Deep Reflection: An Archaeological Analysis of Mirrors in Iron Age Eurasia

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For my mother and father, with gratitude for their love and support all these years.

I am proud of you too.

Abstract

During the Iron Age, mirrors were frequently deposited in wealthy burials across all of Temperate Eurasia. Although mirrors had by that time existed for thousands of years, they experienced an upswing in popularity which coincided with intensified intercultural links resulting from globalization.

This dissertation is a cross-cultural analysis of mirror burials in Temperate Eurasia, *ca*. 700 BC-AD 700, focusing on the questions of what mirrors could communicate, and to whom, and what characteristics were important in establishing mirrors as grave goods preferred among many cultures. This analysis brings together information on disparate areas of mirror use which have previously only been considered in isolation, discussing mirror use in mortuary contexts as one activity which united these various regions in spite of local variations.

The mirrors are assessed in terms of their physical and phenomenological properties, along with their position and orientation in burials, utilizing three scales of analysis. These are a descriptive sample (I = 129), a series for which detailed information about mirrors and burials is provided and discussed; a conservative sample (I = 77), a selection of those sites with the best documentation which were used to calculate descriptive statistics; and an extended inhumations sample (n = 101), which includes only the inhumations from the descriptive sample, plus a few additional inhumations for which only minimal information was available. The extended inhumations sample was used to calculate descriptive statistics about mirror placement relative to the body of the deceased. Added context and a series of testable hypotheses were derived from an examination of mirrors in literature, folklore, images, and psychological and behavioral studies.

The results provide evidence for a growing focus on self-examination and memorialization of selves within the context of increasing consciousness of globalization. In addition, mirrors provide direct evidence for that globalization, *qua* networks of exchange and interaction in late prehistoric Eurasia.

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A Note on Orthography

The text uses the following conventions to render words and names from East Asian languages in the Latin alphabet:

Chinese words are transliterated according to the Pinyin system; if necessary for clarification—e.g., where English speakers are likely to be already familiar with the Wade-Giles transliteration—the latter is given in parentheses, e.g., "*Laozi* (W.-G. *Lao-tzu*)."

Korean is transliterated using the modified McCune-Reischauer system employed by the South Korean government for official documents and signage.

Japanese is transcribed using the modified Hepburn system, using diacritical marks; however, because of the unusually large number of homophonous words in Japanese, phonetic transliteration is not always sufficient to convey the meaning of the characters. Therefore, in each chapter, the first instance of each transliterated Japanese personal or site name, or word the meaning of which is under discussion, is also given in its original characters. For other East Asian languages, if the meaning of a word is at issue, the word is both transliterated and its original characters given.

For personal names, the spelling preferred by the individual or that given in his/her English-language publications is observed. For publications, the spelling used in the original published form is maintained.

In East Asian cultures, it is customary to give an individual's family name followed by his/her given name(s). In the text, I follow this practice for all names of East Asian origin, while the bibliography is formatted per the guidelines of the Society for American Archaeology—(first author: family-name, given-name; subsequent authors: given-name family-name).

THE QUESTION

Mirrors were among the furnishings of rich Eurasian burials for more than 5000 years, becoming especially common from the second millennium BC through the early second millennium AD. Burial architecture and furnishings and funerary ritual were governed by locally- and temporally-specific cultural norms and individually-specific relationships and emotional expressions, yet mirrors stand out because few objects enjoyed such consistent or widespread popularity, in so many cultures and communities. To a twenty-first century person, accustomed to the sight of utilitarian and decorative mirrors in the home as well as public venues, from restaurants to department stores, this may not seem remarkable; but in prehistory, mirrors were not abundant. Mirrors were usually small, capable of reflecting only one face, or even part of a face, at a time. Most were made of bronze, which was a costly material requiring skilled craftsmanship to manufacture. Most people could only view their reflections in still water, given proper lighting conditions which were not easily controlled; seeing their reflections, therefore, was relatively rare, and in manipulating their appearance they would have relied to a great degree upon feedback from other people.

Mirrors were undoubtedly used for personal grooming by those few who had access to them, but archaeologically, mirrors are conspicuous by their absence in domestic contexts. Instead, they are found in burials and sacrificial deposits, suggesting that mirrors were specially cared for, for they were almost never discarded, even when broken. All over temperate Eurasia, they belonged among a select few things that were subject to reverential treatment, and this fact begs the question, why were mirrors so special? And how did the various cultures of Eurasia, so frequently at war with one another and in disagreement about the most basic of social mores, come to act so similarly with their mirrors?

Psychology offers some insight, although it cannot completely explain why mirrors fascinate. Experiments indicate that mirrors prompt greater self-awareness in

humans (Carver and Scheier 1978; Froming et al. 1982; Sheier and Carver 1977, 1980), which may seem both obvious and unremarkable, but in fact the *self* is not simply there waiting to be discovered, but is continually in process (La Belle 1988; Loy 1992).

Further clues, this time specific to the humans of temperate Eurasia, can be gleaned from folklore. Present-day folktales often preserve the oral literature of earlier times; although it is impossible to determine exactly how long such tales may have been extant, similarities in mirror stories from across temperate Eurasia provide information on the properties that were commonly attributed to mirrors, as well as the sharing of such beliefs among various communities.

Method and theoretical framework

The questions presented above are inherently cross-cultural, and require a broad-scale comparative approach to elicit any patterns in behavior that may have existed. Indeed, a region as vast as Temperate Eurasia must necessarily encompass enormous cultural diversity, yet it is difficult to circumscribe any one particular culture because each shares traits with its neighbors, and changes through time. A regional approach allows for the observation of specific practices involving mirrors without assuming the existence of bounded cultures, and without relying on texts to name ethnic or cultural groups. During the period under consideration here, *ca*. 500 BC-AD 500, most temperate Eurasian groups were non-literate, so most of our information about their various identities comes from texts written by their more politically-centralized neighbors. The non-literate communities were generally regarded as "barbarians," and the biased and often naïve accounts of their "civilized" chroniclers do not reflect the considerable social complexity and diversity of the non-literate groups. Finally, in the case of mirrors, the variability of their use among different groups across space and through time is arguably overshadowed by the apparently universal reverence with which they were used. A culturally-particularistic stance would fail to reveal, much less explain, this dimension.

Globalization offers a useful theoretical framework for describing the sorts of changes which occurred during the Iron Age in Eurasia. Although often considered

uniquely a facet of the modern world, in fact globalization has been underway for millennia, and moreover has not always been driven by "the West" (Pitts 2008: 493).

Globalization is characterized by increased connectivity among communities over long distances (and sometimes, e.g., through the use of writing, over long stretches of time), and crucially, a consciousness of a large, diverse world of which the community is a part (ibid: 494). The existence of globalizing processes does not negate the simultaneous existence of localizing phenomena. Different groups within a society may evince varying degrees of conservatism or cosmopolitanism, and have differential access to status enhancing goods and practices. For example, where there is consciousness of connectedness with a larger world, information about what goes on in other communities can be very valuable, yet not always easy to obtain. (Much as specialized anthropological knowledge and practice is only accessible through academia today.) Following Pitts, "it is a process that involves the hybridization of culture among the upper echelons of society, and the simultaneous marginalization of those not sufficiently empowered [or unwilling] to engage in new forms of global cultural practice" (ibid). Far from describing a process of international homogenization, globalization can help describe the material manifestations of large-scale cultural change, as it often results in curiously juxtaposed local and global objects and practices (ibid: 500). It is in fact impossible to describe the revolutionary social changes which took place in late prehistoric Temperate Eurasia *without* reference to the "time-space compression" (Harvey 1989 in Pitts 2008) of globalization.

While useful as a way of conceptualizing and describing culture change, globalization does not explain itself (ibid: 494). It cannot be used as a model to determine whether the networks observed are the result of convergence, coincidence, contact, or shared ancestry. Indeed, those questions are largely beyond the scope of this project. Nevertheless, globalization is a more useful descriptive model than core-periphery theory, which tends to create a false dichotomy and to reify and project into the real world categories that were designed as models. Moreover, core-periphery theory, by its very nomenclature, privileges societies at the supposed "core." Globalization, by

contrast, does not specify some cultures as being more central than others, and does not rely on the creation of such categories.

Because most Eurasian mirrors come from burial contexts, it is impossible to understand their uses and meanings without an examination of burials. Thus far, the interpretation of mirrors-as-grave-goods has said less about mirrors than about the epistemology of mortuary analysis in archaeology. Long-standing assumptions that grave goods were simply the belongings of the deceased, and that the abundance or quality of grave goods is an index of social status need to be tested, and are constantly being problematized. It is impossible to fully reconstruct and understand the beliefs of past people, and in this case, it is even more difficult since the acts and actors under investigation were mostly non-literate, or anyway did not leave any writings that have survived. Therefore a simple semiotic approach to mirrors would be unrealistic. However, the material characteristics of mirrors, combined with a contextualized analysis of their final deposition, will yield clues to the ways in which mirrors could act within society, and thus, their potential for meaningfulness. That is precisely the goal of this research.

The cross-cultural, region-based analysis of mirrors offers another benefit, which is to elucidate the nature of cultural contact in prehistoric temperate Eurasia. For instance, a number of mirrors were discovered far from their place of manufacture, such as the Chinese mirrors found at the site of Tillya Tepe in northern Afghanistan, as well as in burials in the Altai region of Siberia. These mirrors are fossils of intercultural communication and exchange. Too often there has been a tendency for archaeologists to treat cultures as discretely bounded, impermeable entities; and cultural interaction has too often been viewed as unidirectional, from an active (usually "civilized") donor to a passive ("barbaric") recipient—e.g., Greece → Temperate Europe, or China → Inner Eurasia. Instead, we must view material culture in Temperate Eurasia as "part of a much wider network of societies in interaction," though "The nature of these interactions and the dissemination and adoption of different styles and motifs throughout the temperate regions of Europe and Asia are themes awaiting full investigation" (Wells 2008: 25-26).

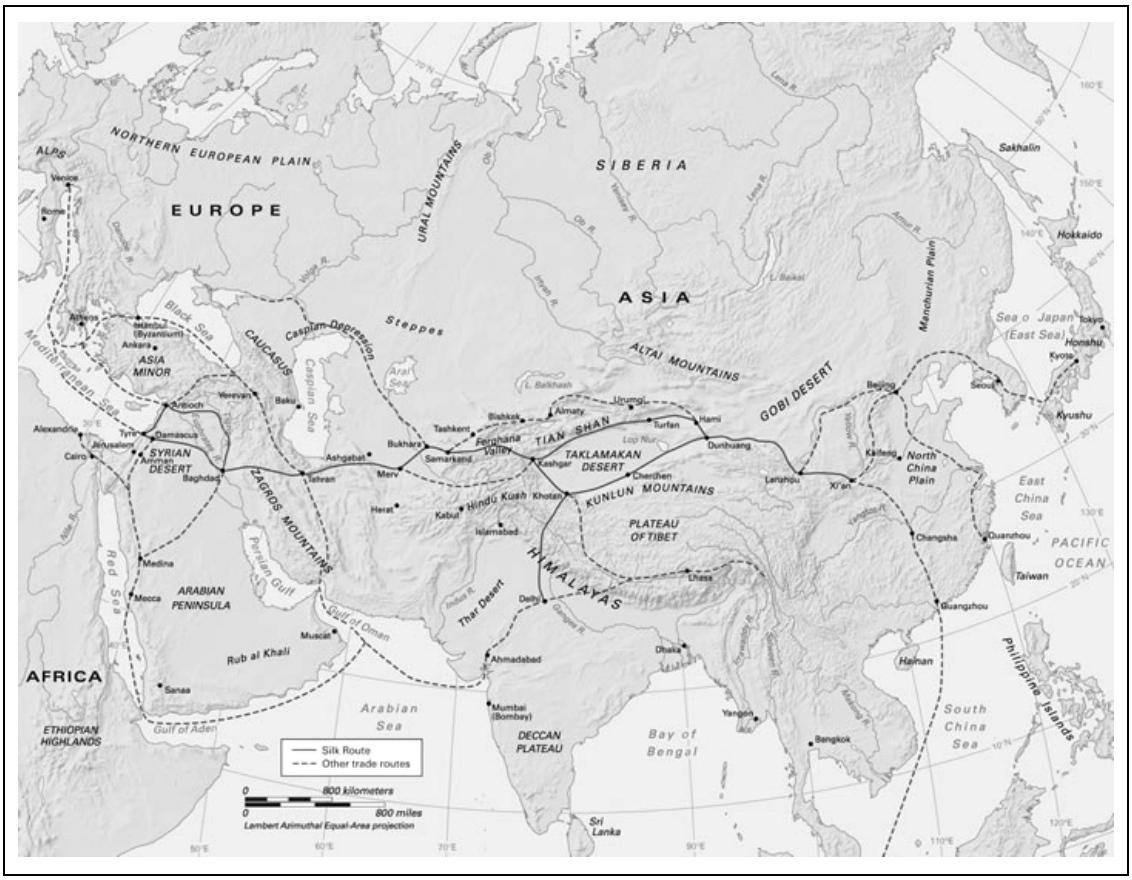

Figure 1. Conventional map of the Silk Roads (The Silk Road Project, Inc. 2011).

One way to investigate such themes is by following a single type of material culture (in this case, mirrors) along the network of interaction. The most famous network of intercultural communication in Eurasia is the Silk Road (or more properly, Roads), but most maps of the Silk Roads end in the west at Byzantium or Rome (Fig. 1). There is, however, ample archaeological evidence—mirrors in particular—which demonstrates that Temperate Europeans were active participants in the Eurasian trade network. Even silk itself has been found in early Iron Age European contexts (7th-6th centuries BC) (Good 1995). Indeed, the meaningfulness and value of mirrors cannot be ascertained independent of their distribution. In the globalizing world of the Iron Age, their cosmopolitan histories were part of their attraction.

GEOGRAPHIC AND CHRONOLOGICAL RANGE OF ANALYSIS

Geography

The focus of this analysis is Temperate Eurasia. Temperate Eurasia encompasses all of Europe and Asia between the tropics and the Arctic, from approximately 30° to 59° north latitude, with the exception of the Mediterranean region and the Indian subcontinent, both of which have unique geographical characteristics (Fig. 2). Europe and Asia are considered together as *Eurasia*, because there is no true geographical or geological boundary between the two—indeed, geographically, Europe has aptly been termed a mere "cape of Asia" (Braudel 1981: 412)—so communication and interaction between west and east has always been possible. A brief discussion of the geography of temperate Eurasia is warranted in order to clarify regional terminology used throughout this dissertation.

For the purposes of this analysis, although the geographical unity of Eurasia cannot be overstressed, four geographical/ecological subdivisions are observed: Temperate Europe, including Britain and Ireland; Caucasia; Inner Eurasia and the steppes; and Temperate East Asia, including Japan.

Some portions of Temperate Eurasia, such as southern Scandinavia, have so far not produced any prehistoric mirror finds, and these areas are not discussed in this analysis (except insofar as mirrors are notable by their absence), in spite of falling within its geographical scope. Conversely, mirrors were produced in great quantities in the Mediterranean region (especially Greece and its colonies, Etruria, Rome, and Egypt) and China; however, these mirrors are not a focus of this analysis, for several reasons. First, since such mirrors were made by literate societies[1], they have been studied more extensively, albeit mostly from an art-historical perspective, while the mirrors made and used by neighboring non-literate peoples have been relatively neglected. A productive future project would be to integrate the study of mirrors and their use in the Mediterranean basin and in China with what is known about mirrors and their use among

[1] Literacy in the ancient world was extremely restricted; only a tiny few could read or write, or indeed had any need to do so. The "literate" societies of the Iron Age were thus very different from those of today. Nevertheless, a large number of texts have survived from the Roman Empire and China, though most of these do not concern mirrors.

Figure 2. Eurasia. The temperate zone lies between the black lines (modified from Google Maps).

the prehistoric communities of Temperate Eurasia. However, not only is it outside the scope of the present research, but indeed, the mirrors of prehistoric Temperate Eurasia first need to be thoroughly studied—a project to which this dissertation is meant to contribute.

Second, the geography of the Mediterranean basin—a sea surrounded by rocky and often intricate coastline—means that societies around its perimeter were in frequent contact via maritime networks, resulting in a relatively greater degree of technological homogeneity among these groups; indeed, this is a causative factor of their shared literacy, mentioned above. Relative to maritime contacts, interaction via terrestrial networks was made considerably more difficult due to the rugged topography of the northern and eastern Mediterranean coast and the deserts of the southern coast. By contrast, the networks and contacts among non-literate societies remain under-studied. Mirrors made by literate communities do form an important part of the distribution of mirrors in Temperate Eurasia as a whole, and it is hoped that the artifact-, rather than text-based, methods employed here in investigating prehistoric mirrors and exchange networks will prove theoretically illuminating when applied to mirrors made by literate societies as well.

Temperate Europe. Temperate Europe includes at least part of all the modern nations of Europe from the Alps, Pyrenees, and Dinaric Alps north to approximately 59° latitude. Although traditionally Russia and other former Soviet republics as far east as the Urals and Caspian Sea have often been included in the notional geographical category *Europe*, here the steppes are considered as a separate region (discussed below). The steppes penetrate as far into Europe as modern-day Hungary (Bashilov and Yablonsky 1995: xi).

Much of Temperate Europe is dominated by the European Plain, which is ringed by mountains: in the west, the Scottish highlands and mountains of Scandinavia, the Alps and Pyrenees in the south, the Dinaric Alps and Carpathians in the southeast. Between the European Plain and the high mountains are fertile hilly uplands. The Alps in particular constituted a significant barrier to travel between Temperate Europe and the

Mediterranean region, but numerous rivers did channel contacts. In particular, the Rhône corridor facilitated contact between communities in western Europe and the Greek colony of Massalia (Marseilles). Links between Temperate Europe and the steppes of Inner Eurasia during the Iron Age have so far been under-investigated, in comparison to the links between Europe north of the Alps and the Mediterranean basin, yet the geographical boundaries between the latter are far more dramatic than those between the steppes and the European Plain.

Figure 3. Temperate Europe (approximate boundaries).

From about the 5th century BC, much of the European Plain and hilly uplands shared a common (La Tène) style of ornamentation. Britain, and to an even greater extent, Ireland, experienced a degree of isolation from the continent, even after nearly all of Temperate Europe had been nominally incorporated into the Roman Empire, however, here too local variants of the La Tène style flourished. The mechanism for the spread of the style is still mysterious, but the manufacture and use of Temperate European mirrors occurred within its context. The cultural context of the La Tène style, and its relevance to mirrors, is discussed further in Chapter 2.

Caucasia. This region is dominated by the Caucasus mountain range, running from the Black Sea and Sea of Azov in the west to the Caspian Sea in the east. It includes the following modern states: Southern Russia, including the regions of Dagestan, Abkhazia, Chechnya, and North Ossetia; Georgia; Azerbaijan; Armenia; northeastern Turkey, including the provinces of Artvin, Kars, and Ardahan; and Iran, including Iranian Azerbaijan and the province of Ardabil.

Figure 4. Caucasia (approximate boundaries).

The Caucasus range represented a significant, though not impassable, barrier to north-south travel between the Black and Caspian seas. To the north of the Caucasus lie the steppes, and communities in Caucasia were in (sometimes hostile) contact with various nomadic groups traveling across them (ibid: 64). South of the Caucasus are the more arid regions of southwestern Asia. The western part of Caucasia (Colchis) came within the orbit of Greek colonization from the sixth century BC, and later fell under Roman rule (Braund 1994: 42). Colchis is a wetland plain transected by numerous rivers flowing to the Black Sea, once densely forested (ibid: 48, 53). Due to the mountains dividing Colchis and southeastern Caucasia (Iberia), these historically constituted culturally distinct regions; Iberia, a high, broad mountain valley, bordered Mesopotamia and the Achaemenid Empire (ibid: 42, 47-48).

The geographic diversity of Caucasia has harbored considerable cultural diversity through time, while the mountains and bordering seas have helped to maintain the region's distinctiveness from its neighbors. Yet although the region has at times been a refugium, its location also renders it a site of intensive intercultural contact and exchange.

Inner Eurasia and the steppes. The definition of "Inner Eurasia" or "Central Eurasia" is contentious and has fluctuated through time (Beckwith 2009: xix-xx). As defined in this analysis, *Inner Eurasia* (borrowed from Christian 2000) is applied rather than *Central Asia*, which is most commonly applied to a more circumscribed region. As applied in the present work, Inner Eurasia includes all or part of the following modern political units: Turkmenistan, Uzbekistan, Tadzhikistan, Kyrgyzstan, and Kazakhstan (formerly the Soviet Central Asian Republics and known collectively as "Western Turkestan"); China's Xinjiang Uighur Autonomous Region ("Eastern Turkestan"); the Ladakh and Kashmir regions of northern India; the North-West Frontier Province of Pakistan; Afghanistan; the northeastern part of Iran (Khorasan); Russia; Ukraine; Hungary; and Mongolia. The coherence of this region is based on geographical factors which facilitated "very intimate historical, cultural and commercial relations" (Mir 1993: 7), especially the steppes, but its borders are extremely blurry and it harbors enormous cultural diversity.

Because so much of Inner Eurasia is dominated by steppe grasslands, the region is coupled here with the steppes generally, even where the steppes stretch into regions traditionally known as Europe or East Asia. On one hand, this is admittedly problematic because the larger the region under consideration, the less culturally coherent it can be expected to be. But none of the regions considered here are meant to be culturally coherent; rather, they are a means of dividing Temperate Eurasia into more manageable sections based on geographical entities that may be considered to influenced—if not actually constituted—cultural and political borders in prehistory. On the other hand, the steppes are naturally suited to facilitating communication, especially by peoples in possession of horses and wheels. Thus they act as a major linking mechanism that spanned Inner Eurasia.

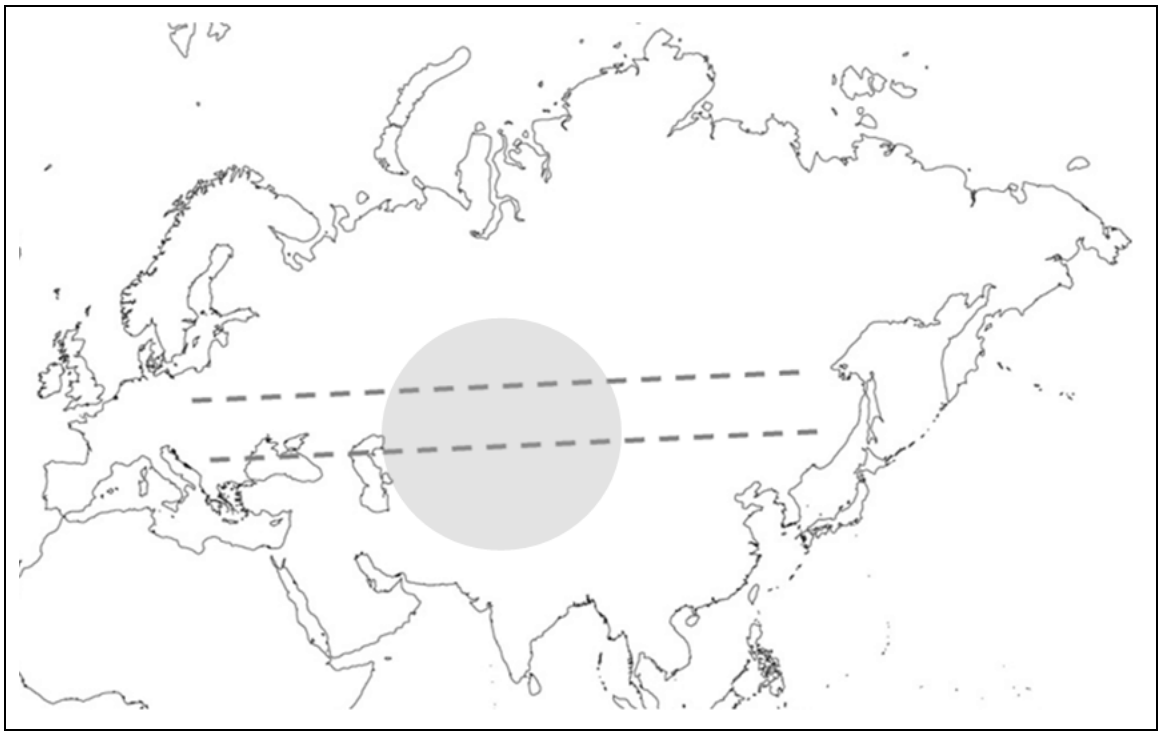

Figure 5. Inner Eurasia and the steppes (approximate borders). Dotted lines show approximate location of the steppes, shaded circle represents Inner Eurasia.

The steppe grasslands stretch some 8500 km across central Eurasia, from present-day Hungary in the west to Manchuria in the east, and 400-600 km north to south (approximately 47°N to 58°N) (Kuzmina 2008: 10) (Fig. 5). The ecology of the Eurasian steppe is unique, and played a significant role in the development and interaction of human communities in Temperate Eurasia. In general, the steppe is characterized by continental climate with low rainfall, with flora dominated by drought-resistant grasses, which in turn provide a favorable habitat for herbivores, including many species of ungulates (ibid).

During the Holocene, a number of oases have allowed travel across the deserts, while mountain ranges mainly run east-west and thus present no major obstacle to communication in this direction. Meanwhile, numerous genetic studies have demonstrated that continuous admixture of anatomically modern humans (*Homo sapiens s.s.*) has occurred in Eurasia since the Palaeolithic (e.g., Comas et al. 2004; Wells et al. 2001). Diamond (1999) has famously emphasized the ease of east-west movement in

Eurasia as a major force in the evolution of Old World plant and animal communities, including humans. The steppe zone has thus acted much like the Mediterranean Sea, insofar as it has facilitated constant contact among communities and thereby led to certain shared types of material culture, as well as similar technological adaptations to common ecological conditions.

The indigenous fauna of Inner Eurasia played a major role in establishing contacts among communities in and around the steppe zone. As boats plied the Mediterranean and its rivers, horses ranged the Eurasian steppe. Various types of equid were present in the early Holocene and were all capable of interbreeding; each may have contributed to the origins of the domestic horse, although morphological analysis of horses buried at Arzhan (Tuva, Russia) in the Iron Age suggest they, at least, were likely descended from *E. caballus przewalskii* (Bourova 2004: 331), as are modern breeds of horse. Recent genetic analyses indicate that horses (*E. caballus*) were domesticated by *ca*. 4000 BC; horses were captured and bred across a wide geographic area, incorporating diverse genetic lineages, and "transfer of technology rather than selective breeding may have been the critical innovation leading to their widespread utilization" (Vilá et al. 2001: 477; cf. Anthony 2007). Due to their speed, horseback riding would have enabled humans to capture or kill other fleet-footed ungulates, including more horses; however, it is likely that humans quickly realized and exploited the opportunity for long-distance travel as well, and as communities came into contact, they exchanged information about horse husbandry which exponentially expanded communicative possibilities across the steppe. Long-distance contacts must therefore have been established by the fourth millennium BC in order for the transfer of horse-taming technology to happen in the first place.

Similarly, the Bactrian camel (*Camelus bactrianus*) was domesticated during the late fourth-early third millennium, and representations show them harnessed to wheeled vehicles (Kuzmina 2008: 61, 95). Wheeled vehicles further expanded the possibilities for movement and contact, especially in arid regions where camels could survive better than horses or oxen.

The predominance of grasses and relatively low humidity of the steppe favors pastoralism as a subsistence strategy, but constant grazing depletes the animals' food

resources. Therefore, periodic relocation of settlements became necessary; over the course of many centuries, a nomadic form of pastoralism evolved (ibid: 62-66). The routes established by Bronze Age mobile pastoralists (*ca*. 12th-9th centuries BC), as indicated by site distribution, match those used by Medieval and 20th century AD nomads and by caravans, leading Kuzmina (2008: 108) to argue that "The functioning of certain sections of the future Silk Roads, along which spread *people*, *objects*, and *ideas*, commenced at least as long ago as the latter half of the third millennium B.C. and considerably intensified in the second millennium B.C." (emphasis original) and to emphasize "the pivotal role of the Eurasian steppe populations in establishing pan-Eurasian ethnic and cultural relations" (ibid).

In summary, a crucial aspect of Eurasian steppe ecology has been the relative ease—and indeed necessity—of mobility, especially since the appearance of horseback riding by at least the 12th century BC. Pathways through the landscape were established and maintained for millennia, and information, individuals, and material culture passed back and forth along these pathways. In this way, steppe communities were instrumental in promoting communication from eastern Europe to Korea. However, the ecology of Inner Eurasia was not the only factor in promoting exchanges among communities, for as cultural information was shared, obtaining certain types of goods and knowledge became a motivation to maintain those contacts. A shared idiom of display developed as a result of communication among diverse groups (Gordon 2008), and it will be demonstrated that mirrors were an important element in its grammar.

The exact nature of contacts among Inner Eurasian communities—and between these communities and others living in adjacent regions—has been examined, and debated, from a variety of disciplinary perspectives; it is not the main focus of the present research, but the existence of certain shared practices and artifact types lends internal coherence to a regional classification that might otherwise appear somewhat arbitrary.

Temperate East Asia. This region includes the modern nations of North and South Korea (the Korean Peninsula); the Japanese archipelago, not including the subtropical Ryukyu Islands; portions of China including the Yellow River (Huang Ho)

Valley; and the easternmost portion of Russian Siberia ("Maritime Russia"). On the west temperate East Asia is bordered by the arid Tibetan Plateau and the deserts of the Tarim Basin and on the south by tropical and subtropical Southeast Asia.

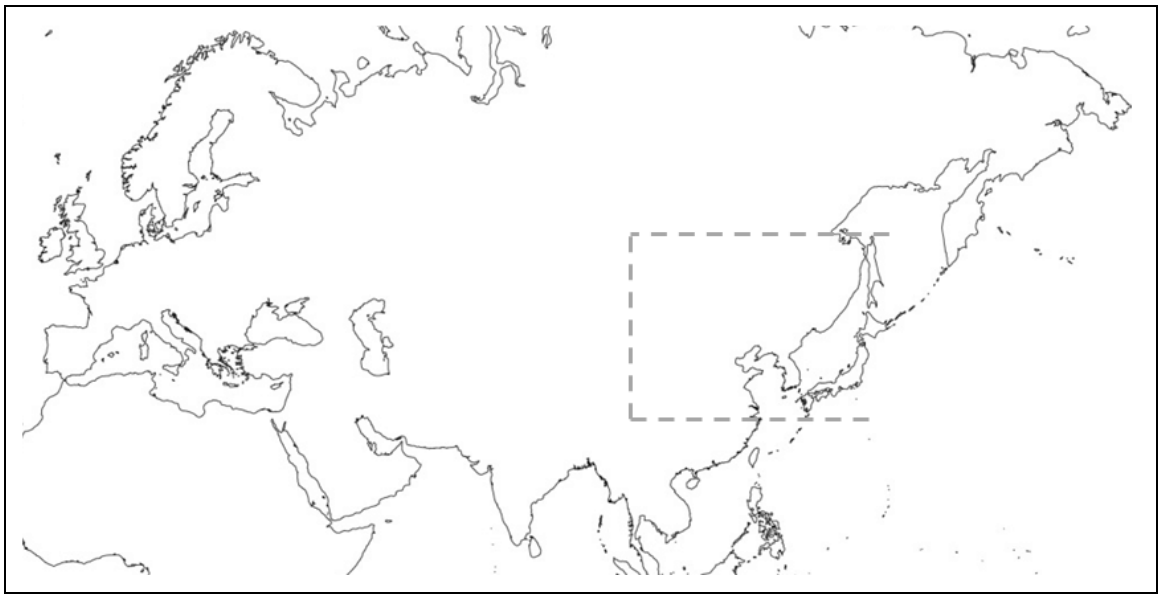

Figure 6. Temperate East Asia (approximate boundaries).

East Asia is subject to monsoon rains and high humidity during the summer months, and was once heavily forested; indeed, Japan is the most humid temperate region in the world and is still dominated by forest (Imamura 1996: 3-4). Abundant rainfall at the time of year when sunlight is at its peak intensity favors the growth of trees over smaller plants such as grasses; coupled with Japan's steep mountainous topography, land suitable for agriculture is in short supply. Complex hunter-gatherer societies were able to flourish independently here long after the development of agriculture on the continent, and indeed well after China had begun its imperial expansion. As well as maritime travel between islands, even contact between regions of the same island is best accomplished by sea rather than overland. This had a major impact on the formation of complex society in Japan, resulting in pockets of intensive agricultural exploitation and political centralization on the few small plains.

Temperate East Asia encompasses the heartland of Chinese civilization along the Yellow River, where many mirrors were manufactured beginning at the end of the first

millennium BC. However, it is important to note that although imperial China became instrumental in the spread of mirror technology in the later part of the Iron Age, there existed earlier networks of exchange between Central and East Asia, especially via what are now southern Siberia and the northern steppes (Di Cosmo 1996: 87-88). Although historical documents focus on hostile relationships between China and its nomadic neighbors, more harmonious types of contact are evident in certain elements of material culture in the Korean Peninsula.

