, A.V., Bogdanov, E. S., Slosarenko, D.V. and Cheremisim, D.V., 2004. *Arkheologicheskie Pamiatniki Ploskogor'ia Ukok (Gornyi Altai)*. (Archaeological Research on the Ukok Plateau (Gorno-Altai).) Archeological Material Series, Book 3. Novosibirsk. (Russian.)
- Morell, V., 2008. Minds of their own: Animals are smarter than you think. *National Geographic*, (March), 37-61.
- Morphy, H., ed. 1989. *Animals into Art*. London: Unwin Hyman.
- Morris, B., 1998. *The Power of Animals; An Ethnography*. Oxford/New York: Berg.
- Morris, B., 2000. *Animals and Ancestors: An Ethnography*. Oxford/New York: Berg.
- Morris, D., 1988. *Horsewatching*. New York: Crown.
- Mullin, M., 2002 Animals and Anthropology. *Society and Animals*, 10(4), 387-393.
- Myers, O.E., 2003. No longer the lonely species: A post-Mead perspective on animals and sociology. *International Journal of Sociology and Social Policy*, 23(3), 46-68.
- Nakamura, C., 2005. Mastering matters: Magical sense and apotropaic figurine worlds of Neo-Assyria. In: L. Meskell, ed. *Archaeologies of Materiality*, 18-45.

- Narain, A.K., 1990. Indo-Europeans in Inner Asia. In: D. Sinor, ed. *The Cambridge History of Early Inner Asia*, 151-176. Cambridge: University Press.
- Nicol, C.J., 2005. Learning abilities in the horse. In: D.S. Mills and S.M. McDonnell, eds. *The Domestic Horse: The Evolution, Development and Management of Its Behaviour*, 169-183. Cambridge: University Press.
- Normando, S., Haverbeke, A., Meers, L., Odberg, F.O. and Ibanez, T.M., 2002. Heart rate reduction by grooming in horses [online]. Available from: <http://research.vet.upenn.edu/HavemeyerEquineBehaviorLabHomePage/ReferenceLibraryHavemeyerEquineBehaviorLab/HavemeyerWorkshops/HorseBehaviorandWelfare1316June2002/HorseBehaviorandWelfare2/HeartRateReductionbyGroominginHorsesEquus/tabid/3131/Default.aspx> [accessed 27 March 2009].
- Noske, B., 1997. *Beyond Boundaries: Humans and Animals*. rev. ed. Montreal: Black Rose Books.
- Noske, B., 2005. Horse image and the human self-image in equine research. In: F. de Jonge and R. van den Bos, eds. *The Human-Animal Relationship: Forever and a Day*, 38-50. (Animals in philosophy and science.) Assn. Royal van Gorcum.
- O'Connor, T.P., 1997. Working at relationships: Another look at animal domestication. *Antiquity*, 71, 149-156.
- Okladnikov, A.P., 1959. *Ancient Populations of Siberia and Its Cultures*. Russian (Translation Series of the Peabody Museum of Archaeology and Ethnology, Harvard University, 1(1).) Cambridge Mass.: Peabody Museum.
- Olmert, M.D., 2009. *Made for Each Other: The Biology of the Human-Animal Bond*. Cambridge, MA: De Capo Press.
- Olsen, S.L., ed., 1996. *Horses through Time*. Boulder: Roberts Reinhart.
- Olsen, S.L., 2000. The exploitation of horses at Botai, Kazakhstan. In: M.A. Levine, C. Renfrew, and K. Boyle, eds. *Prehistoric Steppe Adaptation and the Horse*, 83-103. Cambridge: McDonald Institute for Archaeological Research.
- Olsen, S., 2008. The inception of horse pastoralism. *General Anthropology, Bulletin of the General Anthropology Division*, 15(1), 1-6.
- Olsen, S.L., Grant, S., Choyke, A.M. and Bartosiewicz, L., eds., 2006. *Horses and Humans: The Evolution of Human-Equine Relationships*. (BAR International Series 1560.) Oxford: Archaeopress.
- Oma, K.A., 2007a. *Human-Animal Relationships: Mutual Becomings in Scandinavian and Sicilian Households 900-500 B.C.* (Oslo Arkeologiske Serie Nr. 9.) Oslo: Unipub.
- Oma, K.A., 2007b. Horses in Scandinavia 500 BC-1000 AD: Enduring structures, symbols of transformation, and mutual becomings. Nordic Theoretical Archaeology Group conference. Aarhus, Denmark.

- Oma, K.A., 2010. Between trust and domination: Social contracts between humans and animals. *World Archaeology*, 42(2), 175–187.
- Ortisi, C.S., 2003. Studien zum römischen Pferdegeschirr aus Pompeji, Herculaneum und den Vesuvvillen. Thesis (Ph.D.). Ludwig-Maximilians Universität, München. (German.)