Chronology

The term *Iron Age* was chosen, after due deliberation, to be generally flexible but regionally specific. It should be noted that in much of East Asia the term *Iron Age*—implying as it does periods that can be differentiated according to various metallurgical technologies—is rarely used, although in some cases *Metal Age* is used instead. In Japan for example, iron and bronze metallurgy were introduced from the mainland at roughly the same time; however, for centuries metals were not mined or smelted in the Archipelago but were obtained from the Korean Peninsula and subsequently (re)cast (Imamura 1996: 167-168; Mizoguchi 2002b: 183). Thus while it might make sense to differentiate between Stone and Metal Ages, a chronology based on different metals would be pointless.

Iron Age is admittedly problematic, in that it was originally coined to describe the archaeology of Europe and the Near East, at a time when universal stages of human development were taken for granted. Its use in this analysis is not meant to imply the reality of such universal stages; that iron metallurgy is in any way a "superior" technology relative to the use of other metals or of stone; or that the remains of cultures in other parts of the world can, or should, be shoehorned into a European-based chronology. Rather, in any cross-regional comparison, it is useful to have consistent terminology. In order not to elide regional differences, any such term must be carefully chosen. In this case, *Iron Age* was selected to fulfill this role for several reasons: First, the timespan of the analysis, circa 500 BC-AD 500, incorporates at least part of whatever period is defined as the Iron Age by local archaeologists, in regions where such

terminology is used, including Temperate Europe, the Inner Eurasian steppes, and the Korean Peninsula (see Table 1). Other regionally-specific chronological designators are either too specific (e.g., names of type sites), too broad (e.g., "late antiquity," "late prehistory"), and/or based on textual evidence (e.g., assorted "dynasties" or "kingdoms"). Furthermore, it is common to apply *Bronze Age* to any region of Eurasia, so it seems equally reasonable (or at least no more unreasonable) to do the same with *Iron Age*. Second, iron metallurgy was in use in all the regions under consideration during the timespan of this analysis; this is not in itself relevant to the arguments herein, but at least does not belie the name. Third, the use of a common chronological designator for the period reflects the fact that similar social processes were occurring in Temperate Eurasia. And finally, although accurate and neutral, "mid-first millennium BC-mid-first millennium AD" is long and clumsy.

What were some of the common social processes occurring in Temperate Eurasia during the "Iron Age," and how did they come to be common? During the mid-first millennium BC through the mid-first millennium AD, most of the communities in Temperate Eurasia were using iron, although not all were producing it. Where it already existed, bronze remained in use. Without being environmentally deterministic, nevertheless the adoption of iron did have profound and somewhat similar consequences for many cultures. For one thing, iron is more abundant in the earth's crust relative to bronze and tin, making it easier and cheaper to obtain, and not coincidentally it was often used for mundane tools where bronze was reserved for decorative, ceremonial, or prestige objects. The period in question saw other innovations, many of which were unrelated (or indirectly related) to iron metallurgy, including the advent of industrial-scale production, e.g., of pottery and tools, increased urbanization or centralization, sweeping changes in iconography (such as the spread of the La Tène style in Europe or Scythian animal-style art across the steppes), true nomadic pastoralism, and intensified social stratification, in some cases with political centralization and even absolute monarchs ruling over kingdoms or empires. These characteristics are broad, and not meant to be taken as rules or defining elements of later prehistory. Furthermore, while applicable in Temperate Eurasia, they should not be taken to refer to any other part of the world.

Explaining these processes is another matter. Globalization[2], a concept discussed in more detail later, is an excellent descriptor for them, but does not and cannot function as a causative model. What can be said is that the trans-ecological exchange networks that linked societies across Temperate Eurasia ensured that they all contributed to the evolution of these and other social phenomena, and to that extent, the use of a common chronological designator, however awkward, is warranted. Every effort has been made to clarify the temporal sequence in each region and to facilitate comparisons between regions.

Temperate Europe. In Europe, the Iron Age corresponds to the Hallstatt and La Tène periods—traditionally, from the start of iron metallurgy around 800 BC until the conquest of regions that were subsequently incorporated into the Roman Empire (though some regions, such as Ireland and Scandinavia, were never conquered by the Romans). The Iron Age was characterized by increasing contacts with Mediterranean civilizations, the beginnings of urbanism and probably political centralization in the form of *oppida*, and large scale production of iron objects and ceramics. After *ca*. 450 BC, the La Tène style diffused throughout much of Europe, and was especially popular as decoration on metalwork.

Caucasia. The Caucasian Iron Age is traditionally dated from approximately 1150-600 BC; the subsequent period, from 600-200 BC is commonly termed the "Antique Era" (Reinhold 2003: 32; Smith et al. 2004: 3). The Antique Era is further subdivided according to historical and sub-regionally specific periods (Smith et al. 2004: 27). Clearly, there must have been significant changes over the last millennium BC, however, for the purposes of the present analysis, the Antique Era will be subsumed within the Iron Age as it shares the relevant characteristics described above, and because "antique" is a vague designator. Furthermore, the Antique Era corresponds to the

[2] This term has come to be increasingly applied within Old World archaeology, even though the "global" should arguably also incorporate the Americas. However, *globalization* is used here because although the Americas and Eurasia would not come into contact for nearly another millennium, the process began in prehistory.

Table 1. Timeline: Iron Age temperate Eurasia. Dark gray areas represent the "Iron Age" in each region.

	TEMPERATE EUROPE			CAUCASIA	INNER EURASIA & THE STEPPES	TEMPERATE EAST ASIA		
	Britain	**Western Europe**	**Eastern Europe**			**China**	**Korean Peninsula**	**Japan**
AD 500								
400	Roman Period AD 100-450	Roman Period 50 BC-AD 450	Sarmatian 400 BC-AD 300		Sarmatian 400 BC-AD 300	Jin AD 280-420		Kofun AD 300-700
300			Late AD 100-300		Late AD 100-300	Three Kingdoms AD 220-280		Late Yayoi AD 100-300
200				Roman Period 63 BC-AD 199			Three Kingdoms (*Samhan* + *Samguk*) 300 BC-AD 668	
100						Han 206 BC-AD 220		Middle Yayoi 100 BC-AD 100
BC/AD	Late 200 BC-AD 100		Middle 100 BC-AD 100		Middle 100 BC-AD 100			
100				Armenian Kingdom 189-63 BC				
200		La Tène 450-50 BC	Early 400-200 BC		Early 400-200 BC	Qin 221-206 BC		Early Yayoi 300-100 BC
300	Early 450-200 BC					Zhou (Warring States) 475-256 BC	Bronze Age (*Mumun*) 1500-300 BC	Final Jōmon/ Initial Yayoi 900-300 BC
400			Sauromatian/ Late Scythian 600-400 BC	"Classical Antiquity" 600-200 BC	Sauromatian/ Late Scythian 600-400 BC			
500 BC		Hallstatt 800-450 BC						

historically-attested era of Greek colonization around the Mediterranean, which is not relevant to this analysis. Unfortunately, very little has been published in English on the archaeology of the Caucasus, and most of the literature covers only the Bronze and early Iron Ages.

Inner Eurasia and the steppes. The beginning of iron metallurgy among the non-literate peoples of Inner Eurasia is generally dated to the 8th century BC (Bashilov and Yablonsky 1995: xii). How to define the end of the putative Iron Age, however, is a more complicated matter. As literate societies came to politically dominate their neighbors, or at least to incorporate them into their historical texts, they left their terminology for posterity; scholars have tended to use these historical terms as they become available. For example, names borrowed from Greek writers, such as "Scythians" and "Sarmatians" are routinely applied as both archaeological cultures and ethnic designators. Although artifact assemblages may support the existence of Scythians or Sarmatians as bounded cultural entities, ethnonyms are problematic as chronological designators. For clarity, chronological terms are kept distinct from cultural or ethnic ones in this analysis. Moreover, *Iron Age* is commonly used in Anglophone literature on the archaeology of the steppe regions of Eurasia (e.g., Davis-Kimball 2002b; Davis-Kimball et al. 1995; Rapin et al. 2001).

Temperate East Asia. In East Asian archaeology, *Iron Age* is seldom applied, for different reasons according to the particularities of each sub-region. In China, writing was adopted long before the advent of iron technology (which occurred relatively late, ca. 500 BC—Bronson 1999: 77), so historical chronologies are available and preferentially used. In the Korean peninsula, though archaeologists frequently use the term *Bronze Age*, *Iron Age* is less common. Iron metallurgy appeared in the Korean peninsula by 400 BC, as did writing, both adopted from China; therefore, post-Bronze Age chronologies are based on Chinese, and later Korean, historical texts and their periodization. Meanwhile, in Japan, bronze and iron appeared together (iron slightly predating bronze—see e.g., Imamura 1996: 167), along with radical changes in other types of material culture, but

predating contact with the Chinese, and here a chronology based on ceramic typology has traditionally been preferred. The ceramic typology is so detailed that it is often more specific than the error range of radiocarbon dating. Although Japan remained dominated by hunter-gatherer communities until quite late (at least as late as AD 300 in many parts of the islands), after this point it experienced a rapid technological homogenization with continental temperate East Asia, especially the Korean Peninsula. Thus the term Iron Age is applied to show that very similar social developments were occurring across all three regions. Moreover, in an analysis such as the present one, where the focus is on material culture, it is preferable to avoid historical terminology with its teleological and ethnic biases.

"BARBARIANS"

The main focus of this analysis is on the production and especially the use of mirrors by non-literate societies of Temperate Eurasia. Studies of mirrors to date have tended to concentrate on the most ornate Mediterranean and Chinese mirrors—although even so, no general syntheses are available. In addition, the majority of studies are focused primarily on description and dating. Although non-literate societies were often labeled "barbarians" (or an equivalent pejorative) by their literate neighbors, they were instrumental in the distribution of mirrors and associated ideologies throughout Eurasia, and not as passive participants in trade but as influential actors. While vast territories were ruled by the Roman, Persian, Han Chinese, and other empires, the peoples "in between" and on the edges played the major role in connecting these territories.

> Central Eurasian peoples made fundamental, crucial contributions to the formation of world civilization, to the extent that understanding Eurasian history is impossible without including the relationship between Central Eurasians and the….peripheral civilizations of Eurasia—Europe, the Middle East, South Asia, and East Asia (Beckwith 2009: xx).

The boundaries of the great empires fluctuated and sometimes incorporated, at other times excluded, the "barbarians"; but conceptualizing the empires as peripheral allows us to re-evaluate the actions of Temperate Eurasians in light of their true importance in world history and geography.

Much has been written about the interactions between nomads and their settled neighbors in Temperate Eurasia. However, the dichotomy between "the steppe and the sown" in Eurasian archaeology is giving way to approaches that better reflect the diversity and complexities of Eurasian cultures (e.g., Peterson et al. 2006). For one thing, there was variability over time and space in the degree to which any group was mobile or settled, and fully nomadic pastoralism was relatively rare. Nomadic and semi-nomadic peoples of Eurasia must not be viewed simply as imitators or consumers of prestige goods from the empires on the fringes of the steppe, as the results of this analysis demonstrate.

The origin of the trade networks known as the Silk Roads is conventionally dated to the second century BC, and there has been a tendency to regard the "barbarians" of Temperate Eurasia as a threat to this trade. In fact, archaeological evidence attests to the fact that long-distance systems of exchange stretch back to the Bronze Age, and the various non-literate communities of temperate Eurasia were integral to their functioning. Archaeology knows no "dark ages," because even when writing falls out of fashion, people go on producing and exchanging material culture which sheds light on the richness and complexity of their daily lives. A broad-scale analysis of mirrors thus helps to fill in the blanks left by historical accounts.

MIRRORS: DESCRIPTION, DISTRIBUTION, DEPOSITION

The world's first archaeologically-identifiable mirrors, made from polished cones of obsidian, were discovered in burials at Çatalhöyük, Turkey, dating to ca. 6200 BC. The burials in question have been attributed to women, based solely on the grave goods present. Thus, from their very inception, it seems that mirrors have had a close link with mortuary contexts. Metal mirrors do not appear until ca. 4000 BC, when small copper disks were evidently used as mirrors in Mesopotamia and Iran; from about 2900 BC, handled copper mirrors are found in Egypt (Enoch 2006: 775-776; Pendergrast 2003: 3).

Many Egyptian mirrors included the innovation of an added tang to be inserted into handles made of other materials (Pendergrast 2003: 4; Richter 1915: 252). Mirrors and representations of them were frequently placed in wealthy Egyptian tombs, and texts indicate that the handled mirror shape possessed great symbolic significance, due to its similarity to the *ankh* (Fig. 7), a glyph for life; the word for mirror literally translates to "life-force [*ankh*] for seeing the face" (Pendergrast 2003: 5). Thus, from very early on, mirrors were already endowed with mystical properties, and indeed, the similarity of the *ankh* and the mirror may be a sort of chicken-or-egg question. Additionally, we see again the close association between mirrors and burials.

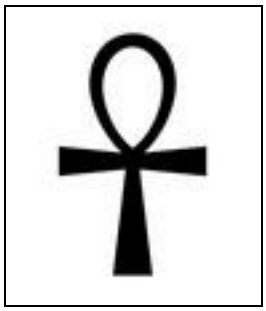

Figure 7. *Ankh.*

By at least 2000 BC, bronze mirrors first appeared in western China—these were simple disks with suspension loops on one face (Enoch 2006: 777; Pendergrast 2003: 4). It is not clear whether the western Chinese mirrors were an independent invention or the result of diffusion from southwestern Asia, but it appears that at least some aspects of early Chinese bronzeworking techniques came originally from the west and/or north, along with a "Northern Bronze Complex" of artifact types which included mirrors and distinctive daggers (Barnes 1993: 122). Later, mirrors with handles or tangs appeared on

the northern shores of the Mediterranean basin by the 7th-6th centuries BC (Barnett 1948: 2; Richter 1915: 252, 271). Hinged mirrors that opened like a modern make-up compact (*Klappspiegel*) appeared on the north shore of the Mediterranean by the mid-5th century (Richter 1915: 257).

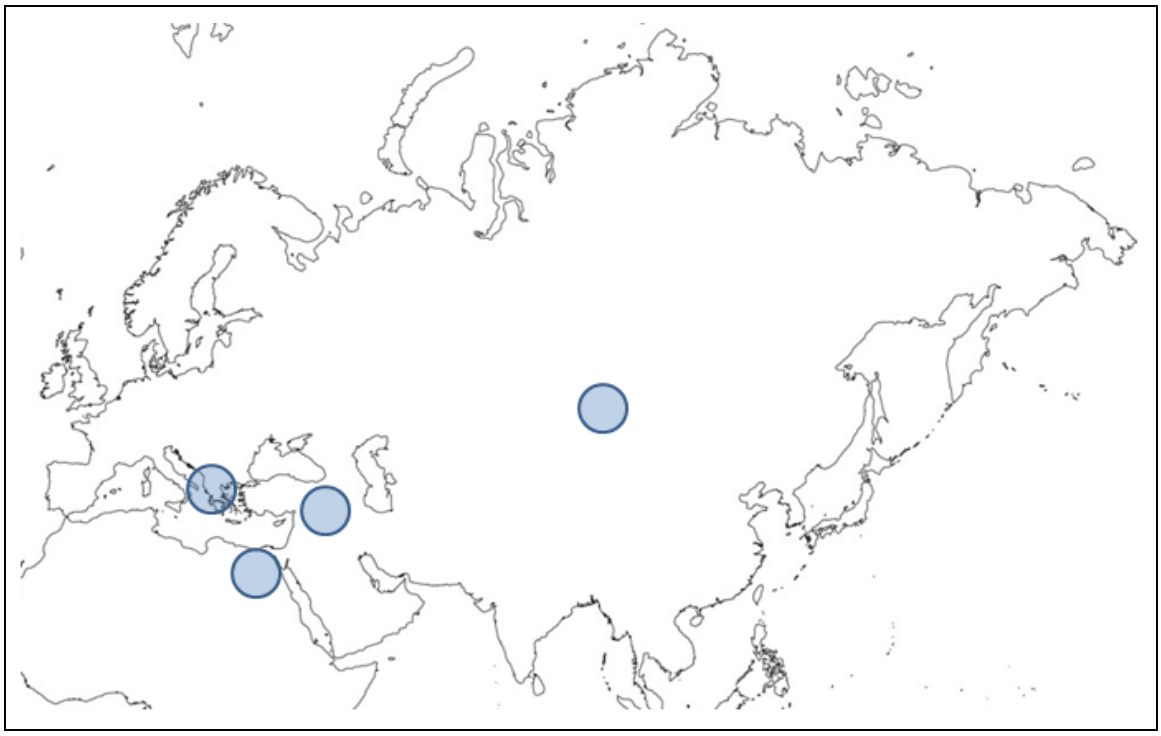

Figure 8. Areas of early mirror manufacture in the Old World (Eurasia and Africa).

By 1500 BC, mirrors had been independently invented in the Americas, appearing first in present-day Peru, and subsequently in Mesoamerica (Pendergrast 2003: 22). Beliefs about mirrors in the Americas seem to have been strikingly similar to those recorded in Eurasia, such as the idea that mirrors can ward off evil or contain a soul (Saunders 1988: 2).

It seems likely, then, that after mirrors were invented in the Near East, they first spread east and south, during the 3rd and early 2nd millennia BC, probably, at least in the east, carried by nomadic Bronze Age communities. Two innovations appeared facilitating easier handling—suspension loops in the east, and projecting handles in the west (Figs. 9 and 10). It was not until the first millennium BC that the technology

traveled north and west around the Mediterranean and finally across the Alps into temperate Europe. Mirrors remained quite uncommon in temperate Europe until perhaps 100 BC, and were not widely available until the late Middle Ages. In East Asia, on the other hand, mirrors were much more common and their popularity grew continually from *ca*. 1200 BC, by which time they had reached the Yellow River valley.

From the 2nd millennium BC, if not earlier, the principal medium of Eurasian mirrors was polished bronze. The exact composition of copper alloys varied according to the desired color, hardness, and corrosion properties of the finished object. Mirrors manufactured in temperate East Asia were usually round with one to three loops in the center of one side to facilitate suspension by a cord or ribbon, while those manufactured in temperate Europe had projecting handles. Mirrors made in Europe and what is now termed the Middle East sometimes had handles made of organic materials such as wood, bone, or ivory. In Inner Eurasia, not surprisingly, mirrors consisting of all these materials could be found. Most mirrors were under six inches in diameter, but very large and very small ones were also made, the large examples most likely for display as they would be too heavy to hold easily. Mirrors were frequently kept in boxes or bags, which protected their surfaces from scratching, denting, and tarnishing.

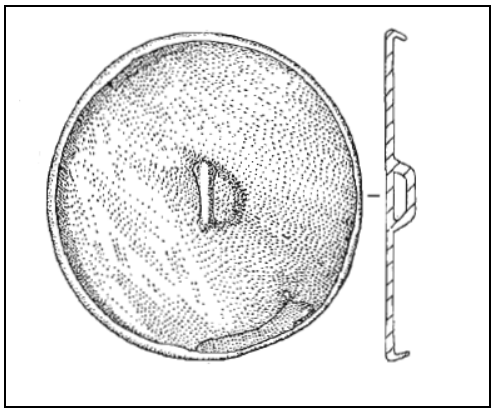

Figure 9. Suspension loop mirror.

Figure 10. Mirror with lateral handle.

The Romans manufactured some mirrors from glass, but glass was not widely used for making mirrors until the Renaissance. Although Pliny the Elder referenced glass mirrors

as a product of Sidon (in modern-day Lebanon) in the first century AD, the earliest archaeological examples date from the 3rd century AD, and "Given the difficulty of the procedure [of making glass mirrors] and the poor quality of the results, metallic mirrors were preferred over glass for many years to come" (Melchior-Bonnet 1994: 13). These early glass mirrors have been discovered at sites across the Roman world, but were generally very small. In order to produce a glass mirror which would render a useful reflection, it was necessary to produce "flat, thin, and clear glass [and] to spread a hot layer of metal onto [the] glass without causing breakage induced by thermal shock" (ibid). Glass mirror-making technology progressed slowly through the Middle Ages in Europe, finally becoming a lucrative industry only in the late 15th century. Moreover, it is still unknown where the technique for making clear, flat glass mirrors originated—among the candidates are Venice, Lorraine, and Bohemia. By the 16th century, the glassmakers of Murano had a virtual monopoly over the process, not only in Europe but in Asia as well, though within two centuries their competitors in other parts of Europe had eclipsed them (ibid: 16-21), and they were exported throughout Eurasia. The frequent appearance of mirrors in Renaissance paintings suggests that they were still objects with connotations of prestige. Bronze only ceased to be the favored material for mirror-making when cheap glass became widely available.

Both the Romans and Han Chinese manufactured mirrors in larger numbers than had ever before been possible, and this was doubtless driven not only by increasing industrialization of metallurgy, but also by mirrors' desirability among their trade partners. The nomadic peoples of Inner Eurasia were partners in trade with the Han, and were instrumental in the diffusion of mirrors across Eurasia.

Mirrors throughout prehistoric Eurasia are most frequently recovered from burial contexts and are rarely found in domestic contexts or middens. Of course, most archaeological artifacts do come from burials, since they are more likely to be preserved there. The fact that mirrors also appear in hoards, together with the burial evidence, leads to the conclusion that mirrors mostly ended up being deliberately deposited in specific contexts through ritually-significant actions. In East Asia, the pre-Buddhist practice of burying certain categories of objects under buildings at the beginning of construction

continued even after Buddhism became the dominant religion; the types of objects chosen for offerings, including mirrors, are often the same as those found in wealthy burials. In contemporary Japanese Shintō religion, digging foundations and post-holes is deemed disruptive to the earth, so offerings are made before construction to appease the earth and thereby help protect against earthquakes—it is thought that ancient deposits served a similar purpose, although present-day offerings consist mainly of libations of rice wine, rather than artifacts (Nelson 1992). Water offerings were also common, and mirrors have recovered from artificial ponds as well as natural lakes.

In the British Isles, mirrors or portions of mirrors have been found along with other metal objects in bog deposits. The practice of making ritual offerings in watery places was widespread in northern and Western Europe from the Bronze Age until at least the hegemony of Christianity (and is arguably still performed by throwing coins into fountains and wells while making wishes). However, the vast majority of mirrors from temperate Europe come from burials or suspected burials.

In Inner Eurasia, votive depositions of mirrors do not seem to have been prevalent, but mirrors are plentiful in wealthy burials. The absence of buried hoards may relate to the nomadic or semi-nomadic lifestyle practiced by many of the steppe communities, whereas sedentary agriculturalists returned year after year to the same locations for religious performances.

WHO USED THE MIRRORS? ETHNONYMS IN THE ARCHAEOLOGICAL LITERATURE

In addition to archaeological cultures—that is, material culture complexes named for characteristic sites or artifact types—the literature on prehistoric Temperate Eurasia is replete with putative ethnic/cultural groups, the names of which are derived from ancient ethnohistorical accounts. Among these are Celts, Germans, Picts, Thracians, Sarmatians, Scythians, Xiongnu, Wusun, Yuezhi, and Saka, to name but a few.

Such names are extremely problematic for the archaeologist, because they are usually attributed to large swathes of Eurasian territory, implying cohesive group identities where none may have existed, or at any rate must have shifted over time. Indeed, most accounts of Iron Age communities ranging from Ovid's letters (see Batty 1994: 101) to early medieval Irish literature (often taken to describe an earlier Iron Age world [e.g., Jackson 1972], though this has been challenged [see Mallory 1992]) actually depict much smaller-scale political and economic units and activities.

There are various types of evidence on which ethnonyms have been based, including linguistic affinity, material culture, representational style, and ancient texts. The culture areas defined by each source seldom overlap perfectly, and rightly so, since none of these types of evidence constituted an impermeable boundary. Research on widespread art styles or material culture types (for example, the Bell Beaker phenomenon in Europe and, in North America, the Hopewell interaction sphere) has shown that exchange among elites in different communities can result in links across vast territories independent of cultural identities (e.g., Caldwell 1962 cited in Binford 1965, Seeman 1979, Sheridan 1983, *inter alia*).

The accuracy of names and territories conferred in ancient times by writers from neighboring societies is sometimes dubious. For example, according to Julius Caesar, the people(s) living west of the Rhine were Gauls while those east of the Rhine were Germans; in contrast to the Gauls, he wrote, the Germans possessed no textile production technology or agriculture (Caesar 1996: 20, 69, 129)—a statement manifestly at odds with archaeological evidence (Wells 2001b). It is clear that whatever differences there may have been, no sharp distinction was manifest at a material level.

None of this should be taken as a condemnation of historical texts or of historians, nor as a stance that texts are not useful for archaeological inquiry. Many of Herodotus' descriptions of certain Scythian customs, for example, find support in the archaeological record (e.g., Ivantchik 2007, 2011). However, archaeological analysis should stand independent of the histories, and the methods of non-historical archaeology can even be productively applied to historical time periods. The material evidence will tell its own tale.

In using ethnonyms, an argument can be made that it is convenient to borrow pre-existing terminology and adapt it to archaeological needs, even if these names would have been meaningless in ancient times (in other words, that they have etic and contemporary, if not emic and ancient, meaning). We have to call ancient people *something* after all. The counter to this view is that we must be careful not to become overly dependent on what are, in effect, typologies. Whereas "Celts" continue to be deconstructed and reconstructed in the archaeological literature, some groups, such as "Scythians" and "Xiongnu" are not as frequently attacked. It is not that there is no material basis for the application of the names, but rather that the question of the meaning and/or utility of the names is never broached, and therefore they act simply as typological designators. The true test of whether, how, and which ethnonyms should be applied to prehistoric peoples lies in what they contribute to archaeologists' understanding of those peoples' lives. If we are going to argue that, e.g., a community in France shared a "Celtic" identity with another in Britain, perhaps on the basis of their speaking related languages, then this must be tested as the hypothesis it is, not accepted as a baseline assumption. Ethnocultural typologies may or may not be useful, depending on the subject of inquiry; when ethnonyms are utilized, identity should be at the core of the discussion. Such investigations are, however, beyond the scope of the present analysis.

Another potentially problematic issue is the value, or baggage, ascribed to ethnonyms in contemporary contexts. To take one example from temperate Eurasia, *Celts* has acquired new potency in the 20th-21st centuries. The notion of a coherent Celtic cultural identity has been vociferously debated by archaeologists (Collis 1997; Cunliffe 1997; Dietler 1994; James 1999; Megaw and Megaw 1996; Raftery 1994). Cunliffe (1997: 19) has summed up the debate as follows:

> There are currently two extreme perceptions of the Celts: the New Celtomania, which provides a vision of a European past to comfort us at a time when ethnic divisions are becoming a painful and disturbing reality, and a politically correct view, which argues that the term is so abused as to be useless except to those who wish to increase the sales of their books. Both views contain some threads of value but in their extremity they are sterile.

Megaw and Megaw (1996) argued that "ethnic divisions" were felt most acutely by British archaeologists, who are most vocal in denying a Celtic cultural identity; during the 1990s, people in the United Kingdom were expressing serious misgivings about many of the European Union's proposed unifying measures. On the other hand, the "New Celtomania" was in part the expression of memory, resistance, and newfound shared identity—found largely in an imagined past—on the part of Western Europe's colonized nations, Ireland, Scotland, and Wales (Dietler 1994; Pittock 1999).

Supporters of a Celtic cultural identity rely mainly on linguistic evidence—the distribution of modern so-called "Celtic" languages (Scottish, Irish, and Manx Gaelic, Welsh, Cornish—now extinct, and Breton) and Celtic place names of apparently ancient origin (e.g., Evans 1995). That related languages—called since the 19th century "Celtic"—were once widespread in Europe is not in doubt, but languages and cultural identities are two different issues. Ireland, for example, is one of the last bastions of Celtic language, and is popularly viewed as perhaps the most culturally Celtic nation of modern Europe, yet the material culture of Iron Age Ireland differs in many significant ways from that of "Celtic" continental Europe and Britain (Raftery 1994).

Certainly the issue of Iron Age Celtic identity is worthy of further investigation, but the evidence is currently insufficient to justify claims of a pan-Celtic culture. The most problematic aspect of pan-Celticism is that it elides diachronic change, which is, after all, the very focus of archaeology as a discipline: "This linking of the peoples whom the earliest Greek commentators named Celts with later populations designated with the same name created a fixed idea that hindered ancient observers and their modern counterparts from understanding processes of change among the peoples of Iron Age Europe" (Wells 2001a: 76).

Most importantly, whether used as ethnic or chronological designators, rigid adherence to names obscures the fluidity of the political, social, and material conditions under investigation: "It is always simpler when writing history [or archaeology] to see in a mass of small scale decisions a cohesive strategy, or to ascribe far more to ethnic terms such as 'Getic' or 'Thracian' than might the average human being of antiquity" (Batty 1994: 101). In this dissertation, every attempt has been made to avoid assumptions about

ethnocultural identity, and hence comparisons are made on a regional basis; however, to facilitate comparison with other research, where an ethnonym has traditionally been applied, this is noted. Fundamentally, ethnocultural identities are not the focus of this research, and are not necessary for this consideration of mirrors; rather, the point is to allow the mirrors and their contexts to speak for themselves, and to allow connections to emerge through the material cultural patterns.

PREVIOUS RESEARCH ON MIRRORS

No general archaeological synthesis of mirrors exists, yet there is a vast body of literature on individual mirrors or mirror-related decoration when all of Eurasia is considered together. For historical reasons, the principal languages in which analyses of mirrors have been published are English, Chinese, Japanese, and Russian: most of the mirrors from Iron Age temperate Europe were made in Britain, where English is the dominant language; Russian and Chinese are the dominant languages of two nations which each occupy enormous portions of Eurasia; and Japanese archaeologists were extremely active from the late 19th century, which coincided with Japan's colonial aspirations in East Asia, so that much of the early literature on Chinese and Korean mirrors was written in Japanese. Any attempt at a general synthesis is therefore handicapped by the polyglot nature of Eurasian archaeology; fortunately, much information can be gleaned from published diagrams.

It is important to emphasize that what has been lacking is an anthropological-archaeological approach to interpreting the use of mirrors. Joy (in press) divides the archaeological literature on British mirrors into three categories: (1) Descriptions of individual finds, either a single object, or reports of the excavation of a site where a mirror was found; (2) examination of an aspect of mirrors, such as decoration, often very technical and/or typological; and (3) a general discussion of a corpus of mirrors, frequently as part of a larger treatise on "art" (e.g., a section on mirrors in a monograph on "Celtic art") (Joy in press: 3-4). Joy's division applies equally well to the literature on

mirrors from the rest of Eurasia, with most literature in the first and second groups. For the present analysis, however, a fourth category could be added, which is (4) literature on mirrors as a metaphor or trope (e.g., in folklore or philosophy).

Until the 1990s, most analyses (that is, studies belonging to Joy's second and third groups) from anywhere in Eurasia were focused on determining the origins, dating, and seriation of mirrors, and these studies "put in place a series of implicit assumptions underlying many of the interpretative sections in much of the subsequent literature" (Joy in press: 4). Thus even today most literature on mirrors focuses on dating and description, and does not attempt to put mirrors into their social context, much less a broader regional context. Even where some social contextualization is attempted, it is often not rooted in anthropological theory but in other epistemological traditions such as history, art-history, or classics.

Schweig (1941), Melchior-Bonnet (2001), Pendergrast (2005), and Anderson (2007a) all attempted more-or-less cross-cultural discussions of mirrors, although these are more along the lines of compendia of facts rather than true syntheses. Schweig's (1941) essay "Mirrors" attempts a general summary of the available literature on mirrors, including a smattering of folklore, etymology of names for mirrors in western European languages, Biblical references, archaeological artifacts (mostly from classical Greece, Etruria, and Rome), Greek divinatory practices, Medieval wardrobe accounts, and much more. However, by present standards Schweig's work is woefully biased toward western Europe and understandably out of date; for example, archaeologists have now discovered mirror technology which predates that of Egypt. It is also entirely lacking in citations.

Two recent volumes, Pendergrast (2005) and Melchior-Bonnet (2001), detail the history of mirrors, relying largely on European texts. These studies are both rich in social context for mirrors, Pendergrast's volume particularly, but unfortunately, they deal with archaeological evidence only summarily. And, because of the language barriers mentioned above, they tend to regurgitate the limited information about non-European mirrors which has been published in European languages. Nevertheless, the diachronic approach to mirrors, and the celebration of what Pendergrast terms "the human love affair with reflection" gives a much-needed sense of the universal appeal of mirrors through

time. While Pendergrast delves more into the psychology of mirror use, Melchior-Bonnet's book is more focused on historical data.

Anderson (2007a) is a collection of essays on mirrors from a variety of disciplinary backgrounds. One of these essays, Giles and Joy (2007), is a contextualized, anthropological approach, not only to mirrors but to metals in Iron Age Britain generally, drawing on cross-cultural ethnographic comparisons. Addey (2007) discusses divinatory practices involving mirrors in "Antiquity," and Anderson (2007c) investigates the "early modern understanding of mirrors," particularly through Shakespearean tropes, but including historical and material culture evidence. The other chapters mostly approach mirrors as metaphorical or philosophical tropes (that is, belonging to the fourth group of mirror studies mentioned at the beginning of this section).

Nicholas Saunders has written truly anthropological-archaeological syntheses of mirrors in the context of American cultures, using historical and ethnographic as well as archaeological evidence, and touches on the subject of mirrors in a number of articles (1988, 1990, 1999, 2001, 2002, 2003); although the details are specific to cultures of the Americas, particularly Mesoamerica, many of his general points may be equally applicable to Eurasian mirrors. Saunders' work focuses especially on the complex layering of the "cross-media sensual dimension which link[ed] objects to landscape, deities, myth and everyday life" (Saunders 2001: 221). Through their sensory engagement with the world around them, he argues, people created a web of analogical meaning and symbolism. Saunders' research is not limited to mirrors, but mirrors are included among other shiny materials, including gold (2003), obsidian (2001), and pearls (1999), as well as water, shell, feathers, and many more, and mirrors shared many of the properties attributed to other shiny things. In the Americas, shininess was widely regarded as evidence of supernatural power—it might be said that the luminous was numinous. Although it is to be expected that Iron Age Eurasian beliefs differed from those of Mesoamericans, Saunders' general approach, integrating multiple lines of evidence, could be applied anywhere.

Recently some archaeologists working in Eurasia have attempted to remedy the lack of social context in treatments of mirrors prior to the 1990s, among them Joy (2004,

2010, 2011), Hill (in Johns (2002-3)), Rubinson (1985, 2002, 2006), and Fitzpatrick (1996). Each of these authors draws on cross-cultural comparison—for example, using ethnographic data—but the mirrors in each analysis are limited geographically and chronologically. For example, Hill (in Johns (2002-3) and Fitzpatrick (1996) are the initial publications of the Bryher (Scilly Isles, England) and Portesham (Dorset, England) sites, respectively. Rubinson (1985, 2002, 2006) has analyzed mirrors as part of the wider social context of Inner Eurasian nomads, along with other types of material culture. Joy (2004, 2010, 2011; also Giles and Joy (2007) considers British Iron Age mirrors from a biographical perspective, incorporating evidence for the life history of the mirrors, including their manufacture, use wear, repair, and deposition. In particular he emphasizes the many junctions in the life of mirrors where people were brought together (with each other and with various materials and objects), thus creating the potential for new relationships. This dissertation attempts to expand on such valuable research as Joy's and Rubinson's by integrating a larger cultural context.

Eurasian mirrors in history, ethnography, and folklore are discussed in greater detail in Chapters 5 and 6. However, there is another body of textual evidence, viz. mirrors as a philosophical and literary trope. These texts are often not self-reflective, and therefore likely repeat the "common knowledge" or beliefs of the time. A number of authors have written meta-literary or meta-philosophical analyses of mirrors, including Wayman (1974), Lai (1979), Oshima (1983), Demiéville (1987), La Belle (1988), Nolan (1990), Kruger (1991), Reding (2004), Gu (2005), Tucker (2005), Anderson (2007b, 2007c), Fenkl (2007), Holden (2007), Hulkes (2007), Kauntze (2007), Prins (2007), and Schechner (2005). In addition, a few analyses have focused on the use of mirrors in art and architecture: Hancock (1988), Miller (1998), Carlson (2006), Shingler (2007), Williamson (2007), and Varga (2007). These works help to reveal nuances of mirror-themed ideology in popular culture, and reveal continuities between ancient writings—such as those of the ancient Greeks—and modern ones.

Mirrors have also formed the basis for psychological explorations of self-recognition and identity in humans and other animals. Lacan (1966) famously argued that the individual experiences a profound alienation when one first recognizes one's

reflection. Several studies have attempted to determine if animals other than humans can recognize their own reflections, with some success in great apes (Gallup 1970; Patterson and Cohn 1994; Povinelli et al. 1993, 1997; Suarez 1981; Walraven et al. 1995), elephants (Plotnik et al. 2006), dolphins (Reiss and Marino 2001), and magpies (de Waal 2008; Prior et al. 2008). Schwarz and Fjeld (1968) found that mirror gazing can produce hallucinations even in mentally healthy adults, which is intriguing in light of the practice of catoptromancy, or divination by gazing into a mirror. (This is not to say that images perceived during catoptromancy are necessarily illusions, but that reflections seem to have the ability to produce altered states of consciousness—cf. MacDonald et al. 1989). The psychological research on mirrors is discussed further in Chapter 7.

There are no ethnographies about the use of mirrors specifically, but many touch on mirrors in one way or another, particularly those that discuss practices of shamans in northern Eurasia; unfortunately, the latter are mostly very old studies, and in many cases the practices under investigation no longer exist. Kondo (1986) is an interesting exploration of self-identity inspired by the author's interaction with her reflection. Eliade (1964) compiles data on shamanism from many cultures, including descriptions of some mirror-related practices and beliefs. Kirby (1973), Covell (1983), Freidel et al. (1993), Van Deusen (1994, 2004), Blacker (1999), Wood (2003), Tedlock (2005), and Nelson (2008) all contain some mention of mirrors in the context of shamanism, and are discussed in detail in Chapter 5.

Table 2. List of Temperate European mirrors discussed in Chapter 3.

Mirror/Site	Location	Context
Akenham	Suffolk, England	unknown
Arras 10	Yorkshire, England	inhumation
Arras 28	Yorkshire, England	inhumation
Aston	Hertfordshire, England	cremation
Bac Mhic Connain	Isle of Uist, Scotland	settlement
Badingham	Suffolk, England	unknown
Ballymoney	Co. Antrim, No. Ireland	watery deposit
Balmaclellan	Dumfries & Galloway, Scotland	watery deposit
Beverley	Yorkshire, England	inhumation
Billericay I	Essex, England	cremation?
Billericay II	Essex, England	cremation?
Billericay III	Essex, England	burial?
Birdlip	Gloucestershire, England	inhumation
Brecon	Powys, Wales	cremation
Bridport	Dorset, England	inhumation
Bromham	Bedfordshire, England	unknown
Bryher	Scilly Isles, England	inhumation
Bulbury	Dorset, England	dry deposit?
Carlingwark	Dumfries & Galloway, Scotland	watery deposit
Chettle	Dorset, England	burial or dry deposit
Chilham Castle	Kent, England	cremation
Colchester I (Lexden Grange)	Essex, England	cremation
Colchester II (Hyderabad Barracks)	Essex, England	unknown
Compiègne	Oise, France	watery deposit
Desborough	Northamptonshire, England	burial?
Disney	unknown	unknown
Dorton	Buckinghamshire, England	cremation
Dühren	Baden-Württemberg, Germany	cremation
“Essex/Sussex border”	Essex/Sussex, England	unknown
Garton Slack	East Riding, England	inhumation
Gibbs	?Kent, England	possible burial
Glastonbury E1	Somerset, England	settlement
Glastonbury E100	Somerset, England	settlement
Great Chesterford	Essex, England	unknown
Hochheim am Main	Hessen, Germany	unknown
Holcombe	Devon, England	dry deposit or settlement
Ingleton	North Yorkshire, England	unknown
Jordan Hill	Dorset, England	unknown
King Harry Lane 9	Hertfordshire, England	cremation
King Harry Lane 13	Hertfordshire, England	cremation
King Harry Lane 66	Hertfordshire, England	cremation
King Harry Lane 138	Hertfordshire, England	cremation
King Harry Lane 222	Hertfordshire, England	cremation
King Harry Lane 325	Hertfordshire, England	cremation
La Motte St. Valentin	Haute-Marne, France	cremation
Lambay Island	Co. Dublin, Ireland	inhumation

Latchmere Green	Hampshire, England	cremation
Llanwnda	Pembrokeshire, Wales	burial
Llechwedd-du Bach	Merioneth, Wales	burial?
Lochlee Crannog	South Ayrshire, Scotland	settlement
Maiden Castle	Dorset, England	settlement
Mayer	unknown	unknown
Merlesford?	unknown, Scotland	unknown
Nijmegen	Gelderland, Netherlands	cremation
Old Warden I	Bedfordshire, England	cremation?
Old Warden II	Bedfordshire, England	cremation?
"Oxfordshire"	Oxfordshire?, England	unknown
Pegsdon	Bedfordshire, England	cremation
Portesham	Dorset, England	inhumation
Portland I (the Grove)	Dorset, England	unknown
Portland II (the Verne)	Dorset, England	unknown
Reinheim	Saarland, Germany	inhumation
Rickling	Essex, England	unknown
Rivenhall I	Essex, England	unknown
Rivenhall II	Essex, England	unknown
Ruxox	Bedfordshire, England	unknown
St. Keverne (Trelan Bahow)	Cornwall, England	inhumation
Stamford Hill I	Devon, England	inhumation
Stamford Hill II	Devon, England	inhumation
Stamford Hill III	Devon, England	inhumation
Stanway CF115	Essex, England	cremation
Stoneyford	Co. Kilkenny, Ireland	cremation
Thetford (Fison Way)	Norfolk, England	unknown
Wederath 2370	Rheinland-Pfalz, Germany	cremation
Wetwang Slack 2	Yorkshire, England	inhumation
Wetwang Village	Yorkshire, England	inhumation

INTRODUCTION

In this and the following three chapters, the mirrors discussed are grouped chronologically within each region. Chronological organization was chosen in order to avoid imposing any preconceived notions of ethnic or cultural groups, and because in some cases, there are no clear geographical boundaries to warrant separating subregions. Tables provide an alphabetical list of the mirrors covered in each chapter, along with their recovery contexts, for quick reference. All mirrors included in this analysis, including those used only in the statistical analyses due to lack of detailed published information, are listed in Appendix A.

Temperate Europe is Europe north of the Alps and south of the Arctic Circle, including Britain and Ireland; traditionally, the eastern border of Europe is the Ural mountain range. In reality, the Urals are more a notional than a physical boundary, but for convenience this geographical fiction is maintained here.

The amount of information available for each mirror or site varies considerably, not only according to when the excavation took place, but also according to local excavation methods and conventions for illustrating archaeological material. Mirrors from Britain have long attracted considerable interest among British archaeologists, so there is a copious body of literature available, while sadly, the mirrors from continental Temperate Europe have not hitherto received such loving treatment. In fact there are relatively few mirrors from continental Temperate Europe, and many of the continental mirror sites were excavated during the 19th century, so therefore little contextual information is available.

Mirrors were made in large numbers by Greeks, Etruscans, and especially Romans, so the very small number of Mediterranean mirrors found north of the Alps is noteworthy. Their rarity in Iron Age Temperate European burials suggest that they were not desirable or were not deemed suitable for burial. Instead, a preference for locally made mirrors is clear.

In contrast to their relative scarcity on the continent, 58 Iron Age mirrors are known from Britain and Ireland (Joy 2010: 1). Mirrors found in Britain are generally classified into two spatially and temporally distinct groups. The first group, *ca*. 400-150 BC, comprises mirrors made of wrought iron, sometimes with small amounts of bronze decoration. These mirrors are quite limited in their distribution, being found only in the so-called "Arras culture" burials of eastern Yorkshire, England.

The second, much larger, corpus of British mirrors is believed to date from the early 2nd century BC through the mid first century AD, and is found across southern Britain (as well as one example found in the Netherlands and one handle from France). These mirrors are made of copper alloy and are decorated with elaborate chased and/or engraved designs, and sometimes with red enamel. Although the mirrors with designs are the most famous late Iron Age specimens, there are contemporary mirrors and mirror

fragments (especially from Scotland and Wales) which differ considerably from their more famous contemporaries, indicating a greater degree of variability than is often allowed for this group.

From the first century AD on, another group of Temperate European mirrors must be recognized, although defining it is not without its challenges: mirrors of Roman style and date which were utilized in non-Roman social contexts, and, conversely, mirrors of Temperate European style from apparently Roman contexts. These include the mirrors found at King Harry Lane, Stanway, and Chettle in England, Stoneyford in Ireland, and on the continent, at Wederath, Germany and Nijmegen, Netherlands. It can be difficult to define what distinguishes a Roman from a native Iron Age one. For example, in southeastern Britain, cremation accompanied by a small number of ceramics and personal items such as fibulae and occasionally mirrors was the dominant burial practice, as it would continue to be post-Conquest. Does the cultural ascription of the burial then rest on the style or provenance of objects, such as ceramics? And if so, what if there are artifacts of more than one style, such as a British fibula and a Roman glass vessel? Besides burial customs, both indigenous Temperate Europeans and Romans practiced votive deposition in watery places, further complicating the identification of some artifacts.

Three points are worth noting here: First, given the multiethnic, multicultural nature of the Roman Empire, it would be surprising if it were possible to easily distinguish all Roman practices from those of their subjects and neighbors. Variability is to be expected. Second, as pointed out by Fulford (2001: 214), both Romans and Temperate Europeans likely shared some practices (e.g., votive depositions), which could be found with minor variations throughout Iron Age Europe. Furthermore, the Mediterranean region and Temperate Europe were not completely isolated from one another—they had already been in contact for centuries, if not millennia, before the Roman conquest. Thus, what Fulford says of Britain may be applied to much of Temperate Europe, i.e., "the concept of a 'civilised' Roman interlude, distinct from the prehistoric past, becomes even harder to sustain as more continuity in behaviour is recognized" (ibid: 216). Finally, there is no reason to suppose that Roman military

conquest spelled the immediate end of local traditions, especially where those practices held deep significance for the local communities. Some practices may even have experienced renewed vigor as forms of resistance against colonization. On the other hand, some individuals were friendly to the Romans, as recorded by Tacitus (Tacitus 1991). The meaning and nature of "Romanization" has rightly been problematized during the past two decades (e.g., Hingley 1996, Millett 2003, Webster 2001, Wells 2001b), and will continue to generate much debate.

We can assume there was at least a transition period post-Conquest, where local customs continued to be observed, even if items of Roman manufacture were sometimes substituted for locally-made products. Therefore, where there is reason to believe that a post-Conquest mirror burial incorporates Temperate European practices or artifacts, even if some objects in the assemblage are of Roman manufacture, I have included it in this analysis.

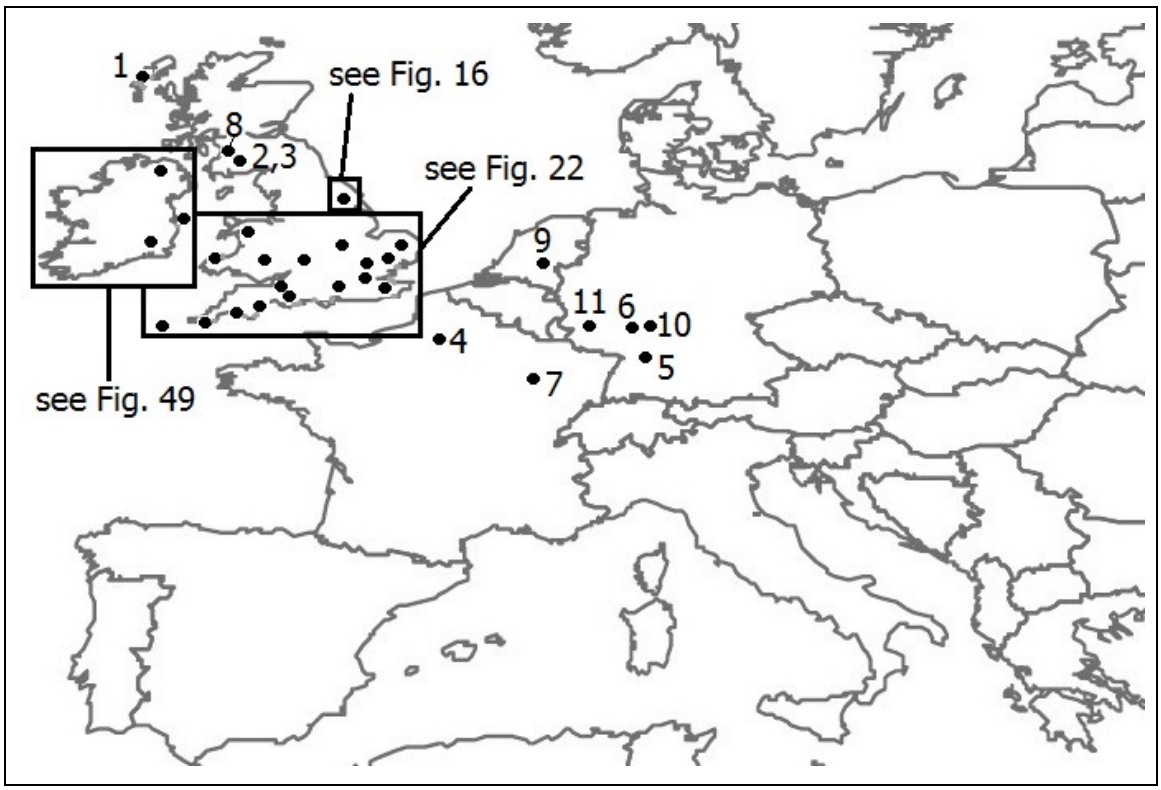

Figure 11. Map of Temperate Europe, showing sites discussed in Chapter 3. 1. Bac Mhic Connain, 2. Balmaclellan, 3. Carlingwark, 4. Compiègne, 5. Dühren, 6. Hochheim am Main, 7. La Motte St. Valentin, 8. Lochlee Crannog, 9. Nijmegen, 10. Reinheim, 11. Wederath

BURIALS

Reinheim (400 BC)

The skeleton from the Reinheim (Saarland, Germany) grave (ca. 400 BC) is not preserved (save for small portions of two teeth), but is believed to be that of a wealthy woman based on the grave goods. These included solid gold ring jewelry decorated with therio- and anthropomorphs, glass, jet, and amber beads, two Italian bronze bowls, a drinking horn, a fibula, a mirror, and a gilt bronze flagon. The flagon is modeled after Etruscan beaked flagons (*Schnabelkanne*), but appears to have been locally made and decorated with indigenous La Tène motifs. The mirror from this burial is one of the earliest from temperate Europe, and it too incorporates Mediterranean elements into a distinctly local object.

The Reinheim burial is one of a number of extremely wealthy "princely" graves dating to the early La Tène period, a time which apparently saw a major increase in wealth for some segments of the population. After *ca*. 400 BC, very wealthy burials disappeared (Arnold 1995: 165; Champion et al 2009). Arnold (1995) argues that intensified warfare resulted in an increase of male mobility, and women seized an opportunity to step into the power vacuum and achieve very high status. However, this does not explain the initial rise of extremely wealthy burials. The presence of Mediterranean imports in some of these burials—especially drinking paraphernalia—suggests that extensive trade contacts and feasting were important elements of status.

The Reinheim mirror was likely inspired by Greek models with anthropomorphic handles, but was locally made in temperate Europe. Its coral components and anthropomorphic handle (discussed in greater detail below) may have served to connect it with the Mediterranean region, where the coral likely originated. On the other hand, the use of coral to decorate the hands (Keller 1965: 41) of the handle figure is a local innovation.

In contrast to the situation prevailing in Greek and Roman iconography, it is not at all clear whether mirrors carried a strong gender association in Temperate Europe (Arnold 1995, among others, disagrees). Since weapons (argued to be a masculine-

gendered artifact class) and mirrors (arguably feminine-gendered) are so rarely found together, it does appear likely that some gender differentiation was occurring, but the sample size (i.e., of mirror burials) is very small, and there are some graves which include weapons and mirrors, so robust conclusions are not possible.

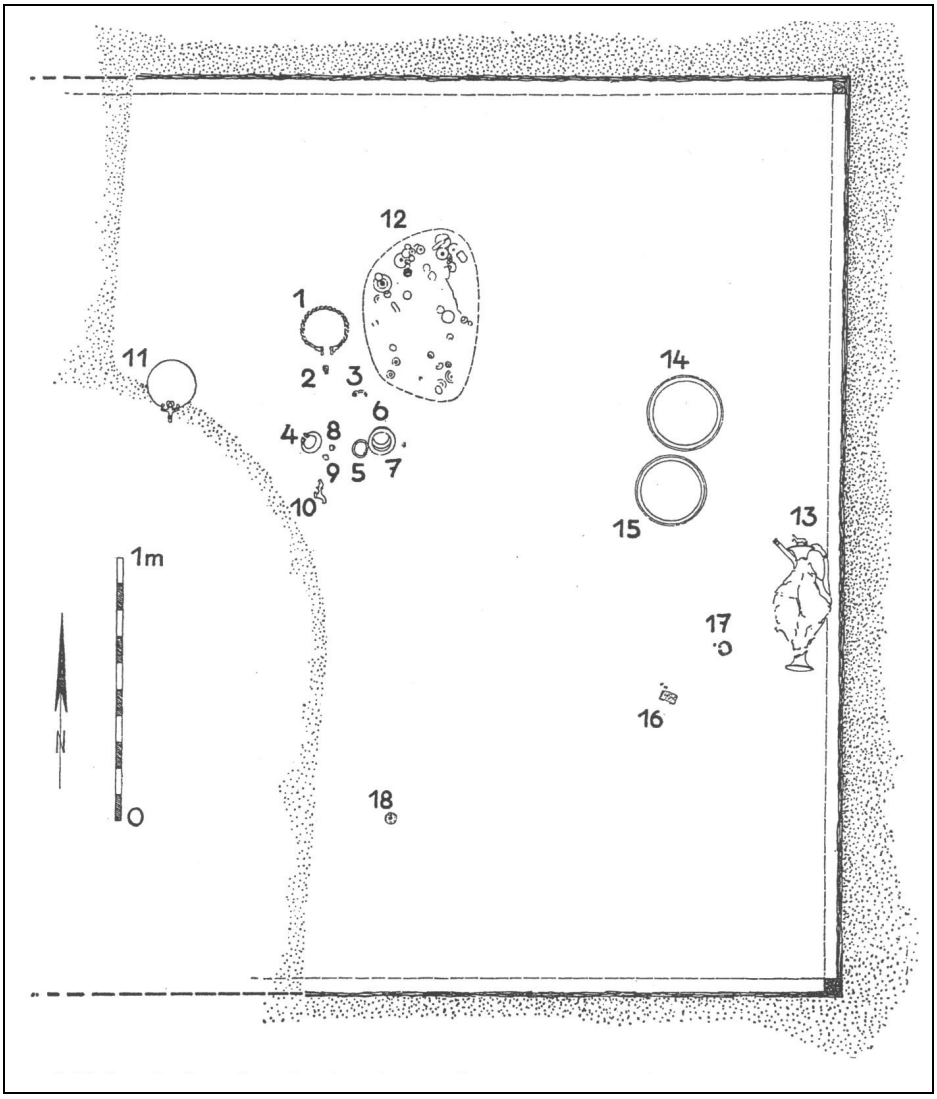

Figure 12. Plan of the Reinheim burial (after Keller 1965). The mirror is indicated by the number 11.

The mirror was located on the western side of the burial. Although virtually none of the skeleton survives, the position of the neck- and armrings suggests they may have been worn on the body. If that is the case, the woman's head was oriented toward the

north, and the mirror would have been placed approximately at the level of the woman's right shoulder, but separated by perhaps 50 cm (Keller 1965: 16-17). The western edge of the grave, south of the mirror, had been destroyed prior to discovery, and goods may have been present in this area (ibid: 19).

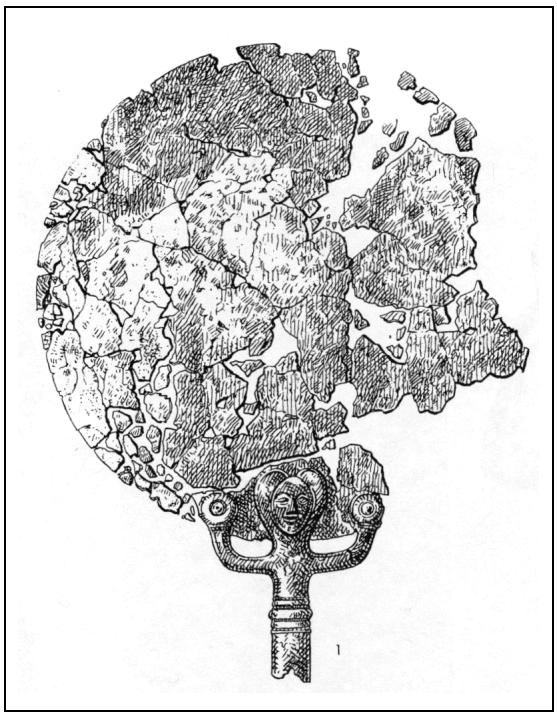

Figure 13. The Reinheim mirror (Keller 1965: plate 28b).

The Reinheim and Hochheim mirror handles. The context of the mirror from Hochheim is unknown, but it is thought to date to the 5th century BC, and stylistically is very similar to the Reinheim mirror. Thus the anthropomorphic handles of both mirrors are discussed together here. Both mirror handle figures have their arms upraised to support the plate of the mirror, and are depicted only from the waist up. The lower portion of the handles was presumably made from some organic material which has since decayed. The sex of the figures is difficult to identify since no secondary sex characteristics were represented. These anthropomorphic handles appear to imitate Greek "Caryatid" mirror handles in their pose, but the latter are clearly identifiable according to sex.

Greek Caryatid mirror handles in which the mirror plate is supported by the figure's upraised hands are relatively uncommon. In Congdon's (1981) study of the subject, fewer than 6% (8 of 134) featured this pose.[3] Of those, only one figure is certainly male, while one other is of indeterminate sex. Three of the four female figures were fully clothed, while the fourth—and the gender-indeterminate specimen—were nude or clad only in loincloths.

[3] These mirrors are numbers 14, 25, 26, 28, 94, 110, 115, and 116 in Congdon's catalogue.

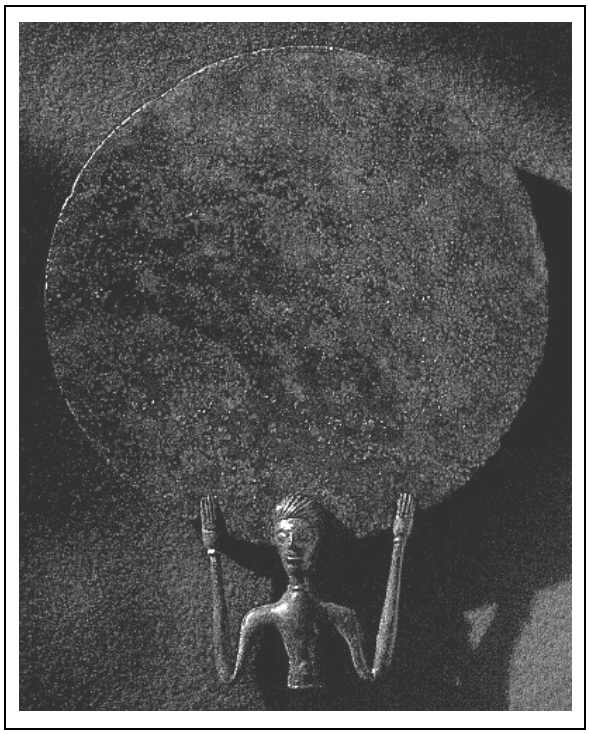

Figure 14. The Hochheim am Main mirror.

The Caryatid handles supporting mirror plates on their upraised hands are of mid-6th-late 5th century BC date and were likely manufactured largely in eastern Greece and Ionia (Congdon 1981: 45 map, 136-137, 144-147, 202-203, 207-208, 211-212). The individuals depicted are thought not to have been goddesses, but may have been temple attendants, or courtesans acting as assistants in the cult of Aphrodite; some may have been athletes or acrobats (especially numbers 14 and 26) (ibid: 14-15). The females appear very youthful, with small breasts and narrow hips. Unfortunately, only two of these mirrors are provenanced, so it is impossible to gain any contextual clues as to the identity of the Caryatids and what that may say about mirror use.

A pendant from the Reinheim burial was shaped like a human with arms upraised, much like the mirror handle, although in this case supporting the ring from which the pendant would once have dangled. This figure has legs and feet (though the right foot is broken off), and is clearly male, having an indication of a penis (Keller 1965). There are no clothes or hairstyle on this figure, however.

By contrast, the Reinheim and Hochheim figures appear androgynous, and it is difficult to determine their gender based on personal ornaments. There is no indication of clothing on either handle figure. Both appear to wear belts—which also function as a decorative joining of the metal and organic portions of the handles—and bracelets; the Hochheim figure also wears a ring around its neck. These ornaments are frequently depicted on the relatively few anthropomorphic representations of late Iron Age central Europe. Both male and female figures may be shown with belts and neckrings or necklaces: e.g., the Hirschlanden statue (male) and the figures on casters supporting the

Hochdorf couch (females); or with belts only: e.g., the largest figure on the Strettweg wagon (female) and the belt plaque from Magdalenska Gora (males), though these are earlier in date than the Reinheim and Hochheim mirror handles. Bracelets, however, are less common. The female couch-supporting Caryatids from Hochdorf wear bracelets, but the man buried at Hochdorf wore a belt, neckring, and bracelet as well. The masculine Glauberg statue wears a bracelet on his right wrist. Thus belts, bracelets, and neckrings could be accoutrements of either sex.

Nor is hairstyle indicative of gender—both the Reinheim and Hochheim figures lack facial hair, and while the Hochheim figure's hair appears to be short and combed straight back from the forehead, the Reinheim figure does not have hair—instead its head is surmounted by a "leaf crown" composed of two "palmettes" or "mistletoe leaves" (cf. Frey 1998: 4). Finally, males may be represented with or without facial hair in late Iron Age iconography.

Following Paul Jacobsthal, Frey 1998 believes the "leaf crown" was a symbol of divinity, and that figures wearing it—which can be either human or human-headed animals—"are clearly intended to be elevated above the real world by means of this attribute" (ibid). Besides the anthropomorphic mirror handle with its leaf crown, the Reinheim grave also yielded a bronze flagon, the lid of which was surmounted by a human-headed horse with a leaf crown (Frey 1998: 6).

Because the majority of Greek Caryatid mirrors with upraised arms supporting the plate are nude females, it is likely that the Reinheim and Hochheim mirrors were based on such a model. Interestingly, the ornaments worn by the German mirror handle figures suggest that local artisans borrowed the Caryatid form, but added details of native dress. Whereas the Greek prototypes seem to represent primarily young adolescent girls, the Reinheim and Hochheim figures have the paraphernalia of higher-status adults. Possibly the seeming androgyny of the figures was another deliberate local alteration (cf. Armit and Grant 2008 for a discussion on ambiguity in the Hirschlanden statue), though of course it is equally likely that their gender was easily recognizable in the context of late Iron Age society.

La Motte Saint Valentin (Courcelles-en-Montagne) (5th century BC)

La Motte Saint Valentin (Courcelles-en-Montagne, Haute-Marne, France) is a tumulus containing at least two burials. The site was excavated by H.-E. Millon in the 1880s, and as there are no accompanying diagrams, the context and relationship of goods within the burials is largely unclear. (The report, written by Joseph Déchelette, quotes from Millon's notes at length.) One burial—which Millon identified as "central"—was a cremation; the grave goods included a bronze *stamnos* of Greek or Italo-Greek style, in which the cremated remains had been deposited, an Attic red-figure *kantharos*, and an iron sword (Déchelette 1913: 115-116). Stylistically, these objects can be dated to the "Late Iron Age" (La Tène I) (Déchelette 1913: 140; Freidin 1983: 82), probably the 5th century BC. Cremation burials utilizing bronze stamnoi, situlae, or pails as urns are not uncommon in northeastern France during the period (Freidin 1983: 80-82). The presence of a sword and the absence of jewelry are traditionally regarded as an indication of an adult man.

The second La Motte Saint Valentin burial was apparently an inhumation, but the skeletal material is almost entirely decomposed, except for a small portion of leg bone preserved by contact with a bronze ankle bracelet (Déchelette 1913: 105). This burial contained, in addition to the ankle bracelet mentioned, a second made of lignite, a bronze pin of "antique" type (Déchelette describes it as a type common during the Bronze Age but exceedingly rare in the Late Iron Age), a belt buckle, and a bronze mirror. These goods are broadly contemporary with those of the cremation burial. Mirrors and ankle bracelets are traditionally viewed as the burial accoutrements of adult women.

Although Millon determined the cremation burial to be "central," implying that the inhumation was secondary or adjunct, Déchelette's report does not make clear the exact relationship of the two burials, so it is difficult to determine their relative ages. Re-use of existing tumuli was common during the Iron Age, and secondary burials often disturbed earlier ones (Armit and Grant 2008: 409; Arnold 2002: 132). In addition to these two burials, numerous objects without clear associations, but possibly from other burials in the tumulus, were discovered, including glass and amber beads, bronze rings, fragments of a bronze neckring, and two Roman coins (Déchelette 1913: 109-110).

Millon also noted the presence of numerous small "hearths"—deposits of charcoal which were found all over the tumulus, and at different depths, but which did not contain bones (ibid: 108-109). Such *Holzkohlennester* ("charcoal nests") have been observed at other tumuli of the early La Tène period, for example at the Hohmichele in Germany (Arnold 2002: 136-138); "The features appear to be intentional deposits and may represent the remains of small hearths (altars?) that were used briefly and then abandoned" (ibid: 138).

The mirror had a round, flat bronze plate with a handle made of organic material (now decomposed) and probably of a simple, bar-like shape. The handle had a bronze terminal at the distal end and an attachment with two "palmette" shapes, affixed to the plate by rivets (ibid: 105). Déchelette regards the mirror as a 5th century BC Greek import (ibid: 143); however, more recently the mirror has been attributed to a local craftsperson inspired by Etruscan prototypes (Kruta 2000: 742). Thus both burials at La Motte Saint Valentin testify to contacts with the Mediterranean: the stamnos and kantharos in the "central" burial were imported Mediterranean drinking accoutrements, while the belt buckle in the mirror burial (of a type common in the Champagne region) features a palmette reminiscent of Greek or Italo-Greek style (Déchelette 1913: 141).