- O'Shea, J.M., 1984. *Mortuary Variability: An Archaeological Investigation*. Orlando: Academic Press.
- Outram, A.K., Stear, N., Bendrey, R., Olsen, S., Kasparov, A., Zaibert, V., Thorpe, N. and Evershed, R.P., 2009. The earliest horse harnessing and milking. *Science*, 323, 1332-1335.
- Patton, P., 2003. Language, power and the training of horses. In: C. Wolfe, ed. *Zoontologies: The Question of the Animal*, 83-99. Minneapolis: University of Minnesota Press.
- Parelli, P., 1993. *Natural Horse•Man•Ship*. Forth Worth: Western Horseman.
- Parker Pearson, M., 1982. Mortuary practices, society and ideology: An ethnoarchaeological study. In: I. Hodder, ed. *Symbolic and Structural Archaeology*, 99-113. Cambridge: Cambridge University Press.
- Parker Pearson, M., 1993. The powerful dead: Archaeological relationships between the living and the dead. *Cambridge Archaeological Journal*, 3(2), 203-229.
- Parker Pearson, M., 1999. *The Archaeology of Death and Burial*. College Station: Texas A&M University Press.
- Parsinger, H., 2008. The 'Silk Roads' concept reconsidered: About transfers, transportation and transcontinental interactions in prehistory. *The Silk Road*, 5(2), 7-15.
- Patterson, F. and Gordon, W., 1993. The case for Gorilla personhood. In: P. Cavalieri and P. Singer, eds. *The Great Ape Project*, 58-77. New York: St. Martin's Griffin.
- Pearson, J.L., 2002. *Shamanism and the Ancient Mind: A Cognitive Approach to Archaeology*. (Archaeology of Religion, vol. 2.) Walnut Creek, CA: Altamira Press.
- Pepperberg, I.M., 2002. Cognitive and communicative abilities of Grey parrots. In: M. Bekoff, C. Allen and G.M. Burghardt, eds. *The Cognitive Animal: Empirical and Theoretical Perspectives on Animal Cognition*, 247-253. Cambridge, Mass.: MIT.
- Peterson, A., 2004. Symbolic of a fallen leader who will never ride again, the caparisoned horse is led down Constitution Ave., following the caisson carrying the body of former U.S. President Ronald Reagan.jpg [online]. Available from: http://en.wikipedia.org/wiki/File:US_Navy_040609-N-5471P-013_Symbolic_of_a_fallen_leader_who_will_never Ride_again,_the_Caparisoned_horse_is_led_down_Constitution_Ave.,_following_the_Caisson_carrying_the_body_of_former_U.S._President_Ronald_Reagan.jpg [accessed 7 Aug. 2010].
- Piggott, S., 1962. Heads and hoofs. *Antiquity*, 36, 110-118.

- Piggott, S., 1992. *Wagon, Chariot and Carriage: Symbol and Status in the History of Transport*. New York: Thames & Hudson Ltd.
- Pluciennik, M., 1996. A perilous but necessary search: Archaeology and European identities. In: J.A. Atkinson, I. Banks and J. O'Sullivan, eds. *Nationalism and Archaeology*, 35-58. Glasgow: Cruithne Press.
- Pluciennik, M., 1999. Archaeological narratives and other ways of telling. *Current Anthropology*, 40 (5), 653-678.
- Pluciennik, M., 2001. Archaeology, anthropology and subsistence. *Journal of the Royal Anthropological Institute*, 7, 741-758.
- Pluciennik, M., 2002. Art, artefact, metaphor. In: Y. Jamilikis, M. Pluciennik and S. Tarlow, eds. *Thinking through the Body: Archaeologies of Corporeality*, 217-232. New York: Kluwer/Plenum.
- Pluciennik, M., 2005. *Social Evolution*. London: Duckworth.
- Podhajsky, A., 1968 [1967]. *My Horses, My Teachers*. E. Podhajsky, trans. North Pomfret, VT: Trafalgar Square Publishing.
- Polito, R., Minero, M., Canali, E. and Verga, M., 2007. A pilot study on yearling reactions to handling in relation to the training method. *Anthrozoös*, 20(3), 295-303.
- Pollock, D., 1995. Masks and the semiotics of identity. *The Journal of the Royal Anthropological Institute*, 1(3), 581-597.
- Polosmak, N.V., 1994a. A mummy unearthed from the pastures of heaven. *National Geographic*, 186(4), 80-103.
- Polosmak, N.V., 1994b. *Stereguschie zoloto grify (Griffins Guarding Gold)*. Novosibirsk: Eastern Department of Nauka. (Russian.)
- Polosmak, N.V., 1994c. The Ak-Alakha frozen grave barrow. *Ancient Civilizations from Scythia to Siberia*, 1(3), 346-364.
- Polosmak, N.V., 1995. Investigations of a Pazyryk barrow at Kuturguntas. *Ancient Civilizations from Scythia to Siberia*, 2(1), 92-111.
- Polosmak, N.V., 1997. The first report of a noble Pazyryk woman on the Ukok Plateau [online]. *Siberian Archaeological Herald*, 1. Available from: <http://ambal.archaeology.nsc.ru/gen-i/Editions/Electronical/Bulletens/Herald/Vol1/Chapter7/Pol4.htm> [accessed 1 Feb. 2004].
- Polosmak, N.V., 1998. The burial of a noble Pazyryk woman. *Ancient Civilizations from Scythia to Siberia*, 5(2), 125-163.
- Polosmak, N.V., 2000. Tattoos in the Pazyryk world. *Archaeology, Ethnology & Anthropology of Eurasia*, 4(4), 95-102.

- Pony Boy, G., 1998. *Horse Follow Closely: Native American Horsemanship*. Irvine: Bow Tie Press.
- Potapov, L.P., 1996. The Shaman drums as a source of ethnographic history. In: V. Diószegi and M. Hoppál, eds. *Shamanism in Siberia*, 107-117. (Bibliotheca Shamanistica Vol. 2) Akadémiai Kiadó: Budapest.
- Proops, L. and McComb, K., 2010. Attributing attention: the use of human-given cues by domestic horses (*Equus caballus*). *Animal Cognition*, 13(2), 197–205.
- Puhvel, J., ed., 1970a. *Myth and Law among the Indo-Europeans*. Berkeley: University of California Press.
- Puhvel, J., 1970b. Aspects of equine functionality. In: J. Puhvel, ed. *Myth and Law among the Indo-Europeans*, 159-172. Berkeley: University of California Press.
- Puhvel, J., 1987. *Comparative Mythology*. Baltimore and London: Johns Hopkins University Press.
- Radloff, W., 1884. *Aus Siberien*, vo. 2. Leipzig: T.O. Weigel.
- Ray, K. and Thomas, J., 2003. In the kinship of cows: The social centrality of cattle in the earlier Neolithic of southern Britain. In: M. Parker Pearson, ed. *Food, Culture and Identity in the Neolithic and early Bronze Age*, (BAR S1117), 37-44. Oxford: Archaeopress.
- Reed, E.S., 1988. The affordances of the animate environment: Social science from the ecological point of view. In: T. Ingold, ed. *What Is an Animal?*, 110-126. London: Unwin Hyman.
- Reiss, D., and Marino, L., 2001. Mirror self-recognition in the bottlenose dolphin: A case of cognitive convergence. *Proceedings of the National Academy of Sciences*, 98(10), 5937-5942.
- Renfrew, C., 1987. *Archaeology and Language: The Puzzle of Indo-European Origins*. New York: Cambridge University Press.
- Renfrew, C., 1994. The archaeology of religion. In: C. Renfrew and E.B.W. Zubrow, eds. *The Ancient Mind: Elements of Cognitive Archaeology*, 47-54. Cambridge: University Press.
- Renfrew, C., 1998a. All the king's horses: Assessing cognitive maps in later prehistoric Europe. In: S. Mithen, ed. *Creativity in Human Evolution and Prehistory*, 260-284. London and New York: Routledge.
- Renfrew, C. 1998b. The Tarim Basin, Tocharian, and Indo-European origins: A view from the west. In: V. H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 202-212. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.

- Renfrew, C., 2002. Pastoralism and interaction: Some introductory questions. *In*: K. Boyle, C. Renfrew and M. Levine, eds. *Ancient Interactions: East and West in Eurasia*, 1-10. Cambridge: McDonald Institute for Archaeological Research.
- Renfrew, C., 2007. The archaeology of ritual, of cult, and of religion. *In*: E. Kyriakidis, ed. *The Archaeology of Ritual*, 109-122. Los Angeles: Cotsen Institute.
- Renfrew, C. and Bahn, P., 2000. *Archaeology: Theory Methods and Practice*. 3rd. ed. London: Thames & Hudson, Ltd.
- Reznichenko, S., 2010. Karkaraly National Park [online]. Available from: http://commons.wikimedia.org/wiki/File:Karkaraly_National_Park_11.jpg [accessed 20 Aug. 2010].
- Rice, T.T., 1957. *Ancient People and Places: The Scythians*. London: Thames and Hudson.
- Ries, G., 2007. *Capra ibex sibirica* [online]. Available from: <http://en.wikipedia.org/wiki/File:Steinbock1000943.JPG> [accessed 21 Aug. 2010].
- Ripinsky-Naxon, M., 1993. *The Nature of Shamanism: Substance and Function of a Religious Metaphor*. Albany: State of New York University Press.