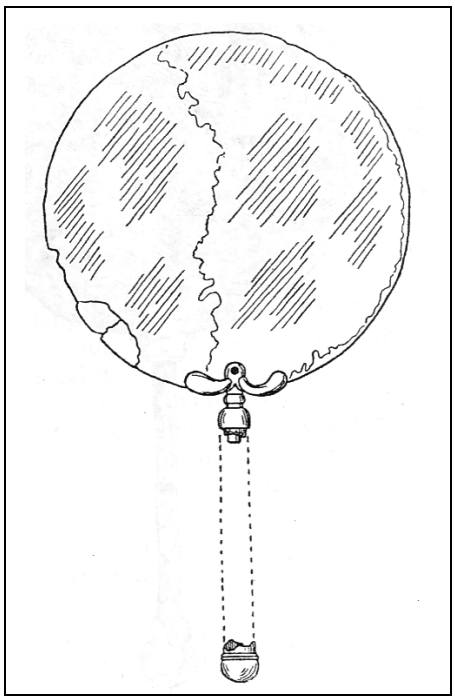

Figure 15. The La Motte Saint Valentin mirror (after Déchelette 1913).

Arras 10 (4th-2nd century BC)

The Arras site, near Market Weighton, East Yorkshire, England, gives its name to the so-called "Arras culture" (Fig. 16). Arras-type burials are found mainly in cemeteries of small mounds (some with hundreds of mounds, e.g., Arras, Danes Graves, Eastburn, and Scorborough Park), located on high ground; the tradition seems to have been

followed almost exclusively in the eastern Yorkshire area, although an isolated burial has recently been found as far away as Newbridge, near Edinburgh, Scotland (Stead 1965: 2-3; Carter and Hunter 2001). The wealthiest tombs are round mounds surrounded by rectangular ditches; under the mound a single individual was interred, usually in a flexed position, lying on one side on top of or underneath a disassembled two-wheeled cart or chariot, with the head oriented to the north. Although the wood has decayed, metal cart-fittings such as linch-pins, terrets, and iron tires survive. Horses are usually not found in these graves, but their role is represented by bridle bits. Other grave goods include joints of pig, weapons (swords and spears), and personal ornaments (fibulae) (Boyle 2004: n.p.; Stead 1965). However, these wealthy cart-burials probably account for between 2-10% of graves from the period and region.[4] The inclusion of a vehicle in the wealthiest burials is similar to contemporary burial practices in northeastern France, which has prompted much debate about possible migration from the continent, for which no convincing evidence has been found.

Seven burials are known to have contained mirrors: Arras 10 (now lost) (Stead 1965: 55); Arras 28, the "Lady's Barrow" (Fox 1958: 7); Wetwang Slack 2 (Dent 1985: 90); Wetwang Village (Hill 2001); Garton Slack Barrow II (Brewster 1970: 289); and Beverley (Walford et al. 1897). Only one of these burials (Garton Slack) contains a weapon, leading archaeologists to the conclusion that the mirrors were a marker of feminine gender while weapons marked masculine gender; and indeed, at least two of the individuals with mirrors—Wetwang Slack 2 and Wetwang Village—have been biologically identified as females (Hill 2001: 410).

All that is known about the Arras 10 burial is that it was small and the mirror was reportedly the only grave good (Greenwell 1906: 294; Smith 1909: 335). The excavator, the Rev. E. W. Stillingfleet, describes it thus:

> The diameter of the circular part is about 7 ¼ inches. The length of the handle, including the perforation (a ring at the end of the handle and another where it joins the mirror), 5 ½

[4] In the 1930s, it was estimated that close to 1000 Iron Age barrows were either still visible or had been excavated in Yorkshire, but only 21 have yielded carts (Stead 1965: 3; Boyle 2004: n.p.). Since 1960, over 700 graves have been excavated in East Yorkshire, 7 of which were cart burials (Trustees of the British Museum n.d.).

inches. The iron is much corroded. The outer diameter of the two perforations 1 ½ inches, the inner diameter about ¾ inch" (cited in Greenwell 1906: 294, note 1).

Stillingfleet made a sketch of the mirror, but this is unpublished (Greenwell 1906: 294). If it is true that the mirror was the only grave good, Arras 10 would be unique insofar as all the other Yorkshire mirror burials also contained carts and associated bits.

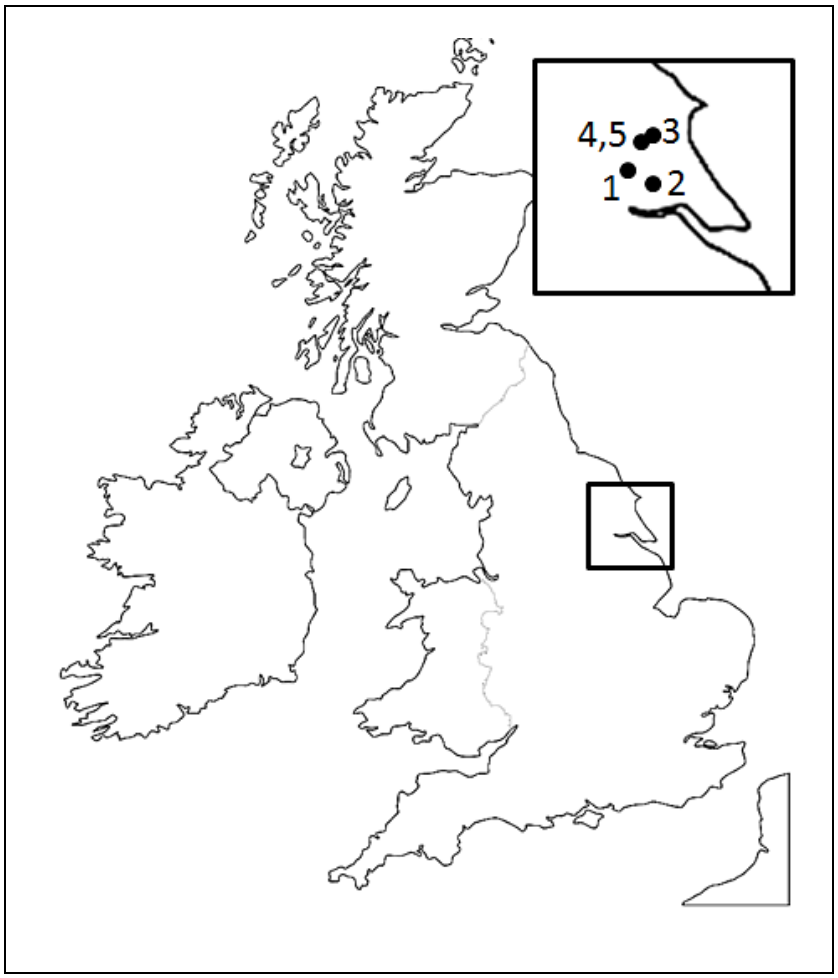

Figure 16. Map of the Arras burials, East Riding, Yorkshire, England. 1. Arras, 2. Beverley, 3. Garton Slack, 4. Wetwang Slack, 5. Wetwang Village.

Arras 28 (4th-2nd century BC)

Arras Burial 28 was excavated in the 19th century, and little contextual information exists. The excavators reported numerous small tumuli at Arras (perhaps as many as 200), some surrounded by square ditches (Stead 1965: 2). The burial itself was a circular grave about 12 feet in diameter, containing a skeleton in extended supine position.

On one side of the body were the two wheels of a cart and on the other two horse bits (ibid: 6, 90). Canon Greenwell, who excavated Burial 28 in 1875, was not certain the deceased was female, in spite of the presence of a mirror which has so frequently been accepted as an index of femininity (Greenwell 1877: 457, cited in Stead 1965: 6, note 1).[5] The mirror, made of iron with bronze mounts, had been placed beneath the individual's head (Smith 1909: 335). Pig bones were also found near the skull (Stead 1965: 90). Apart from these, the cart, and the mirror, no grave goods are recorded.

Figure 17. The Arras 28 mirror (Stead 1965).

The unusual disposition of the body is noteworthy—in most Arras cart burials, and all of those with mirrors for which sufficient information about the skeletal remains has been recorded (i.e., not Arras 10) the individual was interred in a flexed position between/on top of the cart wheels.

Wetwang Slack 2 (4th-3rd century BC)

Grave 2 is one of a cluster of four burials within square enclosures excavated in 1984 (a fifth enclosure does not surround a burial) (Dent 1985: 85). Its enclosure ditch shares its west edge with a smaller enclosure and burial, while the two other burials were located just to the north and south of Grave 2, respectively. "Slack" is a Yorkshire term for a stretch of gravel, and it was during gravel extraction that this cluster of burials was discovered (ibid). Wetwang Slack and Garton Slack (discussed below) together make up part of a dry valley, the location of an extensive Iron Age settlement with "scores of buildings," as well as a single "densely packed" cemetery with some 446 inhumations, aligned along an existing trackway (ibid; Dent 1983: 5, 6). About half the burials in the

[5] The name "Lady's Barrow" was applied by Sir Cyril Fox in the 20th century (Stead 1965: 6, note 1).

valley were enclosed by a ditch "which once defined the limits of a covering mound," while the remainder were secondary burials inserted into or around a pre-existing mound (Dent 1983: 5). Many graves are thought to have been destroyed by gravel acquisition in the valley (ibid).

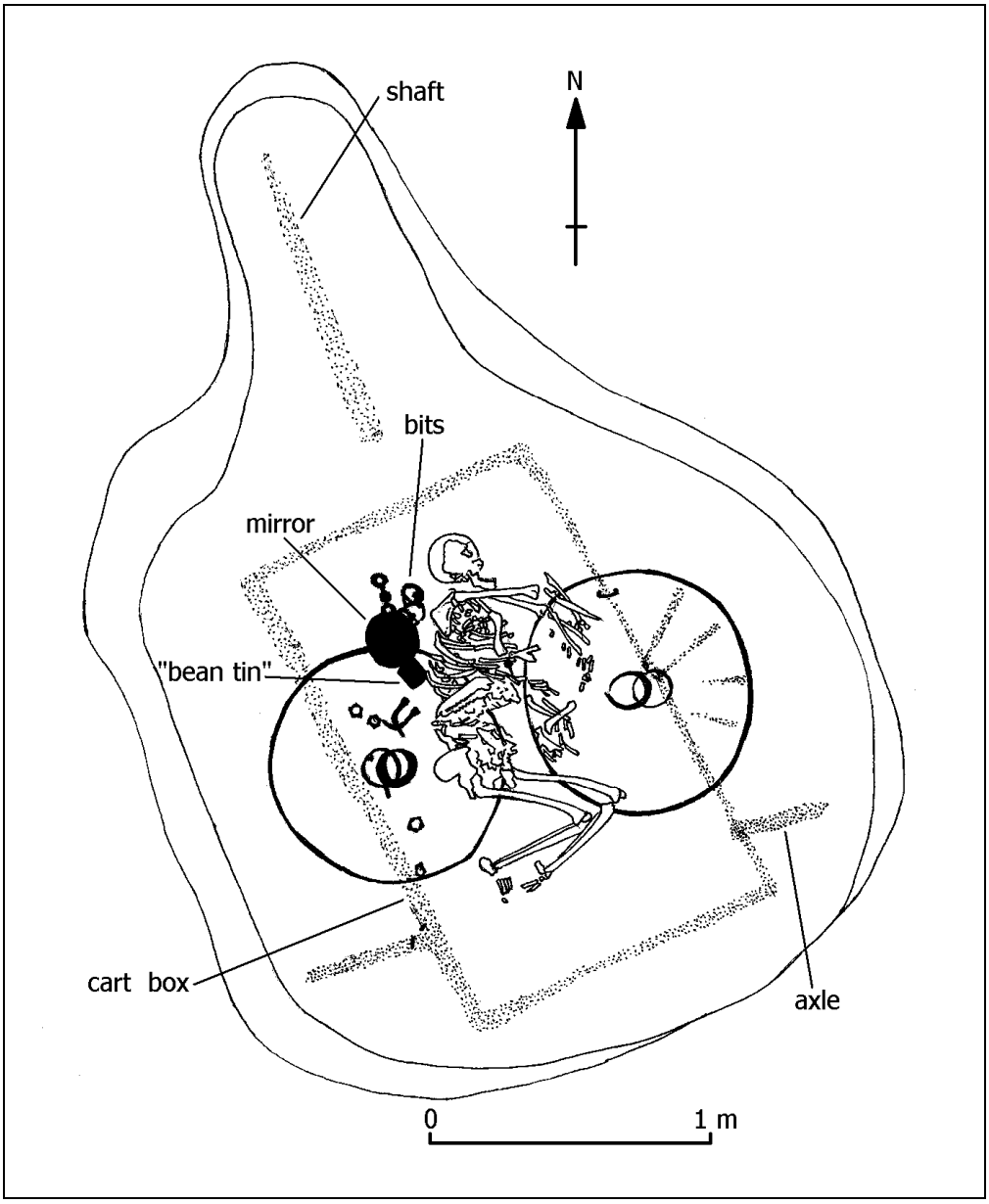

Figure 18. Wetwang Slack Grave 2. After Dent (1985). Objects in black are metal, stippled areas are traces of wood.

In Grave 2, the body of a young adult woman was laid on its left side in a flexed position on the floor of a two-wheeled cart or chariot, or perhaps underneath an inverted cart; the wheels had been removed and placed on either side of the body (Fig. 18). Beside her torso were the remains of two forequarters of a pig (Dent 1985: 88). Just behind (that is, to the west of) her shoulders and head were a plain iron mirror with rings at either end of the handle and a cluster of other artifacts: an iron pin, a matched pair of horse bits, and a bronze canister with attached chain nicknamed the "bean tin" (ibid: 89). The purpose of this object is mysterious: made of sheet bronze incised with curvilinear ornament, there is no easy way to open it, as the ends are crimped into place. Each end features a roundel inlaid with red enamel. Also found in the grave was the head of a broken iron and gold pin inlaid with coral (ibid). The grave has been dated using a sample of human bone to 386-203 cal BC (Joy 2010: 128).

Graves 1 and 3 contained the skeletons of males, but by comparing them to Grave 2, it is clear that the customary layout of Arras cart burials was to place the individual in a flexed position on their left side, on top of the wheels, which had been removed from the cart. Normally, the head faces left and towards the pole which would have been between the horses when the cart was in use. The axle was also removed and placed at the south end of the burial. The remaining grave goods typically include weapons, personal adornments, and bits for the horses.

Garton Slack Barrow II (4th-3rd century BC)

Excavated in 1970, detailed information about this burial is rather scarce. A sample of human bone from the grave has been dated to 380-200 cal BC (ibid: 128). The grave contained a single individual laid in a flexed position on his or her left side. The left hand was "resting extended and inverted beneath the mirror," the handle of which was pointing toward the body (Brewster 1980: 228) (Fig. 19). It may have been positioned so as to be within reach, or suspended from a belt or girdle (Brewster 1970: 289; Jope 2000: plate 237). A cart was represented by iron tires and harness mounts. In addition, the burial contained a shield, a swan's neck pin, fibula, bracelet, a finger ring, and 35 glass beads (Palk 1984: 67).

Figure 19. Plan of Garton Slack Barrow II (Jope 2000). The shield is not visible in this photograph, but the mirror can be seen above the individual's thighs.

The shield is highly unusual, and along with Bryher and possibly Lambay Island, would be one of the only graves in western Europe known to contain both a mirror and weapon(s). In eastern Europe and Inner Eurasia, it is not uncommon to find both mirrors and weapons in a burial, whether the deceased is male or female. In western Europe, however, mirrors and weapons seldom overlap, and consequently, archaeologists have supposed that they are strongly gendered—mirrors feminine, and weapons masculine. So sacrosanct is the notion that weapons are masculine that A.P. Fitzpatrick (pers. comm.) considers it more likely that a man would be buried with a mirror than that a woman could ever have been buried with weapons. However, Brewster (1980: 228) describes the Garton Slack skeleton as a woman, aged 25-30 years, but it is not clear how the sex designation was made. Because there are so few mirrors, relative to the amount of weapons known from Iron Age Temperate Europe, the apparent mutual exclusion of the two artifact types may not be as robust as it first appeared. It seems the reality is much more complicated, and as the sex of skeletons is increasingly assessed according to biological indicators—rather than associated grave goods—it is likely that old gender biases will be challenged.

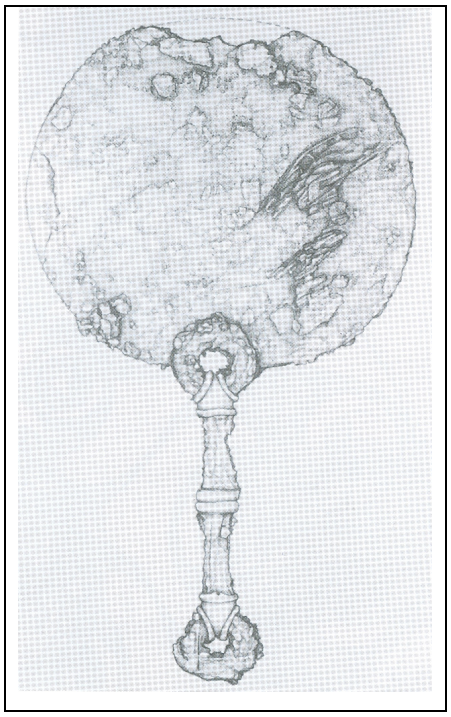

Figure 20. The Garton Slack mirror (Jope 2000).

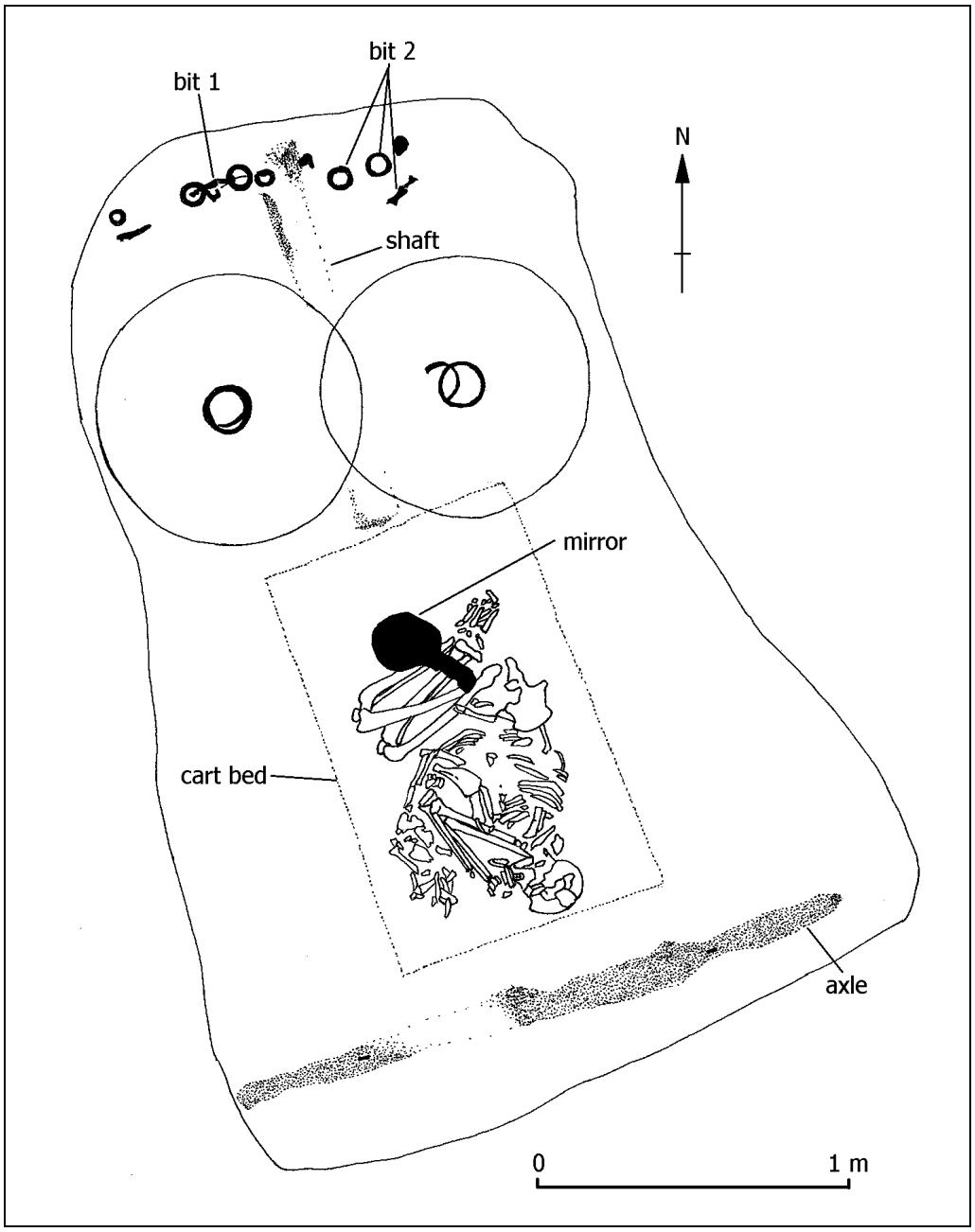

Figure 21. Plan of the Wetwang Village burial (after Hill 2001a). Objects shown in black are metal, stippled areas are traces of wood.

Wetwang Village (4th-2nd century BC)

The burial, excavated in 2001, was situated on top of a hill (Trustees of the British Museum n.d.) and contained the remains of a woman with unique facial features—in particular, strong asymmetry and a large bluish birthmark—which led archaeologists to speculate that she may have been marked as a special category of person, perhaps a

shaman (Hill 2003: n.p.). The woman, dubbed the "Chariot Queen" in the popular media, was laid on its left side with the head toward the south, which is an unusual, though not unique, orientation in an Arras-type burial. Bracketing the body were the cart wheels below the feet and the axle above the head. Two horse bits and other harness fittings were found just to the north of the wheels, and the woman's upper body had been covered with joints of pig (Trustees of the British Museum n.d.) (Fig. 21).

The mirror lay on top of the woman's calves, and its position suggests it may have been suspended from a belt which no longer survives. The mirror handle has a loop at both proximal and distal ends. A cluster of tiny beads near the distal loop may have been from a tassel or perhaps were decoration on a now-decayed bag (ibid). They are so small that Hill (2003) speculates they may have been threaded on horsehair. The handle shape bears certain resemblances to contemporary horse bits (discussed in Chapter 7).

The position of the body is "upside down" relative to most Arras chariot burials, in that the head is oriented toward the south with the face toward the west. However, the flexed position and the fact that the body was laid on its left side are typical. A sample of human bone from the burial has been dated to 353-111 cal BC (Joy 2010: 128-129).

Beverley

Virtually nothing has been published about the Beverley mirror burial, while another "Beverley," a cart burial (sometimes known as Westwood) *without* a mirror, is much better represented in the literature, but the distinction is never made explicit. The mirror burial was excavated in the 19th century and few details are known. Walford et al. (1897) write that the mirror was iron with bronze mountings, that the deceased was a woman, and that there was a chariot (Walford 1897: 227). Another reference to a burial "on the Wolds between Beverley and Market Weighton" states that the mirror was bronze (though if so it would be the only all-bronze mirror in the Yorkshire group) and that the grave contained two cart wheels and two horse bits (Stephenson 1895: 275). Again, the attribution of female sex to the skeleton was almost certainly made according to the presence of a mirror, and cannot be accepted uncritically.

Dühren (*ca*. 150-100 BC)

Dühren (Baden-Württemberg, Germany) was discovered in 1865 and thus there is little contextual information for the two mirrors found there (Fischer 2005: 225). Two mirrors of Italian origin were found in the grave, one with a handle and one without (ibid: 226-227). The grave goods also included a handled bronze pan and bronze flagon of Italian manufacture, a bronze kettle and iron boiler rack (missing since WWII), two gold finger rings, four glass bracelets, six blue and yellow glass ring beads and a number of smaller beads, seven fibulae (two of them silver and one of iron with coral inlay, the rest bronze), a bronze bulla, iron shears, a silver coin of the Volcae, and some unidentified amber objects (Fischer 2005: 225; Schumacher 1925: 467-468). It appears the grave had been sprinkled with white lime or gypsum (Schumacher 1925: 468). "Alleged remainders of 'swords', and a bronze (although much older) lance" are interpreted by Schumacher as possibly indicating a neighboring man's grave (ibid).

Bryher (100-50 BC)

In 1999, a farmer discovered a cist grave at Hillside Farm on the island of Bryher (Isles of Scilly, Cornwall, England) (Johns 2002-3: 5). Although disturbed by ploughing, the stones covering the cist acted to partially protect the contents (ibid). Because the burial was discovered and excavated so recently, it has been possible to perform a number of specialized analyses, including isotope and DNA testing (Johns 2002-3). Unfortunately, the skeletal remains were too poorly preserved to assess the sex of the individual (ibid: 20). All that could be determined was that the individual was probably a young adult, aged 20-25, and that the body had been interred in a flexed position on its right side, with the head to the north (ibid: 15). The remains were radiocarbon dated to 200-45 cal BC, but the metal objects narrow the date range to ca. 100-50 BC (ibid: 1).

Grave goods included an iron sword in a bronze scabbard, a bronze mirror, brooch, spiral ring, shield fittings, a bronze ring from a sword belt, and a shattered tin object, the nature of which was impossible to discern (ibid: 16, 36). In addition there were some fragments of hematite with signs of grinding, perhaps to yield red pigment (ibid: 19). The mirror was positioned just next to the face, with its reflective surface

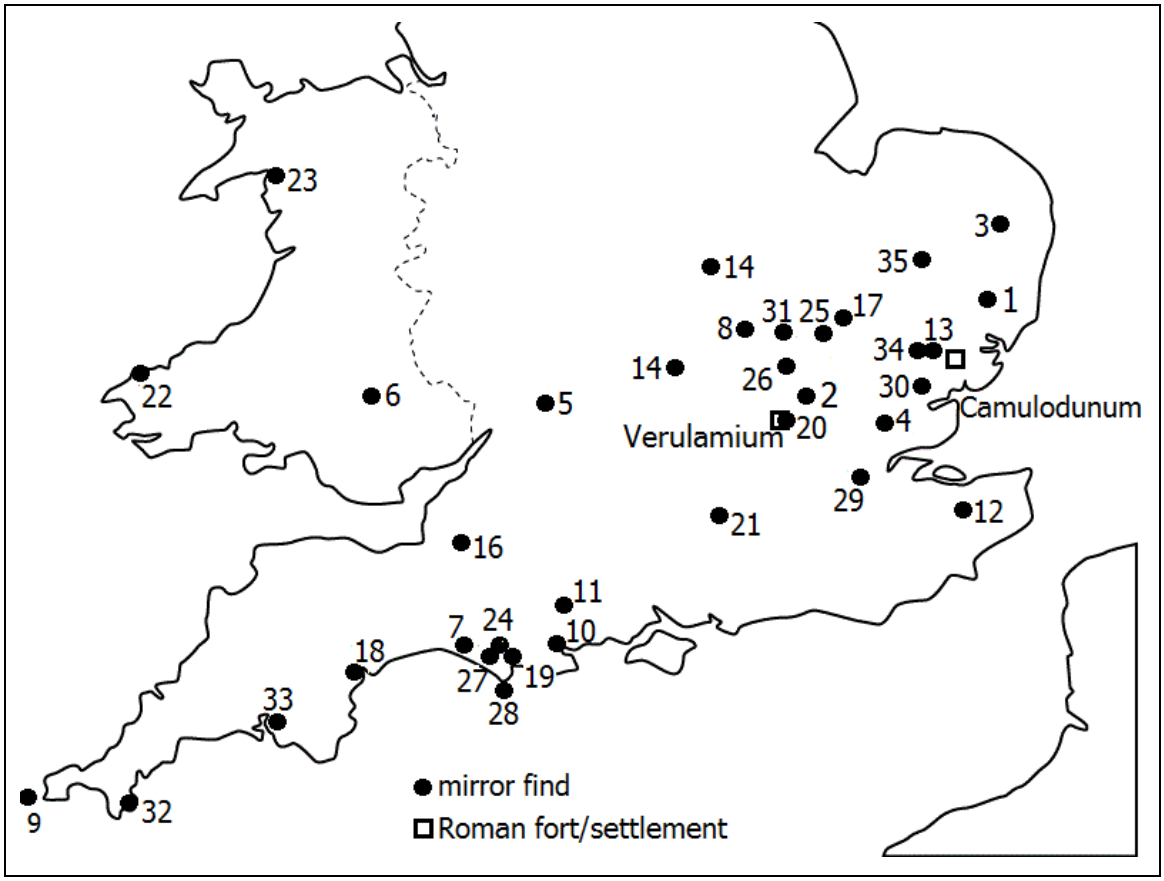

Figure 22. Map of southern Britain, showing sites discussed in Chapter 3. 1. Akenham, 2. Aston, 3. Badingham, 4. Billericay, 5. Birdlip, 6. Brecon, 7. Bridport, 8. Bromham, 9. Bryher, 10. Bulbury, 11. Chettle, 12. Chilham Castle, 13. Colchester, 14. Desborough, 15. Dorton, 16. Glastonbury, 17. Great Chesterford, 18. Holcombe, 19. Jordan Hill, 20. King Harry Lane (St. Albans), 21. Latchmere Green, 22. Llanwnda, 23. Llechwedd-du Bach, 24. Maiden Castle, 25. Old Warden, 26. Pegsdon, 27. Portesham, 28. Portland, 29. Rickling, 30. Rivenhall, 31. Ruxox, 32. St. Keverne, 33. Stamford Hill (Mount Batten), 34. Stanway, 35. Thetford

oriented toward the face, and its handle "up" (ibid: 16) (Fig. 23). Archaeologists speculate that the spiral ring may have been used to fasten a textile bag around the mirror (ibid: 17). The sword also lay to the right (west) of the body, but was clearly not worn by the deceased at the time of burial (ibid)

The Bryher mirror has some distinctive features: The edge of the plate was milled, with some of the notches surviving at the top edge (Hill 2002-3: 32). The design features repeating triangles around the rim, for which there is only one comparable example, the mirror from Trelan Bahow (St. Keverne, Cornwall, England) (ibid: 33-34). Near the top edge of the plate, there are two concentric circles with radiating lines between them, resembling so-called "solar" motifs common throughout prehistoric Europe (ibid: 33).

One side of the plate appears damaged, either due to poor preservation or possibly having been broken and repaired in antiquity. In addition, the handle overlaps part of the design, which is highly unusual, and suggests that the handle and part of the plate may have broken off, after which the plate was trimmed and the handle reattached (or a new handle attached) (ibid). When held in the hand, with the handle down and plate up, mirrors do experience the greatest stress across the plate just above the handle. Since the preservation of metal objects in the grave was so poor, the mirror surface was found heavily corroded, and the design is nearly impossible to see, but it covered virtually the entire plate on one side (ibid). The small size of the Bryher mirror and its oval shape are unusual, but if the mirror had been trimmed down, its original size and shape may have been typical (ibid: 34).

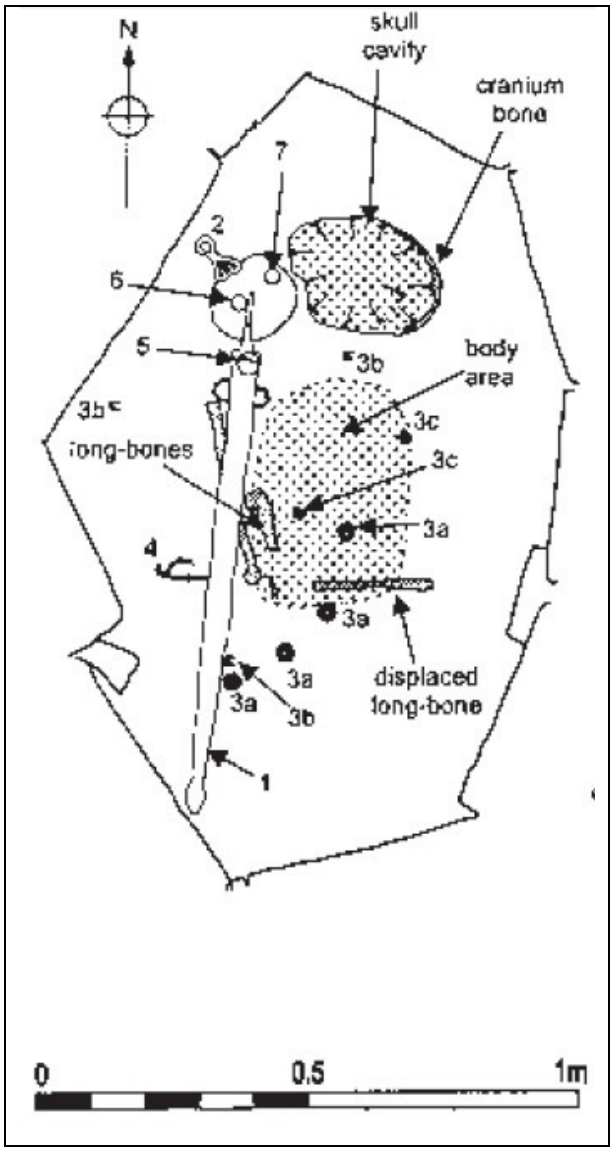

Figure 23. Plan of the Bryher burial (Johns 2002-3: 16). The mirror is numbered 2.