- Ritvo, H., 1987. *The Animal Estate: The English and Other Creatures in the Victorian Age*. Cambridge: Harvard University Press.
- Rivas, J. and Burghardt, G.M., 2002. Crotalomorphism: A metaphor for understanding anthropomorphism by omission. *In*: M. Bekoff, C. Allen and G.M. Burghardt, eds. *The Cognitive Animal: Empirical and Theoretical Perspectives on Animal Cognition*, 9-17. Cambridge, Mass.: MIT.
- Rolle, R., 1989 [1980]. *The World of the Scythians*. F.G. Walls, trans. Berkeley: University of California Press.
- Rolle, R., 2006. Royal tombs and hill fortresses: New perspectives on Scythian life. *In*: J. Aruz, A. Farkas and E. Valtz Fino, eds. *The Golden Deer of Eurasia: Perspectives on the Steppe Nomads of the Ancient World*, 168-181. New York: Metropolitan Museum of Art Symposia.
- Rozwadowski, A., 2001. Sun gods or shamans? Interpreting the 'solar-headed' petroglyphs of Central Asia. *In*: N. Price, ed. *The Archaeology of Shamanism*, 65-86. London and New York: Routledge.
- Rozwadowski, A., 2004. *Symbols through Time: Interpreting the Rock Art of Central Asia*. Poznan: Instytut Wschodni Uam.
- Rozwadowski, A., 2008. Centering historical-archaeological discourse: The prehistory of Central Asian/South Siberian shamanism. *In*: D.S. Whitley and K. Hays-Gilpin, eds. *Belief in the Past: Theoretical Approaches to the Archaeology of Religion*, 105-117. Walnut Creek: Left Coast Press.

- Rudenko S.I., 1970 [1953]. *Frozen Tombs of Siberia*. The Pazyryk Burials of Iron-Age Horsemen. M.W. Thompson, trans. Berkeley and Los Angeles: University of California Press.
- Russell, N., 2002. The wild side of animal domestication. *Society and Animals*, 10(3), 285-302.
- Ryan, K. and Crabtree, P.J., eds., 1995. *The Symbolic Role of Animals in Archaeology*. MASCA research papers in science and archaeology, 12. Philadelphia: University of Penn.
- Samashev, Z., 2007. Culture of the nomadic elite of Kazakhstan's Altai Region (based on materials for the Berel necropolis.) In: C. Chang and K.S. Guroff, eds. *Of Gold and Grass: Nomads of Kazakhstan*, 35-44. Foundation for International Arts and Education.
- Samashev, Z.S., Bazarbaeva, G.A., Zhumabekova, G.S. and Francfort, H-P., 2000. Le kourgane de Berel' dans l'Altai kazakhstanais. *Arts Asiatiques*, 55, 5-20. (French.)
- Samashev, Z., Bazarbaeva, G., Zhumabekova, G. and Sungatai, S., 2000. *Berel*. Almaty: O.F. Berel.
- Samashev, Z. and Francfort, H.-P., 2002. Scythian steeds. *Archaeology*, 55(3), 32-35.
- Samashev, Z., Francfort, H.-P., Bazarbaeva, G., Zhumabekova, G., Sungatai, S. and Bendezu-Sarmoento, J. 1999. Berel mounds [online]. Kumbez. Available from: http://www.lorton.com/~kumbez/archeology_2_eng.htm [accessed 5 Sept. 2004].
- Sanders, C.R., 1999. *Understanding Dogs: Living and Working with Canine Companions*. Philadelphia: Temple University Press.
- Sanders, C.R., 2003. Actions speak louder than words: Close relationships between humans and non-human animals. *Symbolic Interaction*, 26, 405-426.
- Sanders, C., 2007. Mind, self, and human-animal joint action. *Sociological Focus*, 40(3), 320-336.
- Sanders, C.R. and Arluke, A., 2007. Speaking for dogs. In: L. Kaloff and A. Fitzgerald, eds. *The Animals Reader: The Essential Classic and Contemporary Writings*, 63-71. Oxford: Berg.
- Sanger, J.R., 2010. Shamu: In loving memory. *Foothill Footfalls*, May-June, 1-4.
- Sankey, C., Richard-Yris, M-A., Leroy, H., Henry, S. and Hausberger, M., 2010. Positive interactions lead to lasting positive memories in horses. *Animal Behaviour*, 79(4), 869-875.
- Saslow, C.A., 2002. Understanding the perceptual world of horses. *Applied Animal Behavior Science*, 78, 209-224.

- Sax, B., 2008. Again, what is animal studies? [online listserve discussion]. H-ANIMAL Discussion Network on Animal Studies. Available from: <http://www.h-net.org/~animal/> [22 Jan. 2008].
- Schmidt, A., n.d. Scythian designs artimajik [online]. Available from: <http://artmagik.webs.com/siberianhorseman.htm> [accessed 6 July 2010].
- Schneider, J., 2006. Cloth and clothing. In: C. Tilley, W. Keane, S. Kuchler, M. Rowlands and P. Spyer, eds. *Handbook of Material Culture*, London: Sage.
- Schutz, W.C., 1966. *Interpersonal Underworld: A Reprint Edition of FIRO, A Three-dimensional Theory of Interpersonal Behavior*. Palo Alto: Science and Behavior Books.
- Schwabe, C.W., 1984. Drinking cow's milk: The most intense man-animal bond. In: R.K. Anderson, B.L. Hart and L.A. Hart, eds. *The Pet Connection: Its Influence on Our Health and Quality of Life*, 50-57. Minneapolis: Center to Study Human-Animal Relationships and Environments, U. Minn.
- Schwabe, C.W., 1994. Animals in the ancient world. In: A. Manning and J. Serpell, eds. *Animals and Human Society: Changing Perspectives*, 36-58. London: Routledge.
- Scoggins, R.D., 1989. Bits and mouth injuries. *Veterinary Review*, 9, 101-102.
- Sebeok, T.A., 1988. 'Animal' in biological and semiotic perspective. In: T. Ingold, ed. *What Is an Animal?*, 63-76. London: Unwin Hyman.
- Seleznev, A., 2005. Nomads versus 'forest people' in the Altai-Sayan. European Society for Central Asian Studies Ninth Conference, 12-14 Sept. 2005, Krakov, Poland.
- Serpell, J., 1986. *In the Company of Animals: A Study of Human-Animal Relationships*. Cambridge: University Press.
- Serpell, J.A., 2005. People in disguise: Anthropomorphism and the human-pet relationship. In: L. Datson and G. Mitman, eds. *Thinking with Animals.: New Perspectives on Anthropomorphism*, 121-136. New York: Columbia University Press.
- Serre, D. and Pääbo, S., 2004. Evidence for gradients of human genetic diversity within and among continents. *Genome Research*, 14, 1679-1685.
- Shanklin, E., 1985. Sustenance and symbol: Anthropological studies of domesticated animals. *Annual Review of Anthropology*, 14, 375-403.
- Shanks, M., 1991. *Experiencing the Past*. London: Routledge.
- Shanks, M., 1998. The life of an artifact [online]. Available from: <http://traumwerk.stanford.edu/~mshanks/traumwerk/index.php/The%20life%20of%20an%20artifact> [accessed 16 Nov. 2004].
- Shanks, M. and Tilley, C., 1982. Ideology, symbolic power and ritual communication: A reinterpretation of Neolithic mortuary practices. In: I. Hodder, ed. *Symbolic and Structural Archaeology*, 129-154. Cambridge: Cambridge University Press.

- Shanks, M. and Tilley, C., 1992 [1987]. *Re-Constructing Archaeology: Theory and Practice*. 2nd ed. London: Routledge.
- Shapiro, K., 1990. Understanding dogs through kinesthetic empathy, social construction, and history. *Anthrozoös*, 3, 184-195.
- Shapiro, K.J., 1997. A phenomenological approach to the study of nonhuman animals. In: R.W. Mitchell, N.S. Thompson and H.L. Miles, eds. *Anthropomorphism, Anecdotes and Animals*, 277-295. Albany: SUNY.
- Shapiro, K.J., 2008. *Human-Animal Studies: Growing the Field, Applying the Field*. Ann Arbor, Michigan: Animals & Society Institute.
- Sharpe, L., 2005. *Creatures Like Us? A Relational Approach to the Moral Status of Animals*. Exeter: Imprint Academic.
- Sheets-Johnstone, M. 2002. Introduction to the special topic: Epistemology and movement. *Journal of the Philosophy of Sport*, XXIX, 103-105.
- Sigurjónsdóttir, H., van Dierendock, M.C. and Thórhallsdóttir, A.G., 2002. Friendship among horses—Rank and kinship matter [online]. Havemeyer Foundation work shop on horse behavior. Available from: <http://www3.vet.upenn.edu/labs/equinebehavior/hvnwkshp/hv02/hv02auth.htm> [accessed 10 November 2006].
- Simmons, L. and Armstrong, P., eds. *Knowing Animals*. Leiden: Brill.
- Sinor, D., 1965. Notes on the equine terminology of the Altaic peoples. *Central Asiatic Journal*, 10, 307-315.
- Sinor, D., ed., 1990. *The Cambridge History of Early Inner Asia*. Cambridge: University Press.