It is likely that Bryher and Trelan Bahow, which are similar enough that Hill (2002-3: 35) considers it possible that they were made in the same workshop, are two of the oldest of the Late Iron Age mirror group. Their contexts are very similar, both having been found in cist burials, and their distinctive characteristics may reflect a southwestern British "school" of mirror design (ibid). Both mirrors were found with modified Nauheim type fibulae, which were popular ca. 125-75 BC, suggesting that the

mirrors can be dated to the first half of the first century BC, or even slightly earlier (ibid). *Contra* Fox (1958), who argued that the British Late Iron Age mirrors were first made in southeast England and from there spread to peripheral zones such as Cornwall, it can now be seen that the southwest was a contemporary center of mirror manufacture (Hill 2002-3: 36).

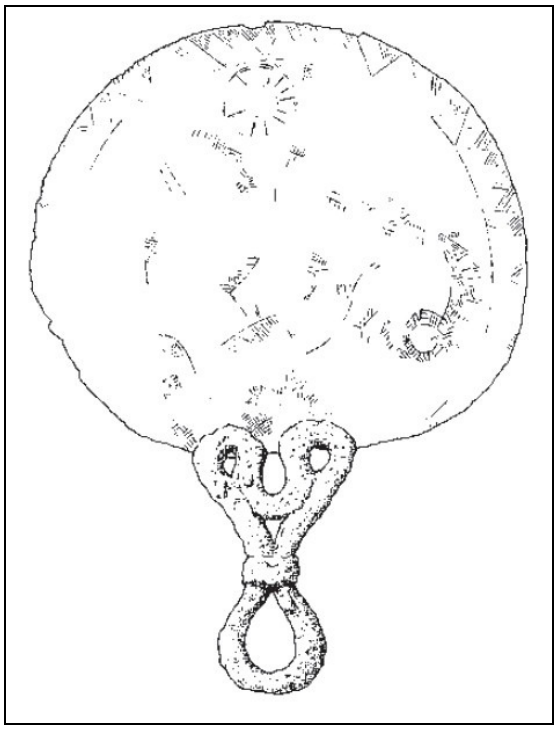

Figure 24. The Bryher mirror (Johns 2002-3: 31).

Bryher has attracted much attention insofar as it contains a mirror and a sword and shield.[6] The site thus confounds the notion that mirrors signify feminine gender while swords signify the masculine, with the two genders being mutually exclusive. Nonetheless, many archaeologists continue to hold to a strict dichotomy, especially as regards weapons (e.g., Cunliffe 1991). For example, Burleigh and Megaw (2011: 128) refer to "the warrior burial with a mirror from Bryher," while Fitzpatrick (pers. comm.) considers it more likely that a man would be buried with weapons and a mirror than that a woman would be buried with both.

St. Keverne (Trelan Bahow) (100-50 BC)

The St. Keverne mirror (Cornwall, England) was discovered in 1833 by workers cutting a new road (Johns 2002-3: 34). The mirror was found in one of a group of cist burials, along with glass beads, bronze bracelets, and a broken fibula of "Nauheim" type (ibid). The fibula is very similar to the one from Bryher, and provides the date for the burial as a whole.

[6] A mirror and sword from Lambay Island, Dublin, Ireland may proceed from a single burial, but the context is uncertain.

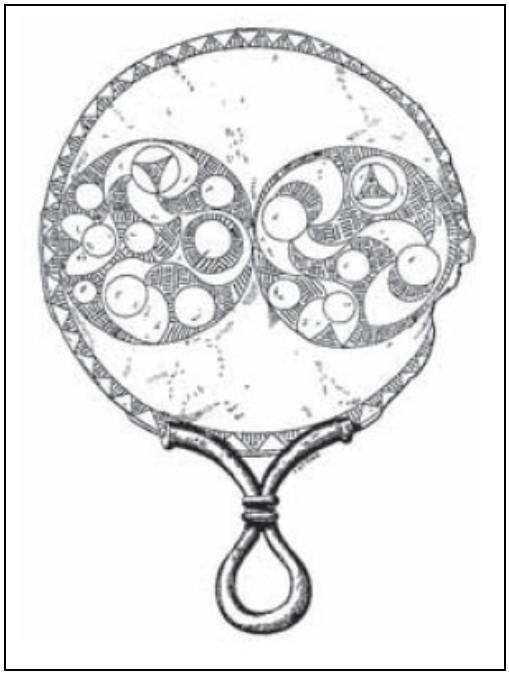

Figure 25. The St. Keverne mirror (Johns 2002-3: 32).

The design on the mirror plate is unusual in that it is laid out within two circles, while there are incised triangles forming a border around the edge (ibid). The incised triangles, and the shape of the handle, are very similar to the Bryher mirror, which helps put both mirrors into a broader regional context (ibid). The only other example with isolated circles in the design is Stamford Hill I (the plate fragment) (ibid: 35).

Aston (1st century BC)

In 1979, a bronze mirror plate was discovered by a farmer on the surface of his field in the parish of Aston (Hertfordshire, England). The following year the area was thoroughly with a metal detector and the handle was located, and along with it, a cremation burial from which the mirror most likely came (Rook et al. 1982: 18). The burial is situated in an area with a number of Iron Age and Romano-British sites, and is only 1 km away from the Roman Road between Verulamium and Colchester, and a few kilometers from an *oppidum* (ibid).

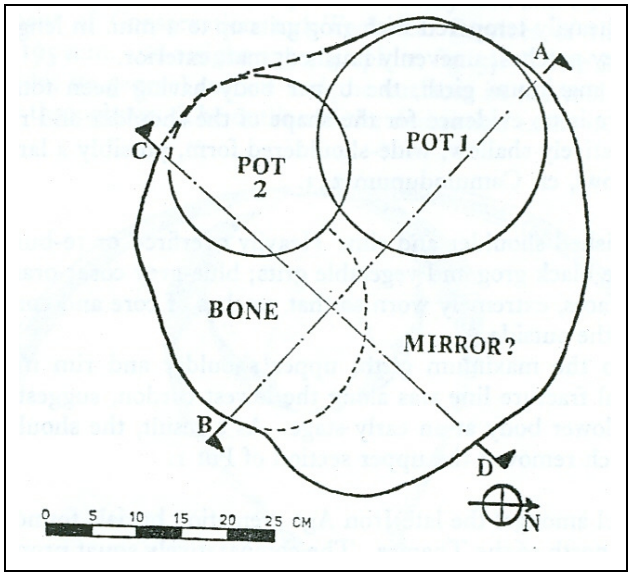

Figure 26. Plan of the Aston burial (Rook et al. 1982).

The grave contained two pottery vessels and cremated bone, which had been piled up against the northern corner of the grave pit, without any container (ibid: 19). The

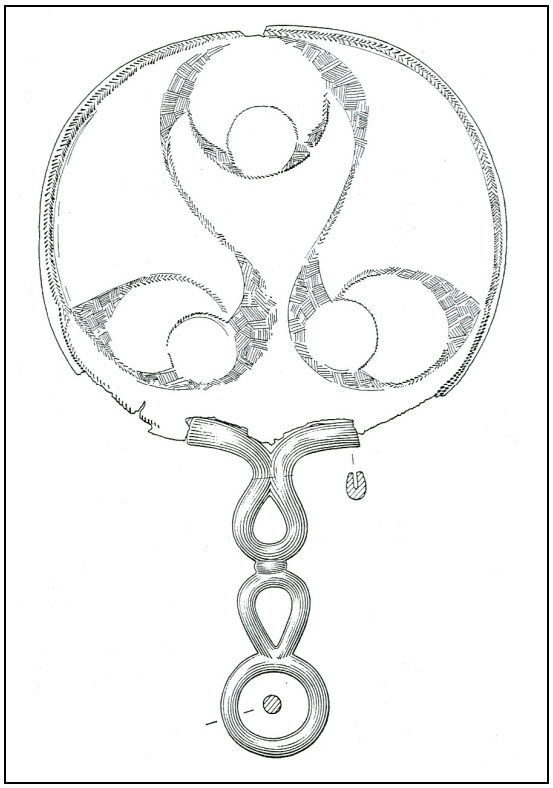

Figure 27. The Aston Mirror (Rook 1982).

exact position of the mirror was impossible to determine, since the plate had previously been pierced by a harrow, separated from the handle, and dragged some 20 m (ibid). The bones belonged to a mature adult, but it was impossible to determine sex; there were no animal bones (ibid). Based on the pottery, Rook et al. assign the burial to the second half of the first century BC (ibid: 23).

The handle is formed of two opposed teardrop loops, separated by a collar, with a terminal ring. The design on the plate was filled with irregular basketry hatching (ibid: 24).

Chilham Castle (1st century BC)

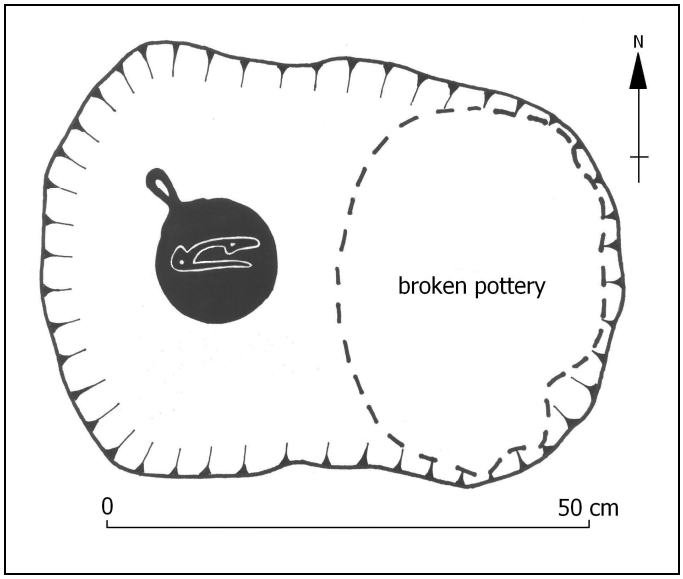

Figure 28. Plan of the Chilham Castle burial (after Parfitt 1998). The second fibula is not shown in this plan, as its original position is unknown.

In spring 1993, a metal detectorist working near Chilham Castle, Kent, England discovered a shallow burial containing a mirror, bronze fibula, and ceramic vessel holding cremated remains (Parfitt 1998: 343). When archaeologists excavated the site, they found another bronze brooch (ibid). The burial was located almost at the summit of a chalk ridge, about 50 m southeast of a trackway running along the spine of the ridge, which was "a branch of the prehistoric

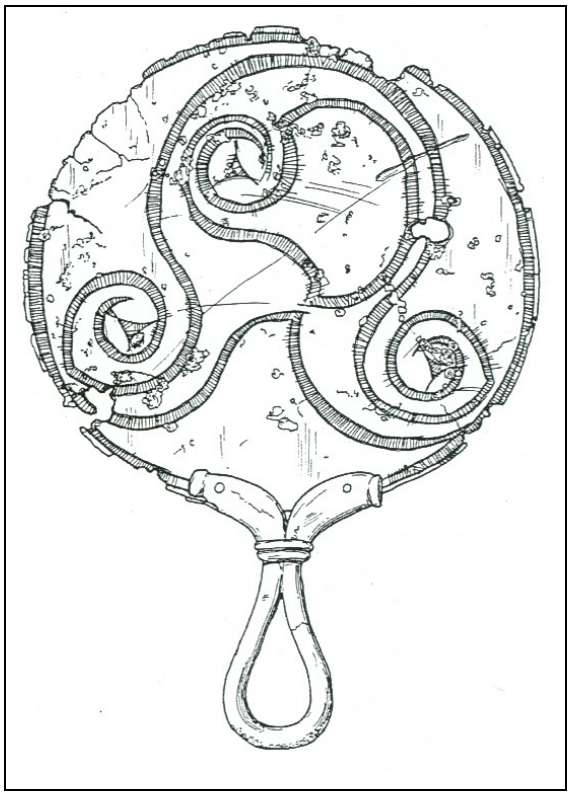

Figure 29. The Chilham Castle mirror (Parfitt 1998).

North Downs trackway that follows the western side of the Stour valley" (ibid). Along the same ridge, 7.5 km northeast of the Chilham Castle burial, is the large hillfort of Bigberry Camp, the only known hillfort in east Kent (ibid: 350). Bigberry Camp was abandoned around 50 BC, perhaps the very time the burial was made (ibid). On the opposite side of the valley is a Neolithic long barrow, which later acted as the focus of a small post-Conquest Iron Age cemetery (ibid).

The ceramic vessel with cremated bone lay in the eastern half of the pit, while the mirror was found, reflective surface up, in the western half (ibid: 343-345). The first fibula was found lying on top of the mirror, while the second was likely under or next to it, although this is not certain (ibid: 345). The brooches formed an almost-identical pair, and Parfitt speculates that they may once have secured a cloth around the mirror, though no evidence of such has survived (ibid). They likely date to *ca*. 70-30 BC (ibid: 347).

The skeletal remains appear to be those of a single, young (<30 years) adult (ibid: 349-350). The small size of a mandibular condyle fragment was taken as an indicator of probable female sex (ibid), but such evidence is very tenuous.

Dorton (1st century BC-AD 1st century)

Dorton (Buckinghamshire, England) is a typical burial of "Aylesford" type. The Aylesford tradition of flat grave cremations takes its name from a cemetery in Kent, excavated in the late 19th century (Whimster 1981: 147-148). Localized in southeastern Britain, few cemeteries contain more than 30 burials; it thus seems to be a rite that was

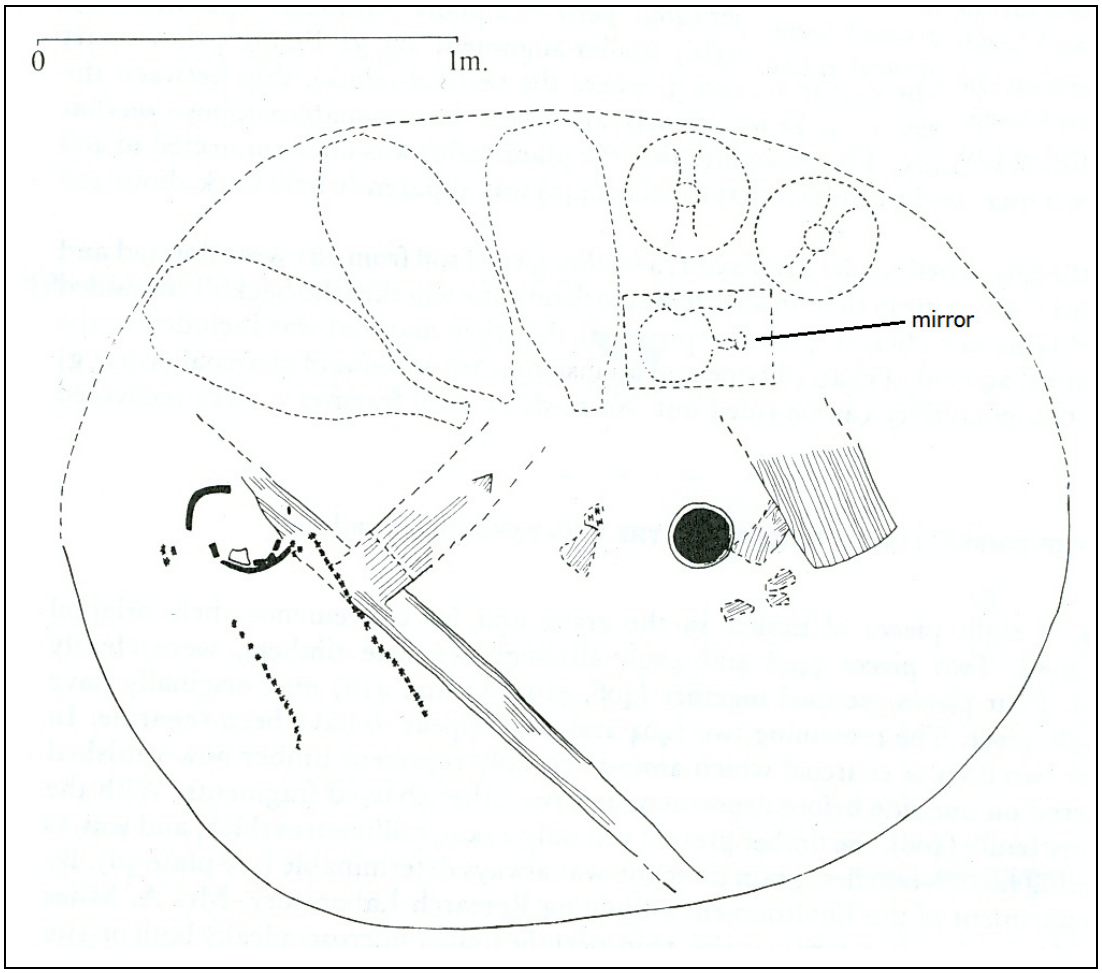

Figure 30. Plan of the Dorton burial (after Farley 1983).

limited to a small number of individuals (Niblett 2004: 30). Within this group, however, a range of burial wealth was represented, from no grave goods at all to elaborate "vaults" with tiled floors (Whimster 1981: 154-155). The graves were evidently marked above ground, as they do not overlap one another (ibid: 155). Cremated remains were usually placed inside a vessel, usually ceramic, but in more wealthy burials, in bronze- or iron-bound wooden buckets; yet in some graves, the cremated remains were not inurned, and this subgroup ranges from burials with no goods, to ones much more richly provisioned (ibid: 157). Typical Aylesford grave goods include ceramic vessels (including imported *terra sigillata*, Gallo-Belgic wares, and amphorae), fibulae, buckets, pedestaled urns made from shale, feasting equipment of silver, bronze, and glass, and iron "hearth furniture" such as andirons; one grave even contained a portrait medallion of Augustus

(ibid: 158-160). The Aylesford tradition appears to have begun sometime around the middle of the first century BC and lasted for about a hundred years (ibid: 163), and is thus broadly contemporary with the British Iron Age mirror series.

The presence of exotics, especially those associated with wine and/or feasting, is particularly noteworthy, as is the absence of certain expected grave goods: "objects of personal ornament, such as brooches and bracelets…tend to be rare in the richest burials and…weapons…are entirely absent" (ibid: 160). The paucity of personal ornaments is intriguing in light of the fact that some Aylesford burials (e.g., those at King Harry Lane and Colchester) contain mirrors. Hill (1997) has suggested that the proliferation of mirrors during the Late Iron Age might correspond to a contemporary increase in numbers of toilet sets and personal ornaments, implying a new focus on grooming and appearance. According to this view, both mirrors and personal ornaments can be included amongst "technology of the body;" but the Aylesford burials suggest that perhaps personal ornamentation and the use of mirrors did not form a natural pair in this society.

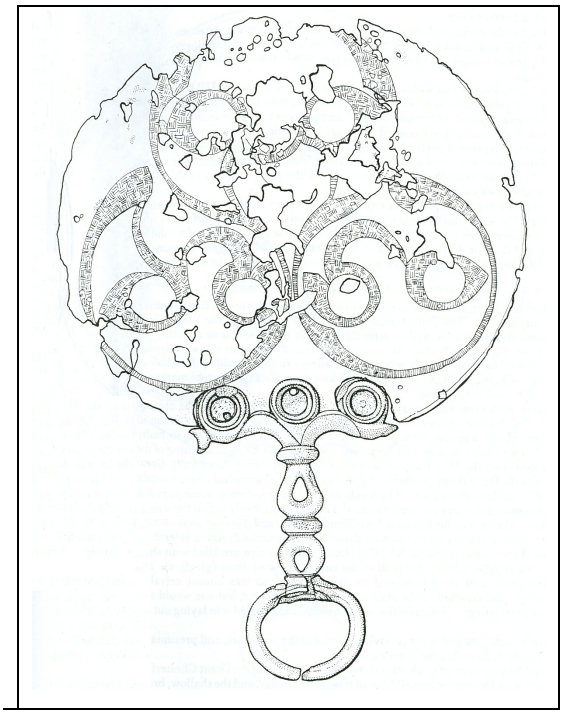

Figure 31. The Dorton mirror (Farley 1983).

Aylesford burials have "long been regarded as the intrusive burial rite *par excellence*" (Whimster 1981: 147) among scholars of Iron Age Britain. The style of ceramics, suite of grave goods, and practice of cremation are similar to burials from north-eastern France, the region identified with the Belgae by Julius Caesar, and the Aylesford tradition was consequently attributed to a migration of Belgic people from the Continent around the conquest of Gaul in 52 BC. Leaving aside for a moment the issue of identifying ethnic groups in the archaeological record, migrations are always difficult to prove. What is known is that the flat grave cremation rite appeared in a very restricted

geographical area, in graves with a distinctive set of accoutrements; but it is difficult to say whether the new practice was brought by migrants or adopted by indigenous societies in contact with Continental groups. Regardless, the practice of including mirrors in some Aylesford burials appears distinctly British, given that no contemporary mirror burials are known from the putative Belgic homeland.

Holcombe (AD 1st century)

The context of the Holcombe (Devon, England) mirror is uncertain—it may have been a burial or a settlement (Fox and Pollard 1973; Joy 2010: 4; H. Quinnell, cited in Hill 2002-3: 35); Burleigh et al (2007: 134) say that it had been carefully wrapped in cloth. The Holcombe mirror is among the better-preserved of the British Iron Age mirrors, with the handle still attached to the plate; the handle itself features an unusual theriomorphic face on the mount. The mount is repeated, Janus-like, on both sides of the mirror plate. Fox and Pollard (1973: 23) state that the mount, composed of trumpet scrolls in high relief and red studs of copper cuprite, only one of which now remains, represents a feline face when the mirror is held handle-up, although the authors concede that "other people" see the mount as the face of a long-eared owl (*Asio otis*) (ibid: 23, note 1). In either case, the copper cuprites would represent the eyes; the creature appears to have two somewhat triangular ears or feather tufts and either a hooked beak or flared nostrils.

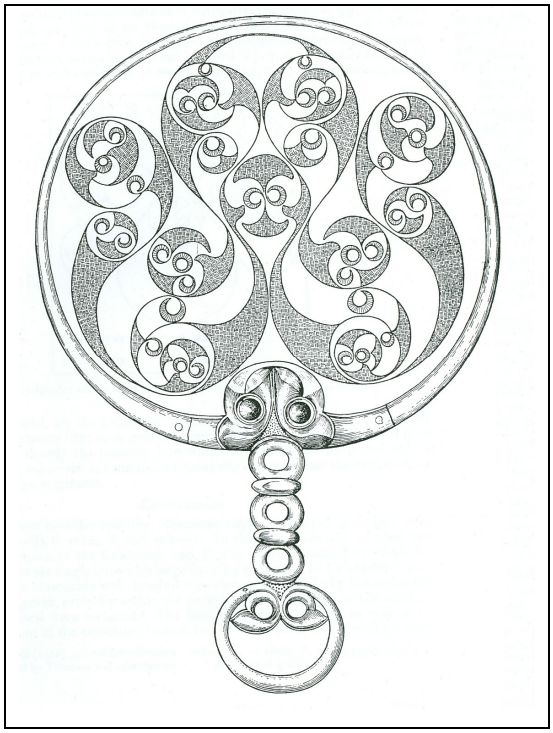

Figure 32. The Holcombe mirror (reconstructed) (Fox and Pollard 1973).

However, the shape, size, and angle of the "ears" and the size and red color of the

"eyes" bear a greater resemblance to the Eurasian eagle owl (*Bubo bubo*)[7] than the long-eared owl. The markings of the eagle owl's face feathers echo the shape of the "face" on the Holcombe mirror, while, to this author's eye, the long-eared owl's feathers create a drooping mustachioed appearance quite distinct from the face on the mirror. A narrow V shape running down the center of the face appears more like a beak than a cat's nose, and again, the color of copper cuprite is more like that of an eagle owl's eyes than those of a cat.

In fact, however, the "face" on the Holcombe handle mount depends very much on the angle from which it is viewed, lighting conditions, and the preconceptions of the viewer. As described by Fox and Pollard (1973), the face is composed of three-dimensional "trumpet" shapes, so that, depending on how the mount is lit, raised areas can appear sunken and vice versa. Thus the nostrils of the putative cat face, which border the beak of the owl, are in fact the inflated ends of the trumpet. Meanwhile, the beak does not stand out in relief as one might expect, but is actually recessed. Trumpet shapes are repeated many times in two dimensions in the engraved design of the mirror back, and finally, there are two more symmetrical trumpets within the terminal loop of the handle (which may arguably represent another pair of eyes).

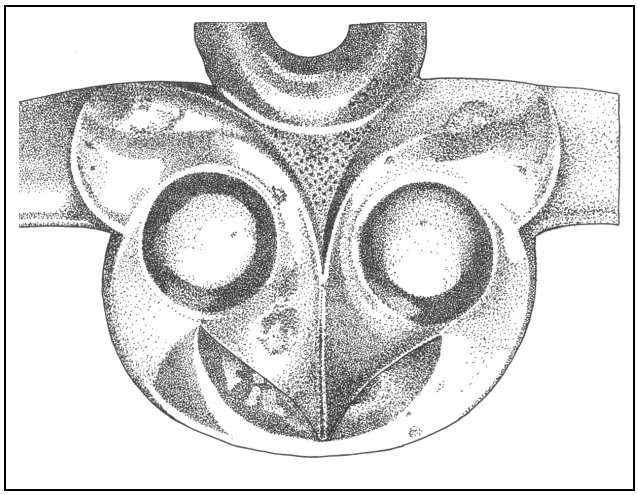

Figure 33. Cat or owl? The handle mount of the Holcombe mirror.

Whether the handle mount represents a cat or an owl is less interesting than why either of these animals—or indeed any animal—should have been selected for representation on a mirror. For no matter how ambiguous the Holcombe handle mount's face is, it is more obviously a face than most decoration on British Iron Age mirrors. The cat and owl are both nocturnal hunters—consequently they have large eyes equipped with

[7] Although the eagle owl is seldom seen in Britain today, it is widespread in Eurasia and prior to the last two centuries it was "probably not an uncommon visitor" to Britain (Wardhaugh 1983: 80).

a *tapetum lucidum* which reflects light and makes the eyes appear to glow in the dark. The reflection from the eagle owl's eyes is bright orange:

> The brilliant orange eyes are a striking feature of the eagle owl. Referring to the closely related Magellanic eagle owl…, Hudson described these as 'great globes of quivering yellow flame, the black pupils being surrounded by a scintillating crimson light which [throws] out minute yellow sparks into the air' (Wardhaugh 1983: 77).

Whatever animal(s) may have been intended on the mirror, large eyes were its (or their) most prominent feature. In fact the surface of the mirror itself, like the eyes of nocturnal hunters, also reflects light. In Mesoamerican cosmology, the shiny surface of mirrors was explicitly linked with the reflective eyes of the jaguar—like the eagle owl, a top predator in its ecosystem—and both were attributed the ability to see "spirit-essence" and associated with high sociopolitical status and shamanistic practices (Saunders 1990: 164-165, 171).

Similarly, the behavior of the cat and the eagle owl may have metaphorically linked them with mirrors: for example, their predatory behavior might have been associated with high status and this may have been why such animals might have been selected for representation on an elite Iron Age object. Certainly the connection between high status and predatory animals appears in other Temperate European representational contexts, for example, in Early Medieval Scandinavian/Germanic art (Pluskowski 2006: 120).

On the other hand, felines are not among the usual predators depicted in western Temperate Europe—wolves and birds of prey are much more common. Unlike the jaguar in Mesoamerica, there are no felines in Europe at the top of the Temperate European food web. Potential feline models for the Holcombe handle include the domestic cat (*Felis silvestris cattus*), the European wildcat (*F. s. grampia*), and the Eurasian lynx (*Lynx lynx*) (Clutton-Brock 1999: 134; Hetherington et al. 2006), the domestic cat having only arrived in Britain with the Normans, or possibly with the Romans (French et al. 1988: 236). Domestic cats, of course, cohabit with humans.

But owls and cats have mystical connotations as well: Owls have been regarded as a symbol of wisdom, but also of death and even evil (Rowland 1978: 115-116; Saunders 1995: 112). They have been associated with prophetic powers (possibly

because of their keen eyesight and "magically" bright eyes) and with ghosts, due to their nesting in isolated places, including around tombs, and their silent flight through the dark (Rowland 1978: 117; Saunders 1995: 112). Graveyards are often viewed as liminal spaces, which may also contribute to the notion that owls possess supernatural powers. Cats were regarded as symbols of the occult and of evil in Medieval Europe, although this tradition may not extend to pre-Christian times. Again like owls, domestic cats may be viewed as creatures that inhabit liminal zones in that they live with humans but are never entirely under our command. Furthermore, a "northern preclusion for the ritualistic treatment of wild animals," as opposed to domestic ones, has been noted (ibid: 121).

Yet the representation of a domestic animal, such as a cat, on a mirror is not impossible. The only mirror handle to unambiguously depict animals, Ingleton (Yorkshire), has two bovine heads flanking the proximal ring where the mirror plate was attached. The "oxen" (Joy 2010: 126, 154) have delicately defined muzzles and clearly modeled horns, but no eyes or ears. All that remains of the plate of the Ingleton mirror are fragments still embedded within the handle, but it appears to have been made of iron. (Sadly, nothing is known about the context of the Ingleton mirror [Joy pers. comm.].)

What might the image on the Holcombe mirror handle tell us about the meanings and uses of mirrors in the Late pre-Roman Iron Age? The theme of liminality stands out: both cats and owls have a tendency to inhabit liminal zones, while the reflected world of mirrors is, in a sense, itself a liminal space. It may be no coincidence that both owls and mirrors have been linked with prophecy in European folklore, and owls, cats, and mirrors have all been linked with magical practices. Most of all, one must not overlook the ambiguity of the Holcombe mirror's design: in addition to the putative cat and owl faces, it is also possible to see the mount as composed of two creatures in profile, because of its symmetrical design; in this case, the two halves of the cat's nose or owl's beak become the beaks of two birds of prey; or alternatively, the ears could become the upturned bills of two ducks. And it is still possible that the design was not meant to be any animal(s) at all—or, it may have been intended to represent all of them. The artist who created the mirror could not have been unaware of the effects of light upon the three dimensional surface of the handle mount. The two-dimensional engraved design on the mirror plate is

also full of shapes that seem to hover on the periphery of recognition, while the trumpet shapes enclosed within the terminal ring of the handle seem like staring eyes. Such ambiguities are frequent in the art of the La Tène period, and indeed, puzzlement might have been exactly what the artist intended. During the Iron Age, the mirror could only have been viewed in daylight or firelight, and the latter would create moving lights and shadows that would further enhance the shape-changing effects of the face. What the Holcombe mirror illustrates is the extraordinary versatility and potential for multivalent meaningful expression to be found within a relatively small vocabulary of shapes, such as trumpets, circles, and semi-lunates.

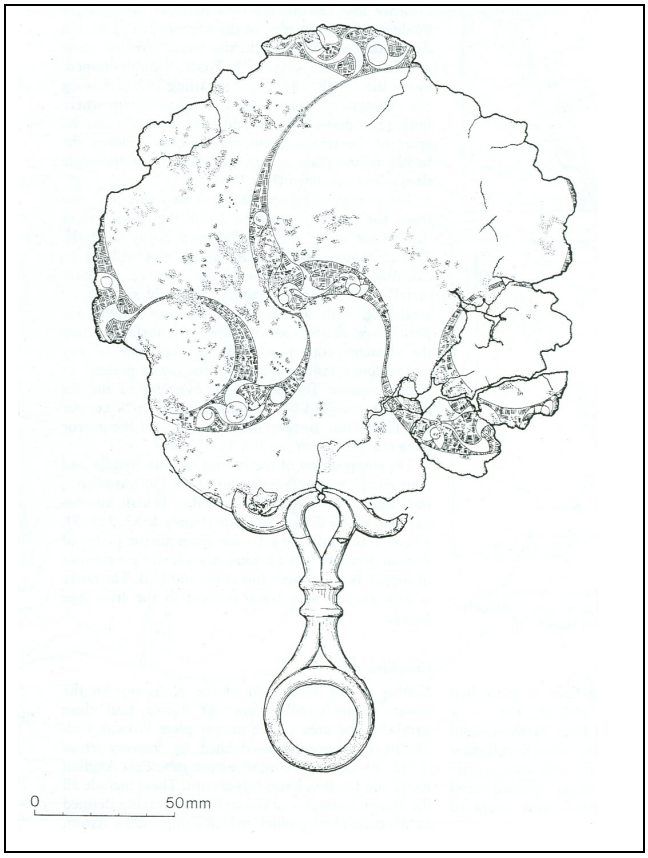

Figure 34. The Latchmere Green mirror (Fulford and Creighton 1998).

Latchmere Green (1st century AD)

A mirror was discovered by a metal detectorist in 1994 on Latchmere Green, near Silchester, Hampshire, England (Fulford and Creighton 1998: 331). The findspot lies on the south slope of a low hill, at the edge of a Roman settlement that developed around the junction of the roads from Roman Silchester—which was itself built over the Late Iron Age hillfort of Calleva Atrebatum—to Winchester and Chichester (ibid). Fulford and Creighton argue that, "even though the location [of the burial] is some 2 km south of the nucleated heart of *Calleva* which underlies the Roman town, it is appropriate to consider it as part of the development of the territorial *oppidum* as a whole, and of the processes by which that development took place" (ibid: 340; italics original).