- Sinor, D., 1998. The myth of languages and the language of myth. In: V. H. Mair, ed. *The Bronze Age and Early Iron Age Peoples of Eastern Central Asia*, 729-745. Washington D.C. and Philadelphia: Institute for the Study of Man and University of Pennsylvania Museum.
- Smuts, B., 1999. Reflections. In: J.M. Coetzee, *The Lives of Animals*, A. Gutman, ed., 107-120. Princeton, NJ: Princeton University Press.
- Smuts, B., 2006. Between species: Science and subjectivity. *Configurations*, 14, 115-126.
- Smuts, B. 2008. Embodied Communication in Nonhuman Animals. In: A. Fogel, B. King and S. Shanker, eds. *Human Development in the 21st Century: Visionary Ideas from Systems Scientists*, 136-146. Toronto: Council on Human Development.
- Sofaer, J.A., 2006. *The Body as Material Culture: A Theoretical Archaeology*. Cambridge. University Press.

- Sorokin, S.S., 1978. Otrazhenie mirovozzreniya rannikh kochevnikov Azii v pamyatnikakh material'noi kul'tury. In: *Kul'tura Vostoka: Drevnost' i rannee srednevekov'e*. (Reflections of the worldviews of the Early Nomads of Asia in the records of material culture. In: *Culture of the East: Antiquity and the Early Middle Ages*.) Leningrad. (Russian.)
- Stetsyuk, V., 2003. *Research of Prehistoric Ethnogenetic Processes in Eastern Europe*. Lvov.
- Stiff, A.R., Capo, R.C., Gardiner, J.B., Olsen, S.A. and Rosenmeier, J.B., 2006. Geochemical evidence of possible horse domestication at the Copper Age Botai settlement of Krasnyi Yar, Kazakhstan. Geological Society of American conference, 22-25 October, Philadelphia, PA.
- Stone, S. 2010. Human facial discrimination in horses: Can they tell us apart? *Animal Cognition*, 13(1), 51-61. Epub 2009 Jun 17.
- Sutterlin, C., 1989. Universals in apotropaic symbolism: A behavioral and comparative approach to some Medieval sculptures. *Leonardo*, 22(1), 65-74.
- Svašek, M., 2007. Moving corpses: Emotions and subject-object ambiguity. In: H. Wulff, ed. *The Emotions: A Cultural Reader*, 229-248. Oxford: Berg.
- Szynkiewicz, S., 1986. Settlement and Community among Mongolian Nomads: Remarks on the applicability of the terms. *East Asian Civilisations*, 1, 10-44.
- Tani, Y., 1996. Domestic Animal as Serf: Ideologies of Nature in the Mediterranean and the Middle East. In: R. Ellen and K. Fukui, eds. *Redefining Nature: Ecology, Culture and Domestication*, 387-416. Oxford: Berg.
- Tanner, A., 1979. *Bringing Home Animals: Religious Ideology and Mode of Production of the Mistassini Cree*. New York: St. Martin's Press.
- Tapper, R., 1988. Animality, humanity, morality, society. In: T. Ingold, ed. *What Is an Animal?*, 47-62. London: Unwin Hyman.
- Tarlow, S., 1999. *Bereavement and Commemoration: An Archaeology of Mortality*. Oxford: Blackwell.
- Tarlow, S., 2000. Emotion in archaeology. *Current Anthropology*, 41(5), 713-746.
- Taylor, S., 2010. Dolphins and 'non-human personhood' [online listserve discussion]. H-ANIMAL Discussion Network on Animal Studies. Available from: <http://www.h-net.org/~animal/> [accessed 23 Jan. 2010].
- Theodoratus, R.J., 1977. Waclaw Sieroszewski and the Yakut of Siberia. *Ethnohistory: The Journal of the American Society of Ethnohistory*, 24(2), 103-115.
- Thomas, J., 1995. Reconciling symbolic significance with being-in-the-world. In: I. Hodder, M. Shanks, A. Alexandri, V. Buchli, J. Carman, J. Last and G. Lucas, eds. *Interpreting Archaeology: Finding Meaning in the Past*, 210-211. London and New York: Routledge.

- Thomas, J., 1996. *Time, Culture and Identity*. London: Routledge.
- Thomas, J., 2000. *Interpretive Archaeology: A Reader*. Leicester: Leicester University Press.
- Thomas, J., 2001. Monuments, power and personhood in the British Neolithic. *The Journal of the Royal Anthropological Institute*, 7(4), 763-665.
- Thorpe, I.J.N., 2003. Death and violence—the later Mesolithic of southern Scandinavia. In: L. Bevan and J. Moore, eds. *Peopling the Mesolithic in a Northern Environment*, 171-180. (BAR International Series 936.) Oxford: Archaeopress.
- Tickle-Degnen, L. and Rosenthal, R., 1990. The nature of rapport and its nonverbal correlates. *Psychological Inquiry*, 1(4), 285-293.
- Tilley, C., ed., 1990. *Reading Material Culture: Structuralism, Hermeneutics and Post-Structuralism*. Oxford: Basil Blackwell.
- Tilley, C., 1994. *A Phenomenology of Landscape*. Oxford: Berg.
- Tilley, C., 1996. The power of rocks: Topography and monument construction on Bodmin Moor. *World Archaeology*, 28(2), 161-176.
- Tilley, C., 1999. *Metaphor and Material Culture*. Oxford: Blackwell.
- Tilley, C., 2000 [1991]. Materialism and an archaeology of dissonance. In: J. Thomas, ed. *Interpretive Archaeology: A Reader*, 71-80. Leicester: Leicester University Press.
- Tilley, C., 2008. *Body and Image: Explorations in Landscape Phenomenology 2*. Walnut Creek: Left Coast Press.
- Torday, L., 1997. *Mounted Archers: The Beginnings of Central Asian History*. Auckland: Durham.
- Trigger, B. 1989. *A History of Archaeological Thought*. Cambridge: Cambridge University Press.
- Trinkhaus, M.K., 1984. Mortuary ritual and mortuary remains. *Current Anthropology*, 25(5), 674-679.
- Tuan, Y.-F., 1984, *Dominance and Affection: The Making of Pets*. New Haven: Yale University Press.
- Turino, T., 1999. Signs of imagination, identity and experience: A Piercian theory for music. *Ethnomusicology*, 43(2), 221-255.
- Ucko, P., 1969. Ethnography and the archaeological interpretation of funerary remains. *World Archaeology*, 1, 262-280.
- Ucko, P.J., 1988. Forward. In: T. Ingold, ed. *What Is an Animal?*, ix-xii. London: Unwin Hyman.
- von Uexküll, J., 1957 [1934]. A stroll through the world of animals and men: A picture book of invisible worlds. In: C.H. Schiller, ed. and trans. *Instinctive Behavior: Development of a Modern Concept*, 5-80. New York: Int'l. Universities Press.

- UNESCO, 2008. Preservation of the Frozen Tombs of the Altai Mountains. Paris: Ateleirs Industria.
- Vahstre, L. and Viiberg, J., 1991. The Mansis. *The Red Book of the Peoples of the Russian Empire* [online]. Available from: <http://www.eki.ee/books/redbook/mansis.shtml> [accessed 7 Feb. 2004].
- Van Noten, F. and Polosmak, N., 1995. The frozen tombs of the Scythians. *Endeavor*, 19(2), 76-82.
- Vasiliev, S.S., Bokovenko, N.A., Chugunov, K.S., Dergachev, V.A., Sementsov, A.A., Sljusarenko, J.U. and Zaitseva, G.I., 2001. Tree rings, 'wiggle matching' and statistics of Scythian Age sites in Asia. *Geochronometria*, 20, 61-68.
- Vaughan, C., n.d. Beyond Boundaries: The Barbara Noske interview [online]. abolitionist-online: a voice for animals rights. Available from: http://www.abolitionist-online.com/interview-issue02_barbara.noske.shtml [accessed 13 Jan. 2010].
- Verderber, R.F. and Verderber, K.S. 2002. *Communicate*, 10th ed. The World: Wadsworth.
- Vitebsky, P., 2005. *The Reindeer People: Living with Animals and Spirits in Siberia*. Boston: Houghton Mifflin.
- Voevoda, M.I., Sitnikova, V.V., Romashchenko, A.G., Chikisheva, T.A., Polos'mak, N.V. and Molodin, V.I., 1998. Reconstruction of the genofond peculiarities of the ancient Pazyryk population (I-II millennium BC) from Gorny Altai according to the MtDNA structure [online]. Novosibirsk: Russian Academy of Sciences. Available from: <http://www.bionet.nsc.ru/bgrs/thesis/99/> [accessed 27 Aug. 2004].
- de Waal, F., 1996. *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*. Cambridge: Harvard University Press.
- de Waal, F., 2001. *The Ape and the Sushi Master: Cultural Reflections by a Primatologist*. New York: Perseus.
- Waley, A., 1955. The heavenly horses of Ferghana: A new view. *History Today*, 5 (Feb.), 95-103.
- Watson, A., 2001. The sounds of transformation: acoustics, monuments and ritual in the British Neolithic. In: N. Price, ed. *The Archaeology of Shamanism*, 178-192. London: Routledge.
- Waugh, D., 2008. Beyond the Sensational: The Reiss-Engelhorn-Museums' Origins of the Silk Road. *The Silk Road*, 5(2), 1-6.
- Weil, K., 1999. Purebreds and Amazons: Saying things with horses in late-nineteenth-century France. *Differences: A Journal of Feminist Cultural Studies*, 11(1), 1-37.