Similarly, although the details of the Iron Age-to-Roman settlement at Latchmere Green remain unknown (at least as of the time of Fulford and Creighton's publication), "its influence may have been such as to effect the course of the roads to Chichester and Winchester which meet there, just outside the limits of the putative *territorium* of *Calleva*" (ibid).

The authors note that, although at Calleva itself, Iron Age occupation seems to have been continuous with Roman occupation and settlement, the same cannot be said for the territory surrounding the oppidum, to a radius of about 2 km from the center (ibid). This, they point out, is distinct from the evolution of other southeastern Iron Age centers/oppida, e.g., Verulamium and Camulodunum, where a more dispersed yet more continuous settlement pattern is evident (ibid: 340-341). For some reason, post-Conquest settlement at Calleva seems to have been concentrated within the oppidum itself.

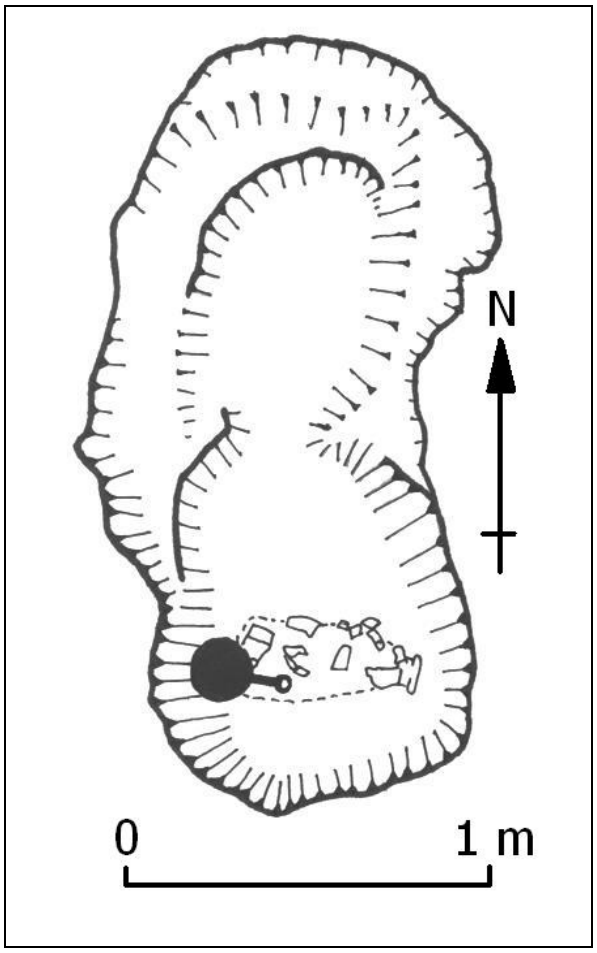

Figure 35. The Latchmere Green burial (after Fulford and Creighton 1998 and Joy 2010).

Upon excavation of the site, archaeologists discovered a Late Iron Age pedestal jar lying on its side in a waisted pit filled with clay loam; cremated bone was found inside and around the mouth of the jar (ibid). In addition to the human bone, cremated pig bone was also present (ibid: 338). Fulford and Creighton report that "The hole dug to recover the mirror suggested that the latter had been originally located to cover the mouth of the jar" (ibid: 331).

In addition to cremated bone, the jar contained the fragmentary remains of two large iron fibulae, their total lengths

estimated at 90-99 mm and 82-91 mm respectively (ibid: 336). Comparable brooches from Britain have been dated to *ca*. 10 BC-AD 40 (ibid). The fabric of the ceramic jar is similar to vessels dated *ca*. AD 5-45, although it appears less frequently as early as the late first century BC (ibid: 337).

Only a small amount of human bone was present—465 g, whereas the average weight of a cremated adult human body is around 3000 g—yet "the indications were that the bone came from two individuals, an adult and a young child" (ibid: 338). The adult was likely aged over 30 years at death, while the child was less than five but no longer an infant (ibid). It was not possible to determine the sex of either individual (ibid: 339). Although two individuals were present in the burial, Fulford and Creighton note that burials with mirrors are more often isolated, as opposed to located within cemeteries (although exceptions do exist, such as Stanway and King Harry Lane) (ibid: 339).

The circumference of the mirror has been subject to corrosion so it is not possible to establish the circumference of the mirror plate (ibid: 331). The design on the mirror is unusual in the sense that it leaves much larger negative (i.e., unengraved) spaces than in most designs. The infilled areas are engraved with basketry hatching. Like many of the Late Iron Age mirror handles, the Latchmere Green handle has loops at both proximal and distal ends; the proximal loop, however, is tear-shaped and smaller than the round, distal one. In addition, there is a waisted molding at the center of the handle which resembles that seen on so-called baluster or bar handles. Neither the shape of the handle and the decoration of the plate have any close parallels within the Late Iron Age mirror group (ibid: 333).

Pegsdon (Shillington) (1st century BC-AD 1st century)

Like most mirror discoveries of the past decade, the Pegsdon (sometimes called "Shillington") mirror was found by metal detectorists, in November 2000 at Pegsdon, Shillington parish, Bedfordshire, England (Burleigh et al 2007: 109). At this site, lying at the foot of the Chiltern Hills, remains of a Late Iron Age to Roman settlement have been unearthed (ibid). Close to the settlement, at the top of the hills, are a Neolithic long barrow and a Bronze Age round barrow, as well as a natural chalk spur which "looks like

a gigantic round burial mound" (ibid: 109-111). Pegsdon is about 29 km, or a few hours' walk, from the Iron Age/Roman site of Verulamium (where Roman mirrors were found in burials at King Harry Lane). Aerial photographs show a number of enclosures in the area, one of which, a "massive ditched sub-rectangular" enclosure, "could conceivably be an Iron Age/Romano-British cult sanctuary" (ibid: 134-135). Burleigh and Megaw write:

> It is tempting to suggest that the prehistoric burial mounds and the natural feature, Knocking Hoe, which itself resembles a giant round barrow, may have been involved in whatever rites and rituals were associated with the cult sanctuary sited below at the foot of the scarp. It may be suggested that the dry valley and the stream flowing from its mouth may have been a link between the ancient mounds on the top of the scarp and the [putative] shrine or temple in the settlement….The Pegsdon mirror could be a special marker of the area's continuing cult significance (ibid: 135).

At any rate, the local landscape was clearly the site of various ritual activities.

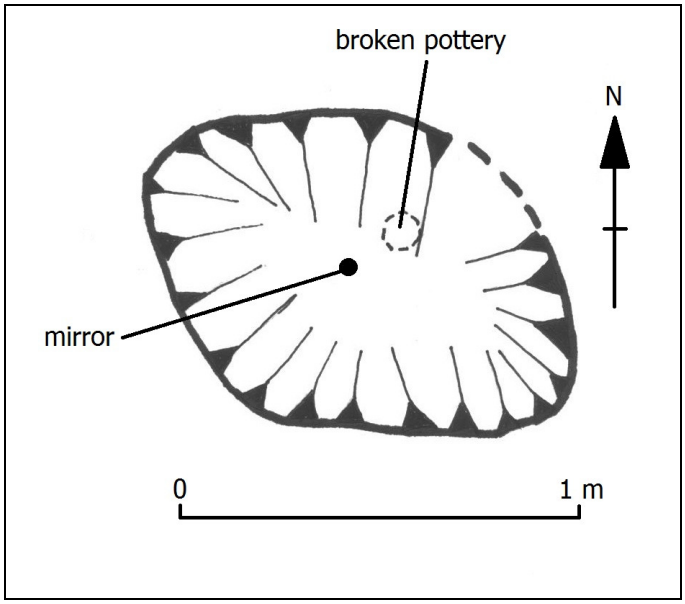

Figure 36. Plan of the Pegsdon burial (after Burleigh et al 2007). Note that the diameter of the filled circle and the dotted line circle in the drawing are not intended to represent the dimensions of the actual artifacts; this information is not included in the original drawing.

In 1998, two metal detectorists discovered a hoard of 127 Roman gold coins in a pit on the settlement site, with a *terminus ante quem* of the early AD 80s; nearby were a number of separate deposits totaling 18 Roman silver *denarii*, minted during a period spanning a century between the mid-1st century BC to AD 128 (ibid: 111).

The same metal detectorists found the mirror two years later. It was accompanied by a silver *Knotenfibel* brooch and fragments of ceramics (ibid: 113-114). When the findspot was excavated the following year, archaeologists found a small patch of original, undisturbed fill which contained four more potsherds and a single fragment of calcined bone, presumed to be human (ibid: 114). The archaeologists concluded that the artifacts and bone fragment all

proceeded from a single Iron Age cremation burial, but it had been badly truncated by ploughing. The mirror was lying on the chalk base of the grave pit, with the reflective side up, while the brooch and pot sherds were found in the soil above (ibid: 114-120) (Fig. 36).

Originally, the grave must have contained at least two ceramic vessels, a Late Iron Age pedestal urn and a flat-based jar (ibid: 120). The fibula was evidently one of a pair, indicated by a ring with pendant loops passed through the spring; the fibulae would have been linked by a connecting chain, a Roman fashion, according to Burleigh and Megaw (ibid: 120, 131). Joy mentions in passing that the fibula was fastened through the terminal loop of the mirror's handle (Joy 2010: 44).

Mansel Spratling (in Burleigh et al 2007) states that the measurements of the Pegsdon mirror correspond exactly to Roman measurements, to wit, 8 *unciae* (198.5 mm, or 2/3 of the Roman *pes*) in width, and 16.5 *digiti* (305.25 mm; there were 16 *digiti* to the *pes*) in length (ibid: 128-129). According to Spratling, "The smith must have been in possession of a rule accurately calibrated to Roman measures" (ibid: 129). This is in contrast to the "Celtic foot," 310 mm, derived from a rule found at the oppidum at Manching, which Spratling regards as the "indigenous measure" which would have been used in Britain (ibid). Although there are problems with the assumption that the same units of measure would have been in use both at Manching and in Britain simply because Celtic languages were once spoken in both places, the measurements of the Pegsdon mirror do correspond well with repeating segments of the Roman foot, and Roman rules have been found in southeastern Britain (ibid). Interestingly, the unprovenienced "Oxfordshire" mirror also corresponds to Roman *unciae* and *digiti* (ibid: 130).

Another interesting numerical feature of the mirror is that its engraved design contains 27 "circled tricornes," which appear singly, in pairs, or in triples. There are three triples, two pairs, and 14 singles—that is, three threes, two twos, and 14 (ibid). The number 27—that is, 3 x 3 x 3—appears on other Iron Age objects in Britain, such as Torque D from Snettisham, which has 27 twists, and the Battersea Shield, which has 27 red glass studs (nine studs in three groups); "Three, nine and twenty-seven are favoured numbers in the early literatures of Ireland and Wales," as Spratling points out (ibid).

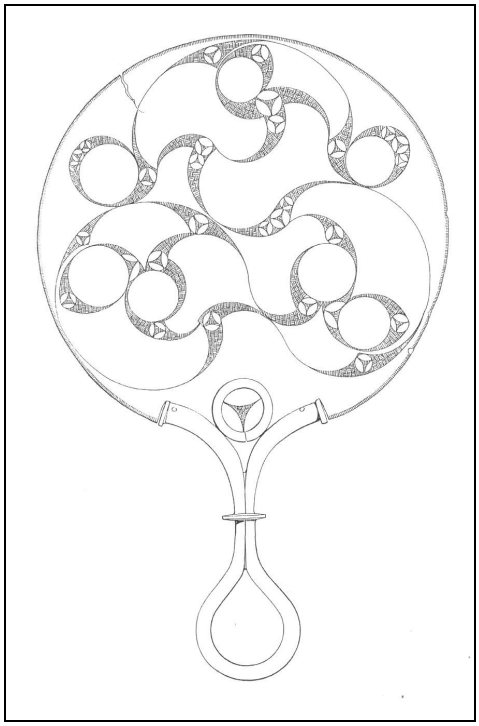

Figure 37. The Pegsdon mirror (Joy 2010: 115).

Pegsdon is one of four mirrors known from Bedfordshire (the others being Old Warden I and the now-lost Old Warden II mirror handle, Bromham, and fragments found in 1998 at the Iron Age/Romano-British settlement at Ruxox, Maulden, Bedfordshire) (ibid: 121, 136-137, notes 13 and 38), indicating that the region was particularly active in whatever activities resulted in mirror deposition. Indeed, the Desborough, Bromham, Old Warden (I and II), Ruxox, Pegsdon, Aston, and Great Chesterford mirrors were all found within an approximately 100 km^2 area (Burleigh and Megaw 2011). The manufacture of the Pegsdon mirror has been cautiously dated to *ca*. 80-20 BC, about the same time the fibula was made (ibid: 133). Pedestal urns were common in southeastern cremation burials between *ca*. 75 BC and AD 10, the likely period of the Pegsdon burial; thus the mirror may have been up to a century old when buried (ibid). This places the Pegsdon burial at roughly the same period as the depositions of Roman coins in the Iron Age/Roman settlement (ibid: 134).

Portesham (1st century AD)

The Portesham mirror was discovered on a farm of the same name by a metal detectorist in 1994, and the associated burial subsequently excavated by Wessex Archaeology (Fitzpatrick 1996: 51). Other artifacts discovered by the metal detectorist suggest that a Roman settlement (perhaps dating back to the Iron Age) lay to the north of the burial (ibid: 51-52). The grave was situated on a south-facing slope with sweeping views of the Dorset coast (ibid: 52). The grave pit was aligned east-west, with the buried individual lying on his/her left side in a flexed position, facing south (ibid: 53).

The skeleton was badly fragmented, especially the skull, but it was possible to determine that the individual was adult (26-45 years old) with rather poor dental health (ibid: 54). Fitzpatrick states that the individual was probably female, but parts of the pelvis were lost, and the skull in very poor condition, so the two best anatomical indicators of sex were not ideally represented (ibid).

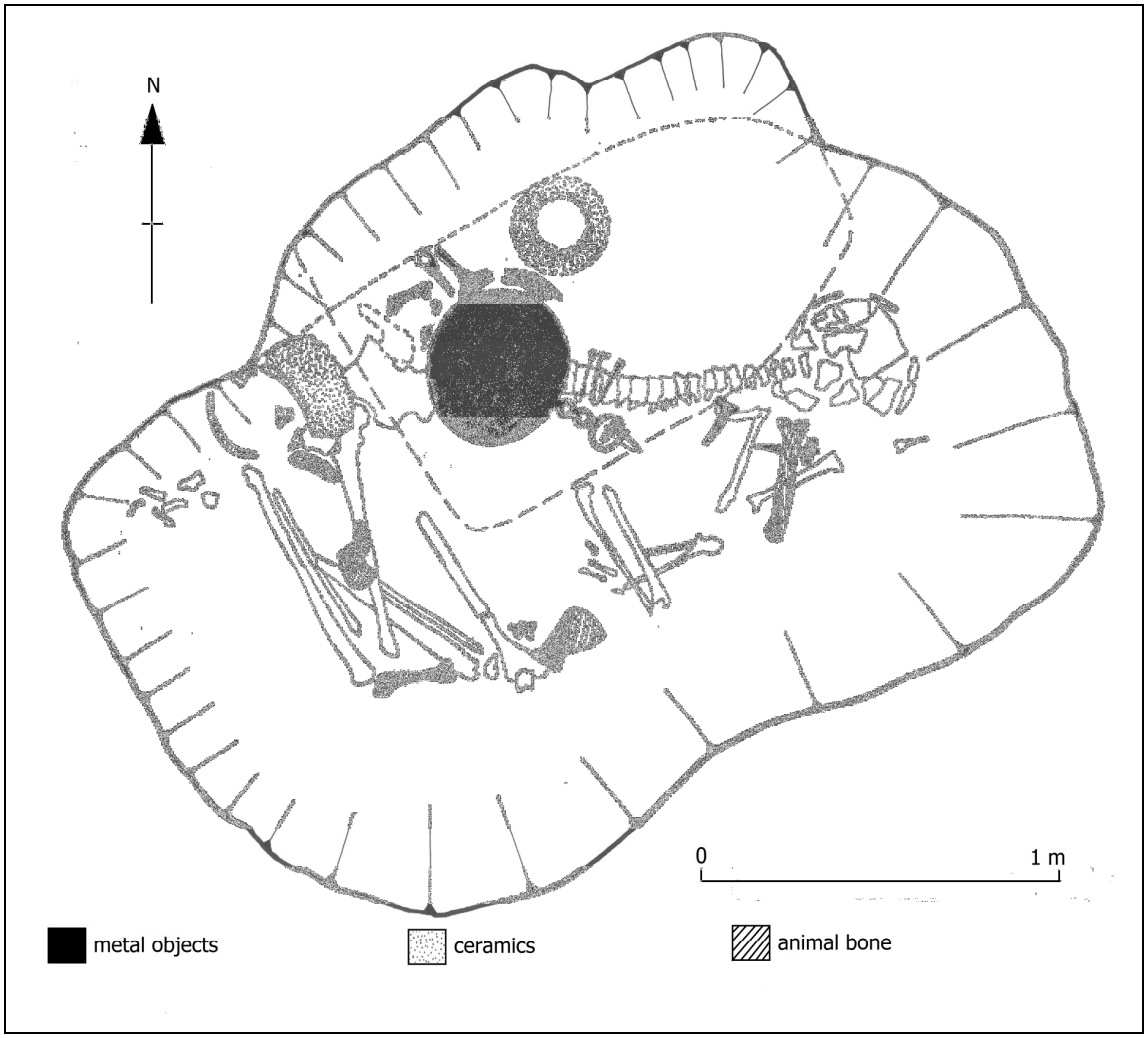

Figure 38. Plan of the Portesham burial (after Fitzpatrick 1996).

The grave goods included a mirror, three ceramic vessels, three bronze fibulae, a toilet set, an iron knife, a bronze strainer, and bones of sheep and pig. Two fibulae were found at the individual's shoulders, presumably decorating and securing clothing, while another was fastened through the terminal loop of the mirror handle (ibid). The *in situ*

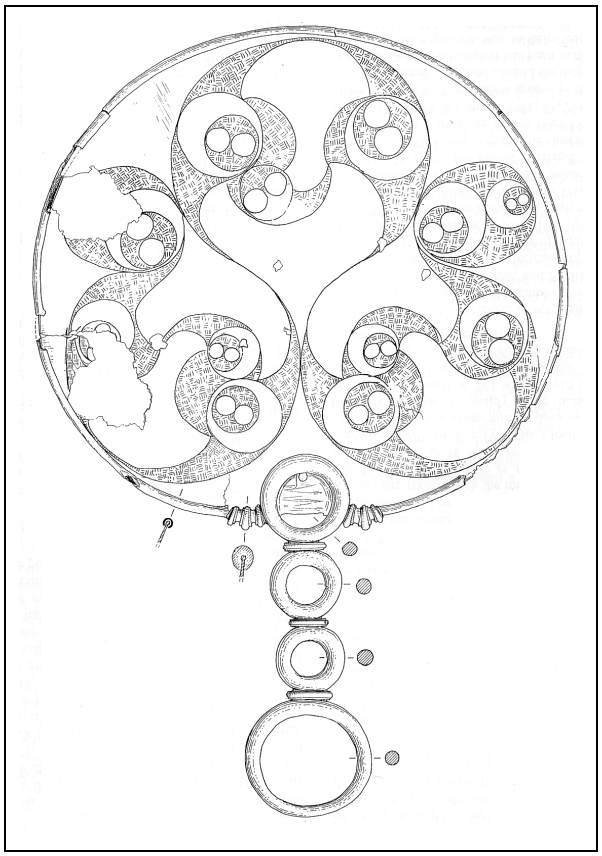

Figure 39. The Portesham mirror (Fitzpatrick 1996).

positions of the animal bones and artifacts were disturbed when the metal detectorist dug a pit to recover the mirror, but through later interviews with him, it was possible to reconstruct the original layout with some confidence (ibid).

Copper staining on the bones indicates that the mirror was originally placed at the individual's waist, or perhaps near the chest, with the reflective side towards the body (ibid). The toilet set was next to the mirror handle at the waist (ibid: 53-54). Iron corrosion products on the mirror suggest that the knife, originally in a sheath, lay near it (ibid: 53). One of the pots had been placed by the deceased's heels/hips, while the other two, along with the strainer, were behind the back (ibid: 38).

It is possible that the toilet set—two tweezers and a *ligula* or ear scoop—were suspended from a belt as a chatelaine, perhaps alongside the mirror (ibid: 56). Such toilet sets are rarely seen prior to the Romano-British period (ibid). Likewise, the strainer is a Romano-British type; Fitzpatrick speculates that the burial thus dates to the 40s AD (ibid: 67). The quantity of metal artifacts makes Portesham an unusually wealthy burial for 1st century Dorset (ibid: 68).

King Harry Lane (1st century AD)

Burials 9, 13, 66, 138, 222, and 325 at the King Harry Lane site, the cemetery associated with a Late Iron Age center and later Roman Verulamium (St. Albans, Hertfordshire, England), contained mirrors. The mirrors are simple cast convex disks

without any decoration, of Roman manufacture (Lloyd-Morgan's Group F), ranging from 70-115 mm in diameter (Stead and Rigby 1989: 103). A simple disk mirror of this type is shown in use on a carved grave marker from Neumagen, Germany (Abegg 1989: 311). King Harry Lane, like Stanway (discussed below), is intriguing because Roman mirrors were found in burials which otherwise appear to belong to an indigenous Iron Age tradition (Stead and Rigby 1989: 103). It is thought the burials post-date the end of the British mirror-burying tradition (Joy 2010: 64-65, 68), but the true end date of the practice is not known.

The graves, all cremations, can be categorized as belonging to the "Aylesford" type (see below). Elsewhere, mirrors have been found in Aylesford burials (e.g., Aston), but those mirrors are of the elaborately decorated native insular type (Stead and Rigby 1989: 103).

The King Harry Lane (KHL) cemetery contained 454 cremations and 17 inhumations, dating between AD 1-60 (ibid: 9). The cemetery lies south of Verulamium along the Roman road to Silchester (ibid: 2). The road, however, appears to have been built after the cemetery, ca. AD 70; its construction may have put an end to the burials. Verulamium was likely founded around AD 50 and lasted until the mid-2nd century (ibid: 11); thus the cemetery predates the Roman settlement and can safely be considered Iron Age. Stead and Rigby (1989: 11) describe the burials as "not impressive." The cemetery features groups of burials enclosed by ditches, much like the contemporary cemetery at Stanway (see below), apparently with a central burial surrounded by other smaller graves, and is thought to have served a community of perhaps 200 people, probably a small subgroup of the total population resident at Verulamium (ibid: 80).

KHL 9. This burial contained seven ceramic vessels, two brass brooches, two glass game pieces, a bone "handle," some nails, and the mirror. Six of the vessels were grouped at one end of the grave, while the fibulae, mirror, and remaining pot were clustered on the opposite side. The cremated remains of an adult were piled in the center.

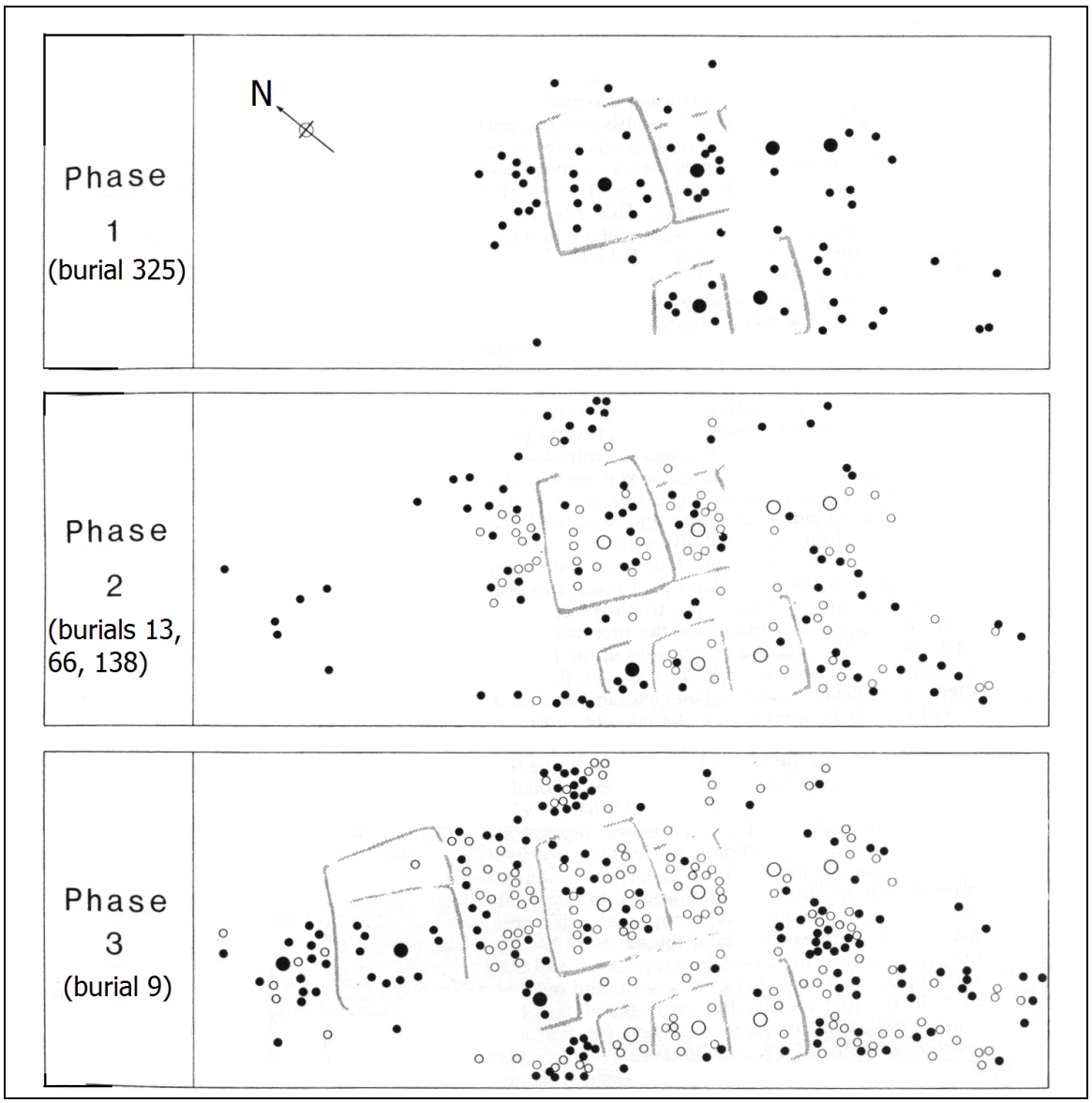

Figure 40. The King Harry Lane cemetery, showing burials and enclosure ditches (after Stead and Rigby 1989: 85).

The vessels included a platter, two bowls, two jars, and two *lagenae*. The platter, one cup, and one lagena were made in northern Gaul, while the other lagena was locally manufactured (the other vessels' provenience is not specified) (Stead and Rigby 1989: 274, 276). This burial was identified as central in its group (ibid: 80). It is among the wealthier burials at the site—only 3% of inurned burials had more than five pots (ibid: 83). This burial is dated to ca. AD 40-60, and corresponds to Stead and Rigby's Phase 3 (ibid: 84).

KHL 13. Here the cremated remains (tentatively assigned to a male) were placed, along with two fibulae (one brass and one iron) and a mirror, inside a lagena (exactly what was inside the lagena is not entirely clear from the site report). In addition there were two other vessels, a cup and a "honeypot." All the ceramics were manufactured in northern Gaul or possibly Lower Germany in the case of the latter two (ibid: 277-278; Joy 2010: 68). This burial is dated ca. AD 30-55, corresponding to Phase 2 (Stead and Rigby 1989: 84). It is noteworthy that exactly the same type of goods—fibulae, a mirror,

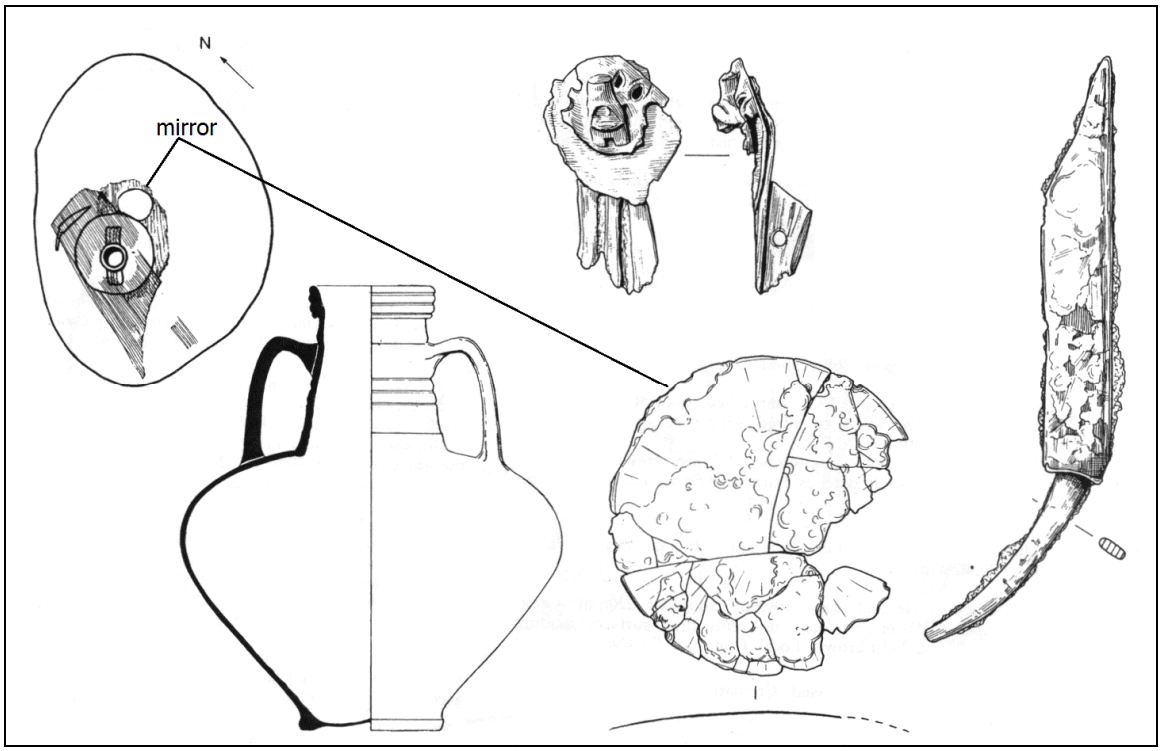

Figure 41. KHL 66 grave goods (after Stead and Rigby 1989: 287). Objects not to scale.

and ceramics—were found with this apparently male individual as have been found in other burials known to belong to females (e.g., Portesham), and others which have been simply attributed to females because of the presence of a mirror, suggests that these goods may not be gendered after all (Fulford and Creighton 1998: 339). Grave 13 is from an early phase at King Harry Lane and may date to *ca*. AD 50-75 (Joy 2010: 68).

KHL 66. Grave 66 contained a single lagena, made in northern Gaul or Lower Germany. The cremated remains of two individuals, one juvenile and one adult, were partially inside and partially outside the vessel. A brass fibula, a knife, and a mirror were placed outside the lagena. The goods and human remains were placed atop a wooden board, while another similar board was laid across the top of the assemblage (Stead and Rigby 1989: 287, 290). Grave 66 is dated ca. AD 30-55 (Phase 2) (ibid: 84).

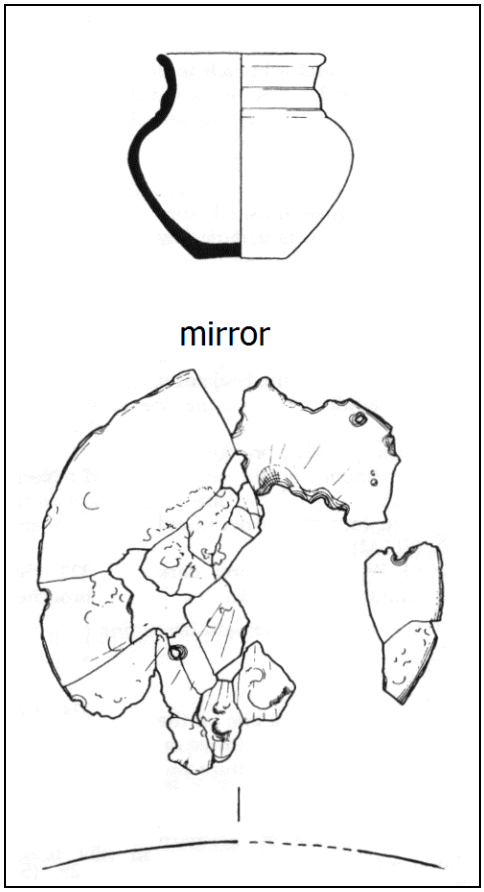

Figure 42. KHL 138 grave goods (after Stead and Rigby 1989: 305). Objects not to scale.