- Weil, K., [forthcoming]. Liberté éhonté. *Critique*, Libérer les animaux?, 747-748, août-septembre. (English draft version.)
- Weinstein, S.I., 1992. Ocherk tuvinskogo shamanstva. *In: Traditionnaya obryadnost i mirovozzrenie narodov Severa*. (An essay on Tuvan shamanism. *In: Traditional Rituals and Worldviews among the Peoples of the North*), 150-195. Moscow: Nauka. (Russian.)
- Weiss, G. and Haber, H.F., eds., 1999. *Perspectives on Embodiment: The Intersections of Nature and Culture*. New York: Routledge.
- Whitley, D.S., ed., 1998. *Reader in Archaeological Theory: Post-Processual and Cognitive Approaches*. London and New York: Routledge.
- Wikipedia editors, 2006. Cervus Canadensis [online]. Available from: http://en.wikipedia.org/wiki/File:Cervus_canadensis2006.jpg [accesses: 20 Aug. 2010.]
- Wikipedia editors, 2007. Capreolus capreolus [online]. Available from: http://en.wikipedia.org/wiki/File:Capreolus_capreolus_2_Jojo.jpg [accessed 21 Aug. 2010.]
- Witmore, C.L., 2006. Vision, media, noise and the percolation of time: Symmetrical approaches to the mediation of the material world. *Journal of Material Culture*, 11(3), 267–292.
- Willis, R., ed., 1994 [1990]. *Signifying Animals: Human Meaning in the Natural World*. London and New York: Routledge.
- Wilson, D.M. and Pietrovsky, B.B., 1978. *Frozen Tombs*. London: British Museum.
- Woodward, A., 2000. *British Barrows—A Matter of Life and Death*. Stroud: Tempus.
- Wylie, A. 2002. *Thinking from Things: Essays on the Philosophy of Archaeology*. Berkeley: University of California Press.
- Wynmalen, H., 1952. *Dressage: A Study in the Finer Points of Riding*. Hollywood: Melvin Powers.
- Xenophon. *The Art of Horsemanship*. M.H. Morgan, trans., 2002 [1894]. London: J.A. Allen.
- Yablonsky, L.T., 1995a. The material culture of the Saka and historical reconstruction. *In: Davis-Kimball, J., Bashilov, V.A. and Yablonsky, L.T., eds. Nomads of the Eurasian Steppes in the Early Iron Age*, 201-238. Berkeley: Zinat Press.
- Yablonsky, L.T., 1995b. Written sources and the history of archaeological studies of the Saka in Central Asia. *In: Davis-Kimball, J., Bashilov, V.A. and Yablonsky, L.T., eds. Nomads of the Eurasian Steppes in the Early Iron Age*, 194-196. Berkeley: Zinat Press.
- Yablonsky, L.T., 1995c. Some ethnogenetical hypotheses. *In: Davis-Kimball, J., Bashilov, V.A. and Yablonsky, L.T., eds. Nomads of the Eurasian Steppes in the Early Iron Age*, 241-252. Berkeley: Zinat Press.

- Yablonsky, L.T., 2000. 'Scythian triad' and 'Scythian world.' *In*: J. Davis-Kimball, E. Murphy, L. Koryakova and L.T. Yablonsky, eds. *Kurgans, Ritual Sites, and Settlements Eurasian Bronze and Iron Age*, 3-8. (BAR International Series 870.) Oxford: Archaeopress.
- Yetts, P.W., 1934. The horse: A factor in early Chinese history. *Eurasia. Septemtr. Antiq.*, 9, 231-255.
- Yorke, J., Adams, C. and Coady, N., 2008. Therapeutic value of equine-human bonding in recovery from trauma. *Anthrozoös*, 21(1), 17-30.
- Yü, Y-S, 1990. The Hsiung-nu. *In*: D. Sinor, ed. *The Cambridge History of Early Inner Asia*, 118-149. Cambridge: University Press.
- Zaitseva, G.I., Vasiliev, S.S., Marsadolov, L.S., van der Plicht, J., Sementsova, A., Dergachev, V.A. and Lebedeva, L.A., 1998. Tree-ring and 14C chronology of the key Sayan-Altai monuments. *Radiocarbon*, 40(1), 571-580.
- Zakharov, A., 1925, Antiquities of Katanda (Altai). *The Journal of the Royal Anthropological Institute of Great Britain and Ireland*, 55, 37-57
- Zvelebil, M., 2003. People behind the lithics. Social life and social conditions of Mesolithic communities in temperate Europe. *In*: L. Bevan and J. Moore, eds. *Peopling the Mesolithic in a Northern Environment*, 1-26. (BAR International Series 936.) Oxford: Archaeopress.