KHL 138. A barrel beaker contained cremated remains, and was accompanied by a jar and a mirror. Both vessels were locally made (ibid: 305, 310). The grave is dated AD 30-55, corresponding to Phase 2 (ibid: 84).

KHL 222. A jar held cremated remains and a mirror, while sherds of another vessel were found adjacent. Both vessels were locally manufactured (ibid: 330). The date of this burial is uncertain.

KHL 325. Two spindle whorls, a copper alloy spoon and copper alloy fibula, iron disc, and cremated remains were piled on the floor of the grave. Next to them was a mirror. In addition the mirror contained seven ceramic vessels, including a platter, cup, three beakers (two of them made in Gaul), and a jar. Except for the Gallic beakers, the pottery was all local (ibid: 365-366). Burial 325 was identified as a central burial in its group, and is among the wealthiest burials at the site (ibid: 80, 83). It is also considered to be one of the earliest, dating no later than AD 10 (Phase 1), and possibly as early as 15 BC (ibid: 83).

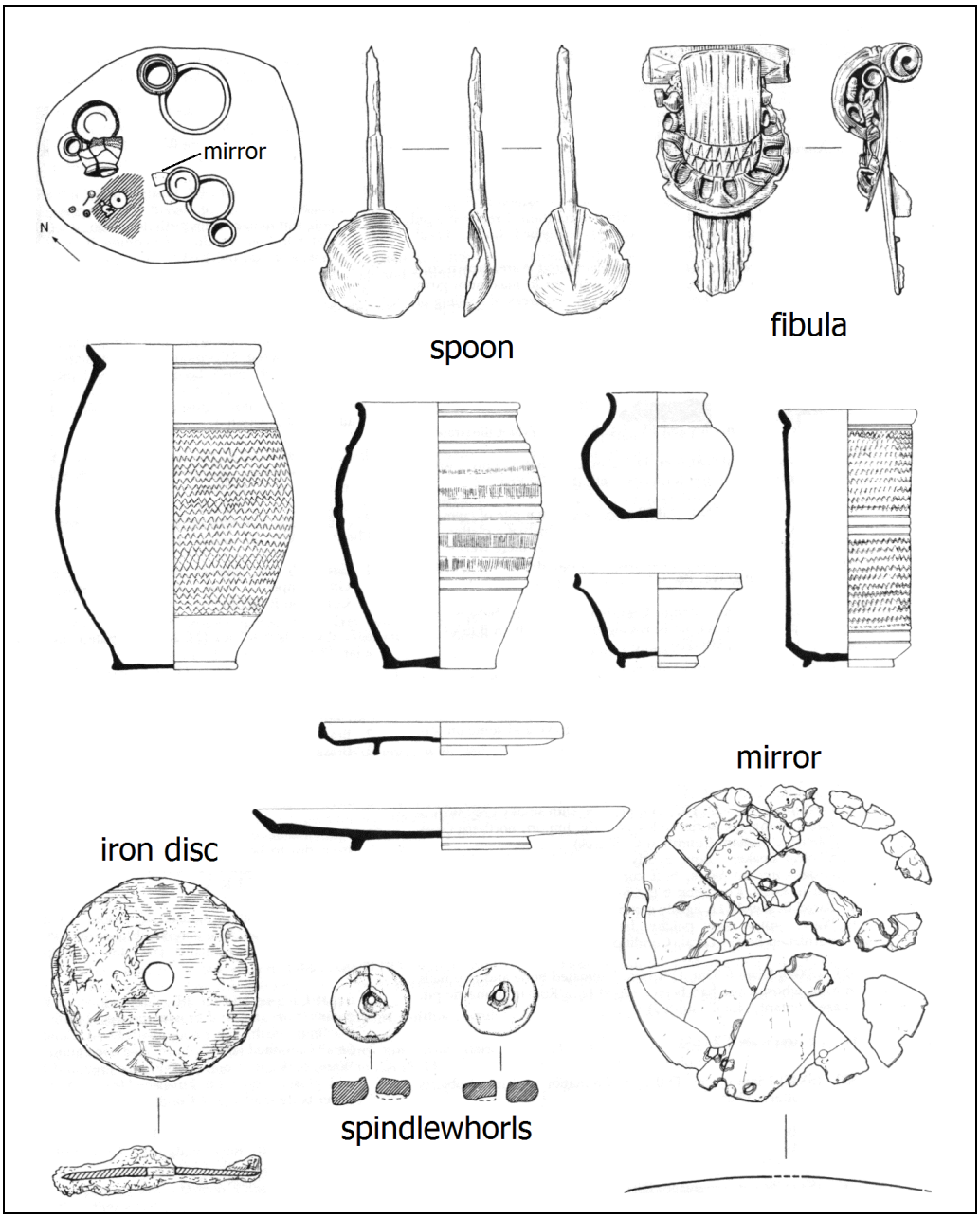

Figure 43. KHL 325 grave goods (after Stead and Rigby 1989: 365). Objects not to scale.

Although mirrors have traditionally been regarded as indicative of feminine gender, the other goods in burials 9, 13, 66, 138, 222, and 325 are apparently not gender-specific (perhaps with the exception of the spindle whorls in Grave 325). The mirrors were made of high tin bronze which would have given a silvery surface and were capable

of taking a high polish, although very brittle (Craddock et al. 1989: 271-272). This is in marked contrast to the golden color preferred by British mirror makers:

> Most Greek and Etruscan mirrors were of a similar composition to the Iron Age British mirrors—a bronze containing approximately 10% of tin which gave a rosy reflection. It seems that in Hellenistic times a silvery reflection came to be preferred, which could be achieved by tinning the surface. By Roman times three main types of mirror alloy were in use: the traditional 10% tin bronze, now usually tinned, and additionally alloys with much more tin and lead. These latter include an alloy with about 20%-23% of tin and a moderate lead content, normally in the region of about 5%-10%, and an alloy with about 20% of lead and either about 20% of tin or much less….Of the KHL mirrors…, those from Iron Age Burials 222 and 13…clearly belong to the second high tin, moderate lead group. The other three belong to the high lead, high tin group—although the lead contents at 13%, 14%, and 16% are rather low (ibid: 272).

Stead and Rigby (1989) propose that these mass-produced Roman mirrors were cheaper and more abundant than the very ornate British mirrors being produced at the same time (Stead and Rigby 1989: 103), and were thus accessible to less wealthy people—certainly the King Harry Lane burials are among the least wealthy mirror burials, and among the least wealthy Aylesford burials generally (ibid: 290). But it may be that Roman mirrors are underrepresented in British burials simply due to poor preservation; the mirrors from King Harry Lane were very thin and cast from brittle metal and were found in a fragmentary state. In that case they may indeed have been accessible for many more people than has been previously realized. Possibly living adjacent to Roman Verulamium made mirrors widely available in the region for the first time, though some of the mirror burials appear to predate the Roman settlement; or alternatively, made it more difficult to obtain mirrors crafted by native artisans. However, sometime after the Roman conquest, mirror burials disappear entirely, suggesting that the plain-but-plentiful Roman mirrors were not accepted as replacements for the elaborate and restricted local ones, at least as far as mortuary contexts are concerned.

On the other hand, as Roman objects, the mirrors from King Harry Lane can be classified as exotics, and one of the characteristics of Aylesford burials is the relative abundance of imported material. It may be that the mirrors were especially sought after for this reason. Indeed,

> …there can be no doubt that cremation became fashionable in England as a result of close contact with the continent, and that contact was a continuing process. Throughout the first half of the first century AD burials on both sides of the English Channel are indistinguishable; in particular, there are identical collections of Gallo-Belgic imports and brooches. Such groups are found not only in north-west France but across Belgium, Champagne, Luxembourg, and the Mosel Valley to the Rhine (ibid: 86).

On this basis we may hypothesize that the conquest resulted in a change in ideology, such that mirrors of any type were no longer seen as appropriate for burial; and/or in a reorganization of social structure, whereby there were no longer any individuals deemed worthy of a mirror burial. St. Albans, having been an important center during the Late Iron Age which then evolved into a major Roman center, is precisely the sort of place where one might expect to find evidence of such social reorganization. The burials at King Harry Lane may indicate individuals—relatively poor to judge from their burials—seizing an opportunity to situate themselves in a rapidly evolving social hierarchy using traditional markers of high status.

The mirrors themselves raise interesting questions about the relationship between their meaning and material—would a mass-produced mirror, entirely lacking in ornamentation, be assigned the same value or power as one which was highly ornamented and deliberately crafted to be completely unique? British mirrors were invariably made from a reddish-golden copper alloy, and some are inset with red inlay made from coral, enamel, or copper cuprite. The choice of color was evidently specific to the object or material to be ornamented, e.g., red seems to have been the favored color for decorating bronze objects in Iron Age Britain (Fitzpatrick 2007: 344-345, 352). The type of Roman mirrors found at King Harry Lane, on the other hand, were cast in a "white" bronze (that is, an alloy containing relatively less copper and having a more silvery color), and were not inlaid at all. This issue of mirrors' materiality inspires further questions about how that material came into being. How much of a mirror's value was derived from the method—perhaps, *pace* Giles (2007) and Giles and Joy (2007), the magic—of its creation? Or could the Roman mirrors, although less visually impressive than their British counterparts, have derived another sort of significance from their association with an exotic and powerful culture? Finally, when and why did mirrors pass out of fashion as status indicators?

Stanway CF115 (1st century AD)

The cemetery at Stanway (Essex, England), located near the hill fort and subsequent Roman town of Camulodunum and the modern city of Colchester, is best known for its "doctor's" grave, a post-conquest cremation burial with medical tools and metal rods possibly used for divination (Crummy et al. 2007). Stanway has justly been considered an important site for understanding how British lifeways changed—or did not—in the years just after the Roman conquest. Although chronologically assigned to the Roman period, the graves at Stanway show that many Iron Age practices continued unabated, while others experienced varying degrees of hybridization with Roman practices—much like the King Harry Lane cemetery, although the Stanway cemetery appears limited to wealthier individuals.

The Stanway site lies on a flat plateau southwest of modern Colchester, and 0.25 km west of the Late Iron Age and Roman *oppidum* of Camulodunum (ibid: 1). Approximately 4 km northeast of Camulodunum is the so-called Lexden Tumulus, a very wealthy grave dated *ca*. 15-10 BC (ibid), and another mirror burial was located at Lexden Grange (the mirror is commonly known as the Colchester mirror). The area around Stanway

> continued to be an important place in the Roman period as is shown by the presence there of a Roman theatre and a Romano-Celtic temple within a monumental portico….Although not falling within the defended area provided by the dyke system [of the hillfort], the high-status nature of the Stanway site suggests that it must have been intimately linked with Camulodunum (ibid).

In the 1930s, aerial photography revealed the existence of two parallel groups of five ditched enclosures—two adjoining enclosures running north-south on the west, and the remaining three conjoined to form a line on the east (ibid) (Fig. 44). The largest enclosure (Enclosure 1) was over 100 m across (ibid: 1). Upon excavation, these enclosures were found to be a funerary monument (ibid).

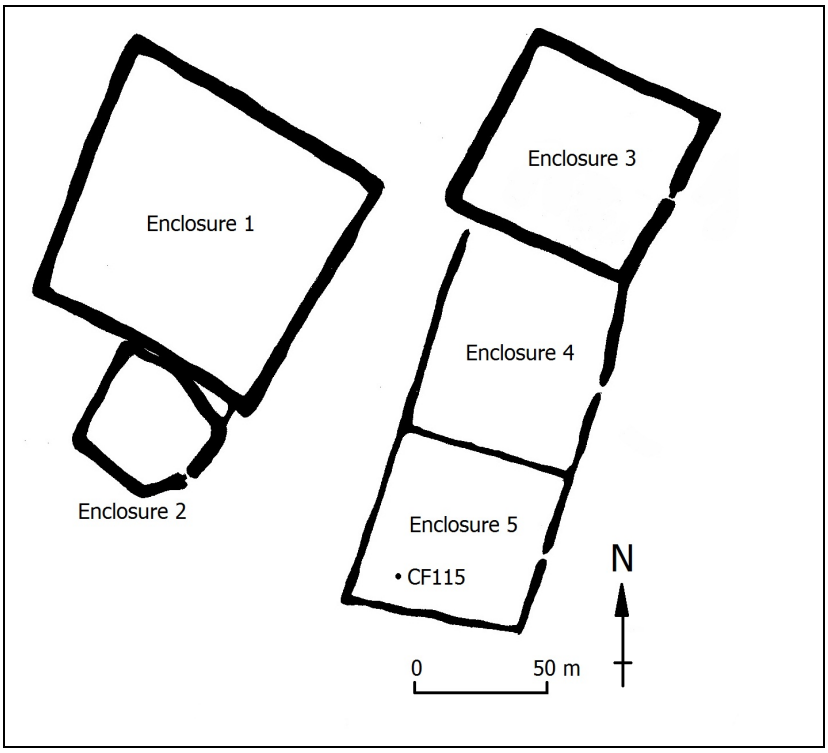

Figure 44. The Stanway burial enclosures, *ca*. AD 40-60 (after Crummy et al. 2007).

Enclosure 2 was the site of a Middle Iron Age farmstead, and various domestic items such as loomweights have been found scattered in the area; in addition, a deposit of two currency bars was discovered in the farm's enclosure ditch (ibid: 8-9). During the second half of the first century BC, Enclosure 1 was laid out, apparently just for mortuary purposes (ibid: 10-11).

Finally, Enclosures 3, 4, and 5 were created around the mid-first century AD; each of these enclosures seems to have had its own pyre and a single wooden burial chamber (ibid: 11). The grave goods had been smashed prior to deposition, and only a portion of the resulting fragments placed in the chamber; there were also a total of six secondary burials in these enclosures (ibid). Enclosures 4 and 5 were apparently laid out at the same time, but after Enclosure 3 (ibid). The enclosure ditches contained hundreds of pot sherds, and Enclosure 5 may have contained an above ground building (ibid). Finally, there was an unenclosed burial area to the southeast of the enclosures (ibid: 13).

The context for burial CF115 is poor, since several of the goods—a pot and pot sherds, some glass and metal—were recovered from the spoil produced during machine excavation of burial Enclosure 5 (ibid: 260), the southernmost of the three eastern enclosures (ibid: 4, Fig. 45). Only a small amount of cremated bone could be recovered,

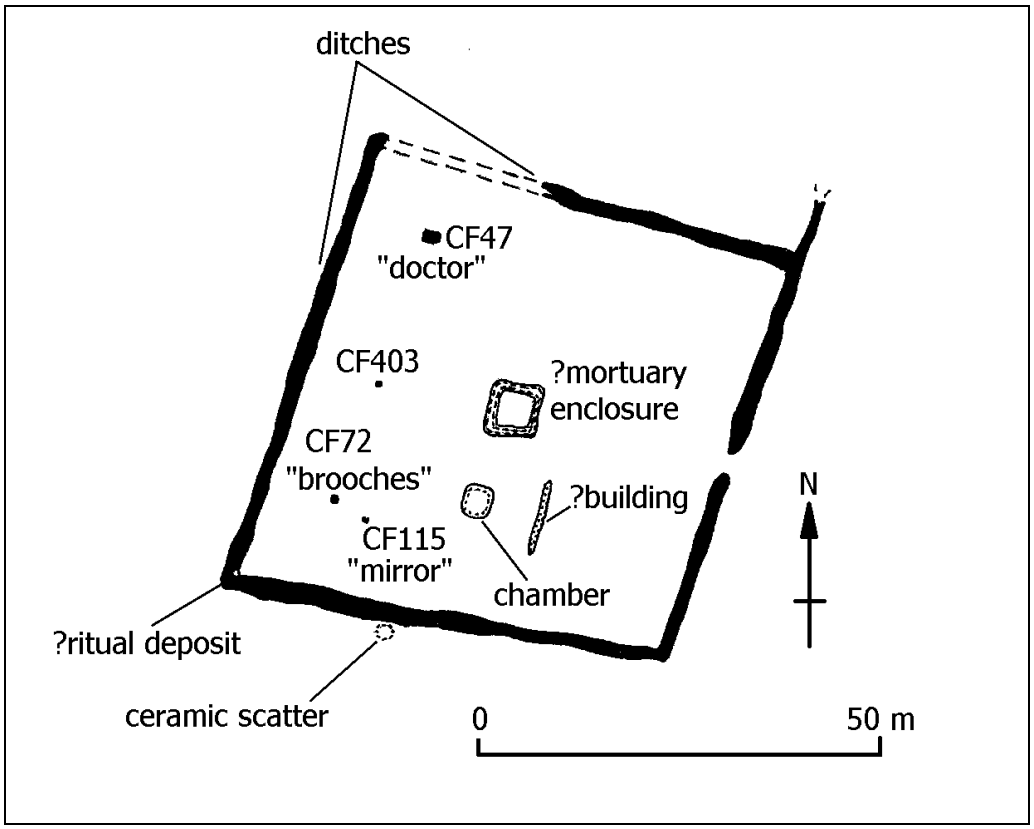

Figure 45. Plan of Stanway Enclosure 5 *ca*. AD 40-60 (after Crummy et al 2007).

and no burial pit could be identified after machining (ibid). The full assemblage of grave goods included a *terra nigra* flanged cup (the only complete item), a two-handled ceramic flagon (*lagena*) imported from Gaul, a tubular glass unguent bottle, a fragment of a mirror, and some unidentifiable metal objects—a piece of an iron shank, a copper-alloy strip, and two fragments of iron sheeting (ibid). None of the items is unusual or particularly distinctive, nor allows close dating of the burial; Crummy et al. place the deposition around *ca*. AD 43-75 (ibid: 261). Due to the presence of the mirror, the authors conclude that the occupant of the burial was a woman (ibid: 260). Enclosure 5 also contained the "Doctor's burial" and the so-called "Brooches burial" (ibid: 83).

The mirror is of Roman manufacture, of a low-tin, high-lead bronze which had been tinned on the surface (ibid: 260). The earliest Roman mirrors in Britain are concentrated in the southeast around Colchester, and it has been suggested that Colchester was the point of entry for mirrors made at workshops around Nijmegen in the Netherlands (ibid: 260-261). Essex was one of the richest regions in Britain in terms of Iron Age mirrors, two of which were found at Colchester; yet here at Stanway, a much plainer Roman mirror was found in an elite burial ground. Possibly the increase in the number of mirrors available which followed the Roman conquest enabled people to acquire mirrors who previously had not been able to own them.

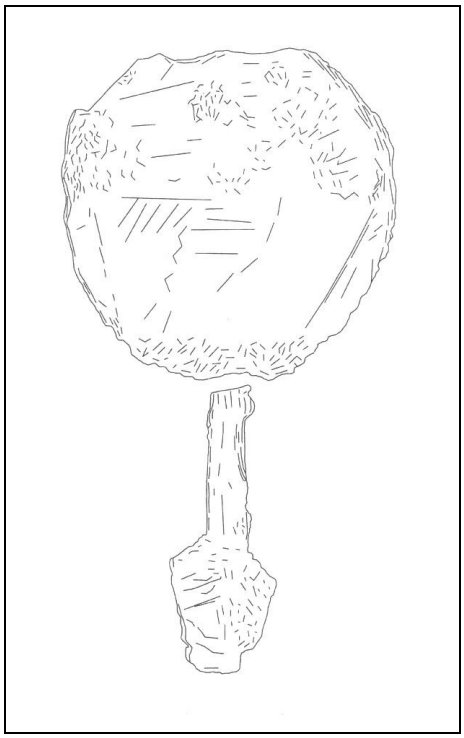

Figure 46. The Lambay Island mirror (Joy 2010: 108).

Lambay Island (AD 60-90)

In 1927, a series of burials was discovered on Lambay Island, off the coast of Co. Dublin, Ireland (MacAlister 1929: 240). The deceased were inhumed in flexed position beneath the sand on the shore of Lambay (ibid). Unfortunately, the grave goods were removed by laborers working on the harbor, although they were later donated to a museum, so the context of the finds is poor (ibid). The objects included stone tools, pottery sherds, part of a bronze shield and scabbard mounts, an arm ring, three fibulae "of Roman provincial type" and one of "Rhenish provincial military type," fragments of an iron sword, a bronze neckring, and an iron mirror (ibid: 240-244; Rynne 1976: 238). The mirror is described as "of the ordinary classical type," with a lateral handle which was broken off, and undecorated (MacAlister 1929: 244). While the stone tools turned out to be Neolithic and/or Bronze Age and probably from a settlement, the metal objects are late Iron Age/Roman period and were certainly grave goods (ibid: 245). Later, a piece of ivory which may or may not have been part of

the mirror handle was found (Rynne 1976: 234). Rynne (1976: 241) proposes a date of *ca*. AD 60-90 based on the fibulae and the neckring. Based on conversation with the laborers who discovered the burial(s), the finds were marked on an estate map, which states that the "shield, sword and ornaments" were "found under [an] iron plate"—perhaps the mirror plate (ibid). The bronze neckring has parallels in northern Britain (ibid: 239), which is also where most of the iron mirrors have been found, but flexed burials are more common in southwestern Britain. If the mirror and sword come from a single burial, it would be one of the few where both a mirror and weapons were among the grave goods. Rynne concludes that this was a warrior's burial, but there is now sufficient evidence to problematize that assumption (e.g., the burials at Bryher and Beverley).

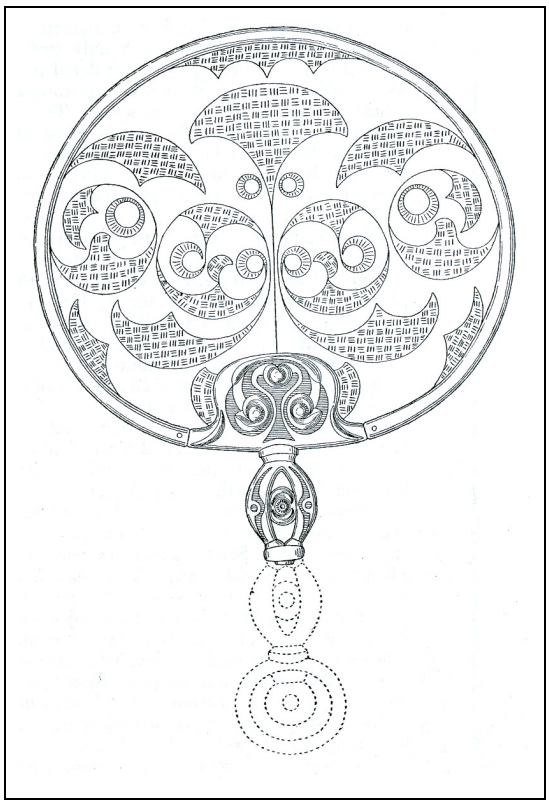

Figure 47. The Nijmegen mirror (Fox and Pollard 1973).

Nijmegen (late 1st century-early 2nd century AD)

The Nijmegen (the Netherlands) mirror was found in a "Roman" cremation burial (Onder Hees No. 29) along with a blue-green handled glass urn in 1926-1927 (Dunning 1928; Joy 2010: 70; Spratling 1972). The Onder Hees cemetery lies outside the Roman fortress of Noviomagus (Nijmegen) (Joy 2010: 70). The glass vessel is a type common in the Rhineland, but cannot be dated more precisely than the 1st-2nd centuries AD (ibid: 132). The mirror, which is clearly a member of the British Late Iron Age series, appears to have already been old when it was deposited (ibid). According to Joy's analysis of British mirror design composition, the Nijmegen mirror does not conform to the usual pattern, although it does use the same

shapes (ibid: 35). It may have been created some time after the other British mirrors (ibid), or perhaps was actually created in The Netherlands by someone who had seen British mirrors but did not understand the rules governing design layout. Like the Birdlip mirror handle, the Nijmegen handle is inlaid with red enamel.

Chettle (Chettle Park) (1st-2nd century AD)

The Chettle site was discovered by metal detectorists in 2003 and subsequently excavated by Wessex Archaeology, but its exact nature remains in doubt. If a burial, it was probably a cremation, and would have been of a type very rare in Dorset; yet as a hoard it would be even rarer (Fitzpatrick pers. comm.). The Chettle assemblage is more typical of burials from southeastern England than from the Dorset area; however, although hoards of metalwork are well known in Britain, no other group contains glass objects (ibid). Furthermore, the deposit was not made in a watery place, as is common for hoards of metalwork. Fitzpatrick suggests a date of *ca*. AD 70-125 for the group (ibid).

The Chettle finds appear to have all come from a single pit, and include a bronze ewer and *patera* set, a spouted bronze bowl with strainer, inlaid with red glass or enamel, two small shallow bronze bowls or platters, a transparent blue-green glass bottle, a blue glass jar, and the plate from an Iron Age mirror with edge binding (ibid). The mirror bronze platters had been stood on their rims facing the glass bottle, which had been placed on the base of the pit (ibid). The glass bottle, which had a single handle (Isings form 51) was particularly popular after AD 75, and was occasionally used as a container for cremated remains, but no trace of human bone has yet been found at Chettle (ibid). Perhaps the Chettle assemblage should be considered a cenotaph. Joy (2010: 130) gives a date of *ca*. AD 70-100 based on the glass bottle.

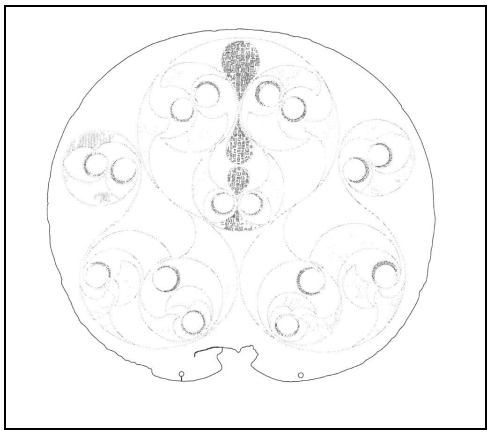

Figure 48. The Chettle mirror (Joy 2010: 97).

Stoneyford (1st-2nd century AD)

Even though "It is almost an article of faith for most Irish people that the Romans never came to Ireland," the Stoneyford burial (Co. Kilkenny, Ireland) contains Roman artifacts (Bourke 1989: 56). The presence of a Roman burial in Ireland is taken to mean that not only was there a Roman person living there, but a sufficiently large community of Romans to bury the person according to Roman funerary customs (ibid). However, Late Iron Age funerary customs in Britain share several characteristics with Roman ones: for example, cremation, the presence of an urn, personal ornaments, and mirrors. In putative "Iron Age" burials, cremated remains may or may not be placed inside the vessel, whereas in "Roman" burials, the urn contains the remains. In addition, "Iron Age" burials usually contain some bones from pig or sheep (presumably food offerings). "Roman" burials are more likely to contain glass vessels, since these were common in the Roman world, but not in Iron Age Britain until after the Conquest.

It is clear therefore that distinguishing between "Iron Age" and "Roman" burials in first century AD Britain is very difficult. A burial such as Stoneyford, while certainly not typical of Irish burials of the time, can thus be considered as much British as Roman. The grave goods included a transparent green glass urn, a glass lachrymatory, and a mirror (ibid). The mirror, a simple convex high-tin bronze disc of Roman type, was used as a lid for the urn (ibid). The glass vessels had non-funerary uses in Roman cultural contexts, for example, the "urn" could also be a "household jar" (ibid). Bourke reports that Stoneyford "is typical of the Roman middle-class burial rite of the first two centuries AD….The standard burial form 'accompanied by a few inexpensive grave goods' and 'enclosed in a box of stone slabs' has been described by Toynbee" (ibid: 56-57).

On the other hand, the burial was located in a *ráth* (an indigenous Irish earthen ringfort) (ibid: 56); which is to say, it was sited near a place of significance to local Irish people, and not according to Roman practice, which would put the burial in a tomb along a roadside. Furthermore, the burial was discovered in 1852, and its description, in a scrapbook belonging to Edward Clibborn of the Royal Irish Academy, merely states that it was "protected by stones," not that it was encased in a stone cist (ibid). It may thus not accord perfectly with Roman customs.

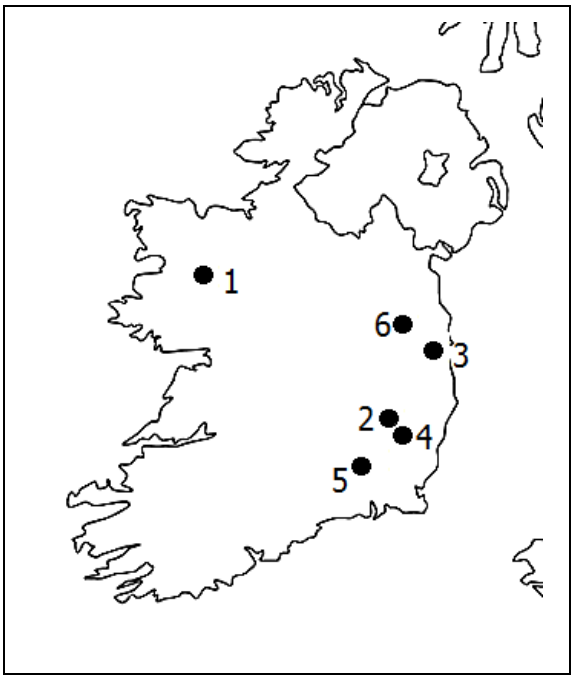

Figure 49. Distribution of sites with Roman artifacts in Ireland. Dots indicate sites mentioned in the text. 1. Clogher, 2. Dun Ailinne, 3. Drumanagh, 4. Rathgall, 5. Stoneyford, 6. Tara

Mass-produced Roman artifacts have been recovered from other sites in Ireland, such as Tara (Co. Meath), Rathgall (Co. Wicklow), the Dun Ailinne (Co. Kildare) and Clogher (Co. Mayo) hillforts, and the promontory fort of Drumanagh (Co. Dublin) (ibid; Warner 1996: n.p.). The presence of Roman artifacts at Stoneyford, therefore, is not greatly to be marveled at; it is, rather, the possibility that a Roman community were performing Roman mortuary customs which provokes surprise. Roman and Irish artifacts seem to be mutually exclusive in their distributions (Warner 1996), although clearly, Roman objects do overlap with Irish settlement and fortified sites. As regards a possible Roman presence in southeastern Ireland,

> From the archaeology alone we would infer substantial intrusions into the South East around the beginning of the 1st century AD, an inference supported by the fact that tribal names recorded by Ptolemy in the early 2nd century are identical to the names of tribes in Gaul and Britain. Furthermore, the early medieval peoples of the area had a strong tradition of a British origin, as well as using Roman and British loan-words in their literature and place-names (ibid).

Perhaps Stoneyford should be considered as much a British burial as a Roman one.

Wederath (late 1st-2nd century AD)

The Wederath cemetery (Rhineland-Pfalz, Germany), located in the erstwhile Roman province of Gallia Belgica, was in use for centuries, allowing archaeologists to observe changes in mortuary practices in a single community over time (Haffner 1989). Grave 2370 is a cremation; a coin from the reign of Domitian (minted AD 77/78) provides a *terminus post quem* for the burial more than a century after the Roman conquest (Abegg 1989: 302). However, the contents of Grave 2370 are consistent with local Iron Age traditions.

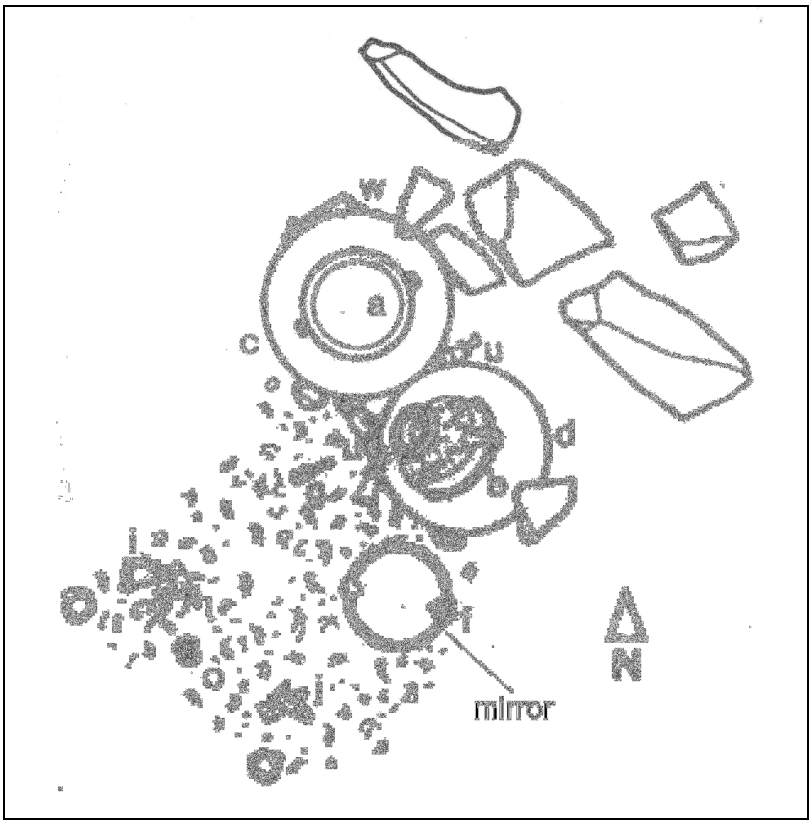

Figure 50. Plan of the Wederath 2370 burial (after Haffner 1989).

Wederath 2370 represents an interesting mix of Roman and Iron Age characteristics, which is perhaps unsurprising given its location in space and time. The large quantity of grave goods, including ceramic vessels and fibulae, corresponds to

burial practices seen in pre-Roman times; on the other hand, some of the goods are Mediterranean in origin. Among the grave goods were two double-handled footed cups decorated with foliate designs in relief, a ceramic jar and single-handled pitcher, a glass flask, five bronze fibulae (two attached to one another by a bronze chain), three bronze rings, four Roman coins from the reigns of Tiberius, Vespasian, and Domitian, a fragment of textile netting, fifteen iron nails, and, next to a small box containing the cremated remains, a bronze hinged mirror (*Klappspiegel*) (ibid: 300-303).

The majority of Roman clasp mirrors were made in southern France (ibid: 309). Such mirrors have been found in burials along the Danube, Rhine, and in Britain, even at Nijmegen and Colchester, where elaborate British-made mirrors of generally similar date have also been found; but the mirror from Grave 2370 is the only one found at the Wederath cemetery (ibid: 305, 309). This suggests that mirrors were quite limited in their distribution intra-regionally, but that their currency as indicators of high status was widely recognized inter-regionally.

Roman-period votive figurines of Venus, found at various sites throughout northwestern Europe, show the goddess holding a clasp mirror; these figurines are a syncretic element in temperate European religion, since they are Mediterranean in style, but were deposited in watery places according to typical local pre-Roman ritual practice (ibid: 312). In similar fashion, Wederath 2370 manifests some of the social changes occurring around the time of the Roman conquest in Western Europe: while the burial continues indigenous Iron Age practices, the identity of the individual was expressed through exotic goods from the Roman world.

VOTIVE DEPOSITS

Several mirrors or mirror parts have been recovered from watery contexts and appear to have been votive deposits. In Temperate Europe, these finds nearly all come from Britain and Ireland.

There is much controversy surrounding the recognition and understanding of ritual behavior in the archaeological record, including votive deposits. A votive deposit is a deposition of goods without an obvious economic function. They are difficult to evaluate because whatever system of beliefs underlay the activity is long gone, and therefore the activity can appear illogical. In Temperate Europe, the deposition of metalwork in watery places (such as bogs or rivers) was a long standing tradition, which may have its echo in the custom of throwing coins into fountains. A famous example is the La Tène site in Switzerland, where numerous swords, spearheads, and other metal objects were apparently thrown into Lake Neuchâtel. The objects presumably could have functioned in everyday life, so their placement in the lake suggests that a new function, one not fully understood by today's archaeologists, was intended for them.

For the purposes of this analysis, a still-functional mirror or mirrors buried in a pit or placed in a watery place are candidates for votive deposits. In some cases, accompanying goods lend credence to the idea that a deposit was structured by ritual activity.

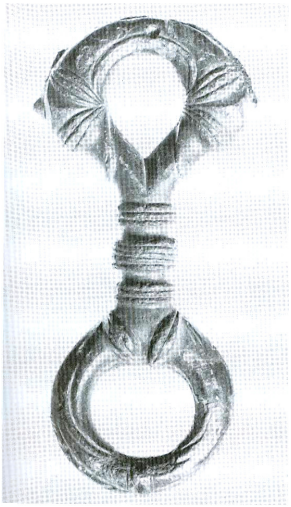

Figure 51. The Ballymoney mirror handle (Jope 1954).

Ballymoney (Ballybogey Bog) (*ca*. AD 1-50)

This mirror handle was recovered from a bog in Co. Antrim, Northern Ireland. Traces of plate still lodged in the handle show that the plate was iron, while the handle is made of cast bronze (Jope 1954: 94). Jope views the decoration on the handle as representative of highly-stylized birds' heads (ibid). He speculates that the mirror was manufactured in southern England and thence exported to Ireland (ibid: 92).

Balmaclellan

A complete mirror was found at Balmaclellan (Kirkcudbrightshire, Scotland) in 1861, in association with some bronze fragments and two bronze belts, in three parcels, wrapped in coarse linen cloth (Fox 1958; MacGregor 1976). The form of the mirror is

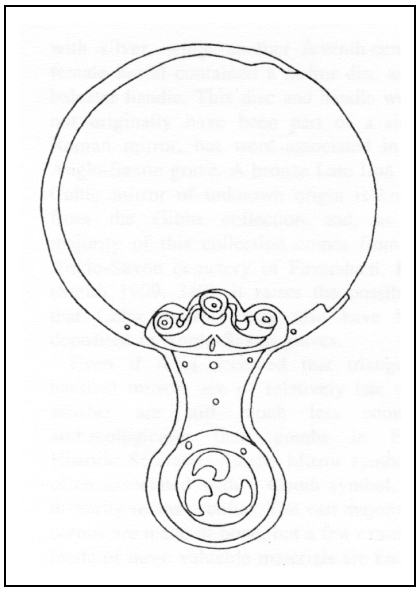

Figure 52. The Balmaclellan mirror (Cessford 1997).

unusual, in that rather than the usual loops of cast bronze, the handle is made of sheet bronze and shaped much like the handles of Roman paterae. Rather than being decorated with incised linear motifs, the plate is undecorated, while the handle is decorated with molded rosettes at the mount, and comma-shaped perforations at the distal end. Interestingly, representations of mirrors on early Medieval Pictish standing stones have the same silhouette as the Balmaclellan mirror, yet it is the only known example of this mirror form (Cessford 1997).

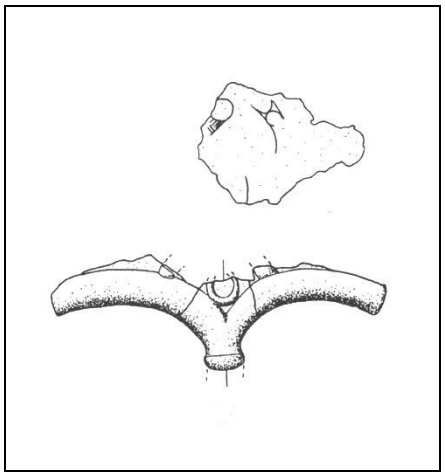

Figure 53. The Bulbury mirror (Cunliffe 1972).

Bulbury (Bulbury or Belbury Camp)

A fragment of decorated mirror plate with associated handle fragment were supposedly recovered from a hoard at the Bulbury hillfort, near Lytchett Minster, Poole (Dorset, England) in 1881 (Cunliffe 1972: 293). Along with the mirror pieces, archaeologists recovered two bronze bulls with legs splayed, apparently for attachment to some object with a rounded section; two bronze mountings, possibly chariot yoke mounts; two rings, probably from a snaffle bit; parts of a sword hilt and chape; a tankard handle; fragments from a bronze bowl or bowls; an iron anchor and chain; pieces of iron tools; part of an iron fire dog; and eight glass beads (ibid: 294-305).

It may be of interest, as regards Late Iron Age British mirror handles generally, that the fragmentary tankard handle has a similar design (ibid: 299). It is made up of two opposed teardrop loops, but with a circular loop linking them. The loops are joined by collars which run parallel to the axis of the handle.

Cunliffe regards the objects as most likely proceeding from a hoard, but it is not known whether all were found at the same spot, or simply at the same time; however, the original notes from 1881 imply they were found together. Although some of the iron objects were "defective," Cunliffe thinks that the glass beads suggest this was not simply a scrap heap, but a true votive deposit (ibid).

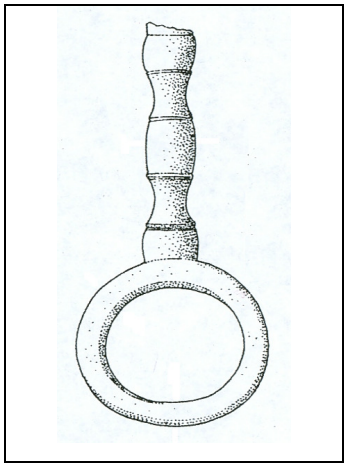

Figure 54. The Carling-wark mirror handle (MacGregor 1976).

Carlingwark

At Carlingwark Loch (Kirkcudbrightshire, Scotland) a bronze handle was found by two fishermen in 1866, along with a hoard of other metalwork (MacGregor 1976: catalogue 268). The handle is a bar type with a terminal ring. The hoard consisted of both Roman and British metalwork, probably of the late 1st or 2nd century AD (ibid). The collection was most likely a votive deposit.

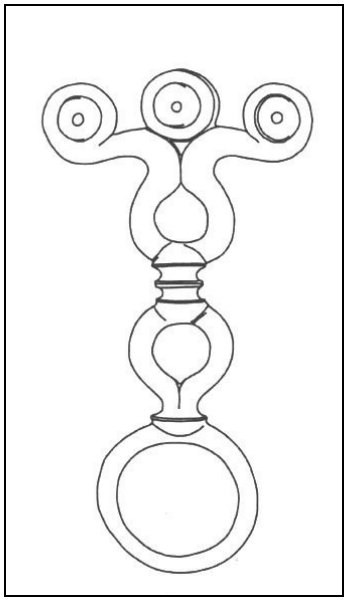

Figure 55. The Compiègne mirror handle (Guillaumet and Schönfelder 2001).

Compiègne

A mirror handle was found in the Oise River at Compiègne (Guillaumet and Schönfelder 2001: 125). The handle is of cast bronze, and typical of the Late Iron Age handles made in southern Britain (ibid). Two opposed teardrop -shaped loops are separated by a collar, and joined to a large terminal ring (ibid: 126). Where the handle would have joined a plate there are three round hollows, probably designed to hold enamel inlay, similar to those of the Dorton and Great Chesterford mirrors (ibid: 126-127) and the handle from the Essex/Sussex border (Joy 2010: 127). The fact that the handle was found in a river suggests that it may have been placed there as a votive deposit.

MIRRORS WITH POOR CONTEXTUAL INFORMATION

A number of mirrors are interesting, informative, or suggestive in their own right, but have too little contextual information to analyze in depth. These mirrors are discussed briefly below.

The Bromham (Bedfordshire, England) and "Oxfordshire" mirrors (Fig. 56) were recently discovered by metal detectorists, and have not been fully published. They are, however, illustrated, and "Oxfordshire" briefly described, in Burleigh et al (2007). Both mirrors are complete, and the "Oxfordshire" mirror (its precise findspot has not been divulged) now belongs to a private collector. According to the Portable Antiquities Scheme report, Bromham was discovered in 2004, but no further details of the find are given (Anonymous 2004).

Three fragments of a mirror were found at a shallow depth by a metal detectorist at Ruxox Farm, Maulden, Bedfordshire in 1998 (Burleigh and Megaw 2011: 51). The finder did not observe any traces of an associated burial or objects, but because of the mirror's damaged and corroded condition, it is likely that any burial had been destroyed previously, probably by ploughing. The mirror is the fifth found in the county of Bedfordshire (ibid). The decoration of the mirror plate was not completed, and Burleigh and Megaw regard the lines as "suggestive of marking-out rather than of a completed design" (ibid) (Fig. 56). Interestingly, the presence of the handle (only the top ring of which now survives) suggests that handles might have been attached before the execution of the design on the mirror plate. Furthermore, if the Ruxox mirror is truly incomplete, it is unique among the late Iron Age British mirrors (ibid: 53). Burleigh and Megaw cautiously suggest a date around the middle of the 1st century BC (ibid). An extensive Iron Age and Romano-British settlement existed around Ruxox Farm, and Roman-period burials suggest more than one cemetery in the area (ibid: 54-56). Unfortunately, the settlement area has yet to be fully excavated. Burleigh and Megaw promise a forthcoming publication by Burleigh in which it is proposed that the concentration of mirrors in the area are associated with high status burials situated along the boundaries

between late Iron Age settlements at Baldock, Sandy, Dunstable, Verulamium/St. Albans, and Welwyn (ibid: 57; Burleigh forthcoming).

A handle and fragmentary plate now known as Colchester I (Fig. 62) came from a wealthy burial, which has been dated ca. 25 BC-AD 5 based on associated ceramics (Joy 2010: 131; Sealey 2006: 17). Found in 1904, the burial was not recorded in detail (Fox and Hull 1948: 135). However, the grave goods were catalogued, and it was recorded that the tomb was found in a field at Lexden Grange, "isolated" between the hill fort of Camulodunum and a "Belgic" cemetery at Lexden (ibid). Besides the mirror, the grave goods included a small bronze cup with a handle with red enamel decoration; a pedestaled ceramic urn; a narrow-mouthed vase-like vessel; two cordoned bowls, one with a lid; and two tall mica-dusted flagons (ibid: 135-136).

A fragmentary mirror and partial handle (known as Colchester II) were discovered in 1974 at Hyderabad Barracks in Colchester, by workers digging foundations (Sealey 2006: 11). The handle is a bar style, broken just below the central turning; where the mirror and plate join there is a circled tricorne shape (ibid: 13) (see Chapter 7 for a discussion of British mirror motifs). Although it appears the plate was incised, notably with unusual zigzag lines like the Colchester I (Lexden Grange) mirror, the preservation is too poor to make out the design (ibid: 11). The Hyderabad Barracks mirror is the only decorated bronze mirror with a bar-type handle (the others being iron, or having an iron plate with bronze handle) (ibid: 12) (Fig. 62).

Another fragmentary mirror with broken handle was found at Rickling, Essex, in 1996 by a metal detectorist searching ploughsoil; a further search of the area by metal detector failed to find any further fragments or other associated artifacts (ibid: 13) (Fig. 62). What is left of the plate shows that it was originally circular (ibid: 14). The handle probably had multiple loops—part of one loop survives (ibid). The surviving design shows that the whole composition was asymmetrical; again, zigzags were used to form the lines, but the curves are very uneven—Sealey describes the execution of the design as "inept" (ibid). The mirror plate fits into a slot on the mirror handle, but actually penetrates so deeply that it protrudes out the other side. There is, furthermore, a small

gap between the plate and handle where the two "arms" of the handle join (ibid: 15). This may mean that the handle replaced an earlier, perhaps broken, original.

The mirror from Brecon (Powys, Wales) was found by a metal detectorist in the early 1990s (Joy 2010: 129). The mirror plate was made of iron, but set within a wide bronze band which was decorated with incised designs, sadly now nearly invisible (ibid: 158-159) (Fig. 62). The handle is most similar to the Ballymoney (No. Ireland) handle and has two triangular loops joined by a collar (ibid: 94, 158-159). It was found in a cremation burial near a Roman fort, along with two bronze terrets, a toilet set, ceramic lamp, and a carinated pot with lid containing the cremated remains and dated ca. AD 70-100 (Sealey 2006: 17; Joy 2010: 129). Although not specified by Sealey (2006), presumably the fort referenced is Y Gaer, or Brecon Gaer (Roman Cicucium), built around AD 75 (Earwood and Townsend n.d.).

Great Chesterford is a complete mirror with some damage, probably from a plough share (Fox 1960: 207). The handle, like so many of its contemporaries, consists of two opposed teardrops and a terminal ring (ibid: 208) (Fig. 63). Fox suggested a date of AD 5-20 (ibid: 210).

The Desborough (Northamptonshire, England) mirror, regarded by many as the finest of the British Late Iron Age mirrors, was discovered during ironstone digging (Smith 1909: 329). A small bronze fibula was also found, but is not certainly known to have been associated with the mirror (ibid: 330). The mirror is in an excellent state of preservation, so it has been assumed it was in a burial which protected it (ibid: 338). The plate is kidney or oval shaped and the edge enclosed with a tubular binding, and the handle is one of the most ornate multiple-looped examples (Fig. 63).

A mirror was discovered in 1875 on the Isle of Portland (Dorset, England) (ibid: 336), now known as Portland I (the Grange). The plate was undecorated except for a single circular line (Fig. 63). The handle is a single-loop type with a circular loop between the arms, at the join with the plate (ibid).

Portland II (the Verne) is a fragment of a plate with hatched circles and basketry-hatched pelta shapes (Fig. 63) (Joy 2010: 111).

Fragmentary handles have been found at several locations in England, including Akenham (Suffolk, England), Badingham (Suffolk), Thetford (or Fison Way) (Norfolk), and an unspecified point on the Essex/Sussex border (Gregory 1991: 130, 132; Joy 2010: 124, 127) (Fig. 57). Akenham, Badingham, and Essex/Sussex border are variations on the two opposed teardrop loops style, while Thetford is the distal portion of a bar handle with terminal ring (Joy 2010: 124, 127).

Rivenhall I (Fig. 58) was discovered near the church in the village of Rivenhall (Essex, England), beside "a passage of Roman pavement" (Smith 1909: 337). The plate is fragmentary, with a single-loop handle. What remains of the design is filled with basketry hatching (ibid). At some point in prehistory, the junction of the mirror plate and handle was strengthened by adding a binding, which partially obscured the top of the handle (Lloyd-Morgan 1993: 30). Rivenhall II is a handle found in 1954 or 1955, now missing (ibid: 33). It was described as consisting of three loops (ibid).

A handle from Jordan Hill (Weymouth, Dorset, England) (Fig. 58) was found together with bronze fibulae dated ca. AD 100 (ibid: 339). It is not clear that the mirror handle and brooches were originally associated, however (ibid). The handle, uncharitably if not entirely inaccurately described by Smith as "stiff," "commonplace," and "decadent," consists of two loops, but is flattened unlike most handles of the Late Iron Age; in addition, it has transverse grooves in place of the usual collars (ibid).

The context of the Ingleton (Yorkshire, England) handle is completely unknown (Jody Joy, pers. comm.) It is a bar-type handle with terminal loops, but is unique in that the proximal loop is flanked by two bovine heads (Fig. 58).

The Gibbs mirror (named for its collector) has a mostly-preserved plate and a handle with one teardrop-shaped loop attached to a terminal circular loop. The engraved design is an asymmetrical lyre composed mostly of pelta shapes (see Chapter 7 for a detailed discussion of mirror design and motifs). Most of the objects in the Gibbs Collection are Anglo-Saxon and come from a cemetery at Faversham, Kent, so it is presumed that the mirror also came from Kent, although there is no documentation of its provenience (Smith 1909: 340) (Fig. 64).

Similarly, the unprovenienced Mayer mirror (Fig. 64) was also part of a collection consisting primarily of Anglo-Saxon finds from near Canterbury, Kent; however, it has alternatively been proposed that it was found in the Thames (ibid: 340-341), in which case, it might have been a votive deposition.

The Disney mirror (named for John Disney, d. 1857) consists of a central fragment of the mirror plate, and a partial handle (ibid: 339-340). The handle is formed of two opposed teardrop shaped loops (Fig. 64).

The Birdlip mirror (Fig. 64) came from an inhumation burial, but there is little contextual information because the grave was discovered by a quarryman in 1879 (ibid: 331). The site of the burials, Barrow Wake, is situated on the Cotswold Escarpment overlooking the Severn Valley (Staelens 1982: 19, 30). Three whitewashed cist burials were found, the outer two identified as belonging to males and the central one, which held the mirror, attributed to a woman (ibid: 331-332). The skeletons were extended with heads oriented toward the east (Staelens 1982: 19). A lathed bronze bowl covered the "woman's" face. Additionally, the grave contained a similar, smaller bowl, a gilded silver fibula, a bronze bracelet, four bronze rings, a bronze handle (perhaps for a knife), shaped like a bovid head, and a necklace of amber, jet and pyrophillite beads (Smith 1909: 332). In one of the adjacent "male" burials, the skeleton had a metal-rimmed vessel, probably a bucket, inverted over the face (Staelens 1982: 21). The well-preserved mirror had a tubular edge binding and an elaborate multilooped handle with red enamel inlay. There is clear evidence for replacement or repair of the mirror plate where it joins the handle (Joy 2010: 159), the spot where the plate is under the most strain when held upright. Based on the style of the brooch, the burial has been dated to the late 1st century BC-AD 60/70 (ibid: 129).

Although mirrors are rarely found in settlement contexts, two fragmentary mirrors were found during the excavation of the Glastonbury lake village (Bulleid and Gray 1911: 220-224). Another mirror fragment—an iron plate with bronze tubular edging—was found at Maiden Castle (Wheeler 1936: 265-283) (Fig. 65). The plate of the first Glastonbury mirror (E100), which was undecorated, was made of bronze, and the handle of iron, so corroded it could not be preserved (Bulleid and Gray 1911: 220-221) (Fig. 65).

This mirror was found in peat and brush among the palisading south of Mound XXX (ibid: 223). The distal portion of a bronze handle (E1) was found near the surface of Mound XXII (ibid: 221, 223). On page 222, Bulleid and Gray report that some "toilet appliances"—a pair of tweezers, two wooden pins with bronze heads, and some powder, probably sulfide of lead—were found with E1, but on the following pages they state that they accompanied E100.

Bulleid and Gray, in a summary of British mirrors then known, also report the mirror fragments from Stamford Hill and Billericay, which were discovered during the 19th century. Remains of two or three mirrors (a handle, Stamford Hill III, may belong to the fragment of plate, Stamford Hill I; Stamford Hill II is another handle) were discovered among graves at Stanford Hill (a.k.a. Mount Batten) (Dorset, England) (ibid: 221) (Fig. 66). The graves are said to have also included ceramics, glass, bronze vessels, and ring jewelry (ibid). Two fragmentary mirrors were found at Billericay (Essex, England); one was said to have been "probably found with a burial by cremation" (ibid: 222) (Fig. 65).

At Bridport (Dorset, England) a mirror was found in a burial along with an individual whose face, like those of two of the Birdlip skeletons, seems to have been covered by a metal-rimmed vessel (indicated by metal corrosion products on the skull) (Staelens 1982: 21). The mirror handle is a short bar with splayed arms and a terminal teardrop shaped loop (Joy 2010: 125) (Fig. 66).

The Llanwnda handle (Fig. 66) came from a probable burial, near Fishguard (Pembrokeshire, Wales). It is now lost (Joy 2010: 87). The piece is unusual within the series of Iron Age British handles: first, it is made of iron rather than bronze; second, the mount where the handle and mirror plate joined is triangular, rather than a ring or splayed arms; and third, rather than being composed of two loops that touch in the center, the handle is shaped like a bar with two small rings set into it. However, it still has the characteristic terminal loop (ibid: 127).

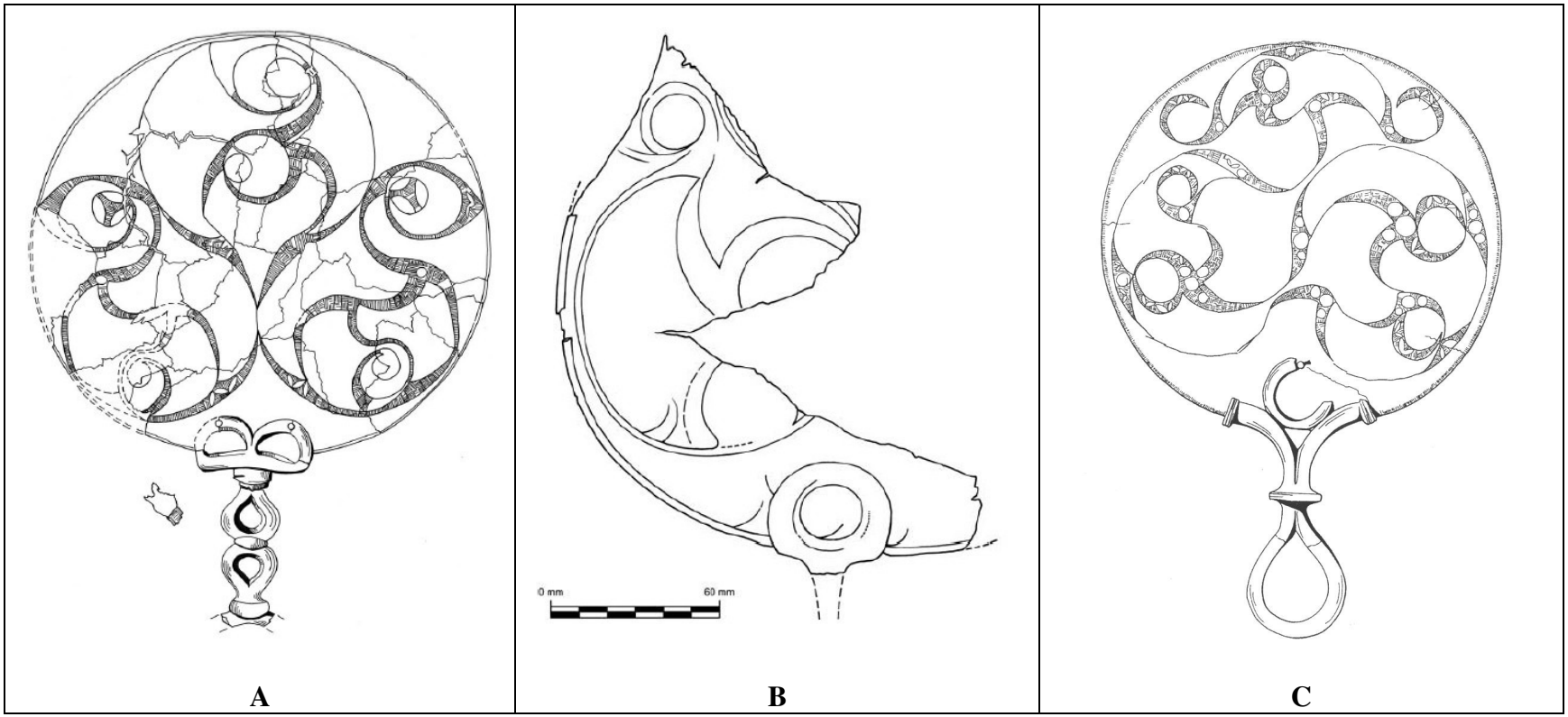

Figure 56. The Bromham, Ruxox, and "Oxfordshire" mirrors.

A: Bromham (Burleigh and Megaw 2011: 55).

B: Ruxox (ibid: 53).

C: "Oxfordshire" (Joy 2010: 123).

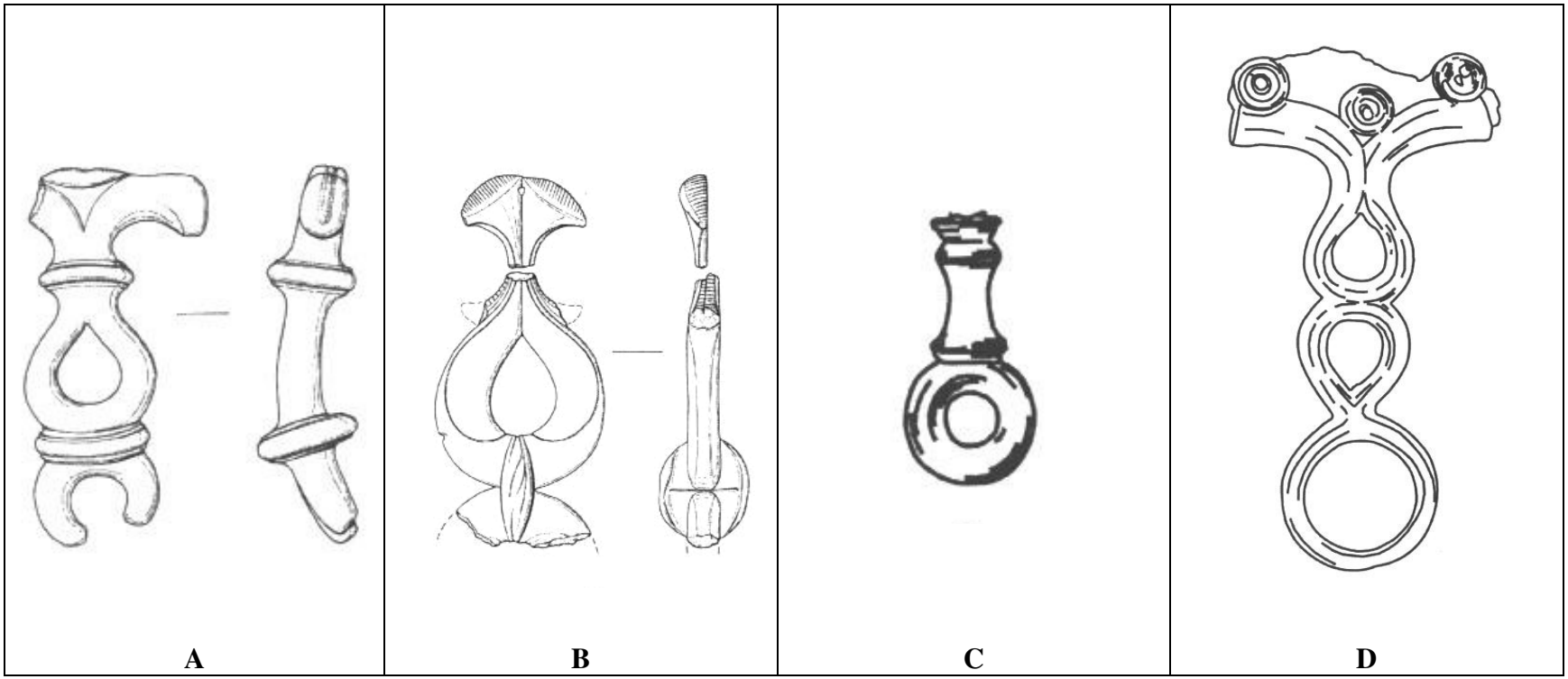

Figure 57. The Akenham, Badingham, Thetford/Fison Way, and Essex/Sussex Border mirror handles.

A: Akenham (Joy 2010: 124).

B: Badingham (ibid).

C: Thetford/Fison Way (ibid: 127).

D: Essex/Sussex Border (ibid).

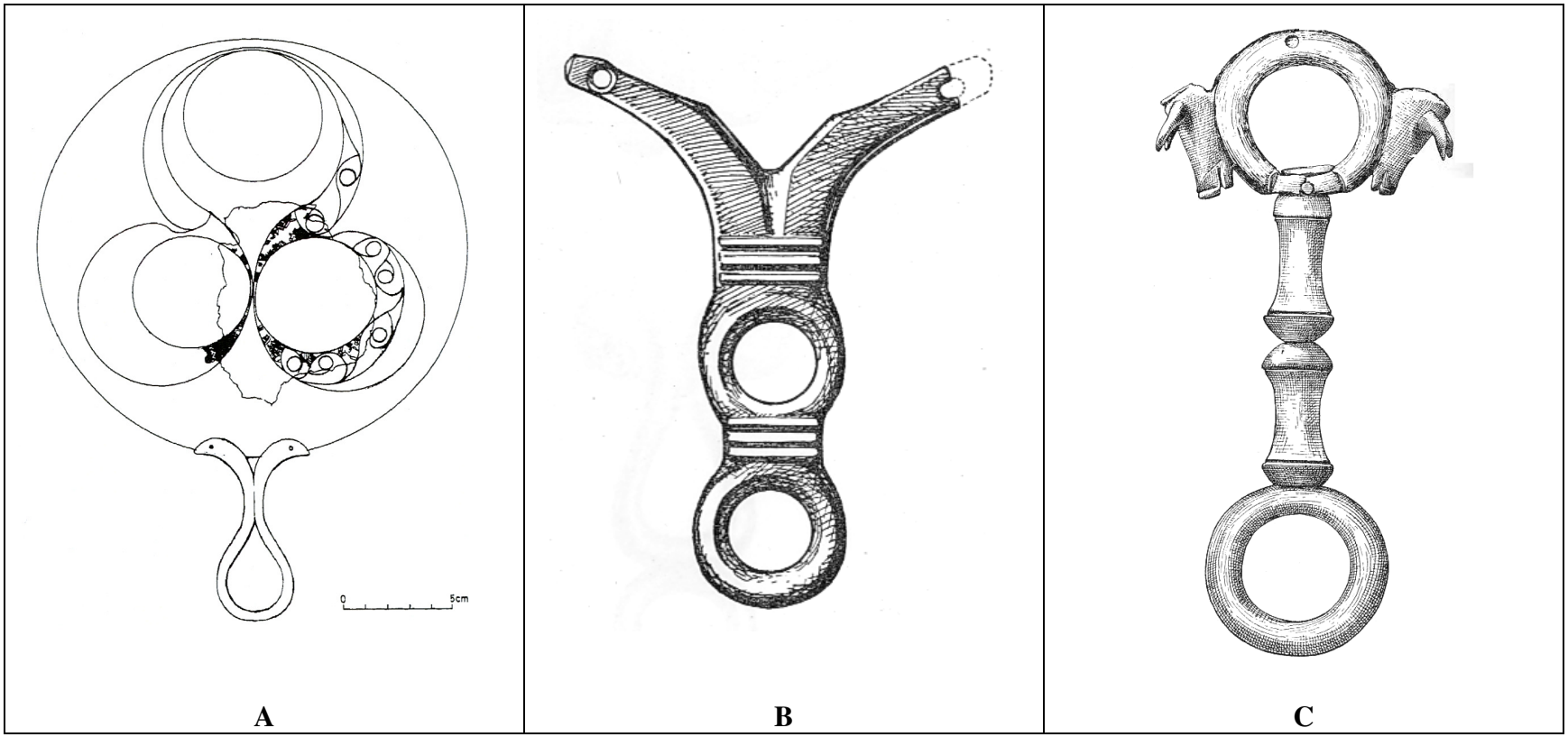

Figure 58. The Rivenhall I mirror and Jordan Hill and Ingleton handles.

A: Rivenhall I (Lloyd-Morgan 1993).

B: Jordan Hill (Fox 1958).

C: Ingleton

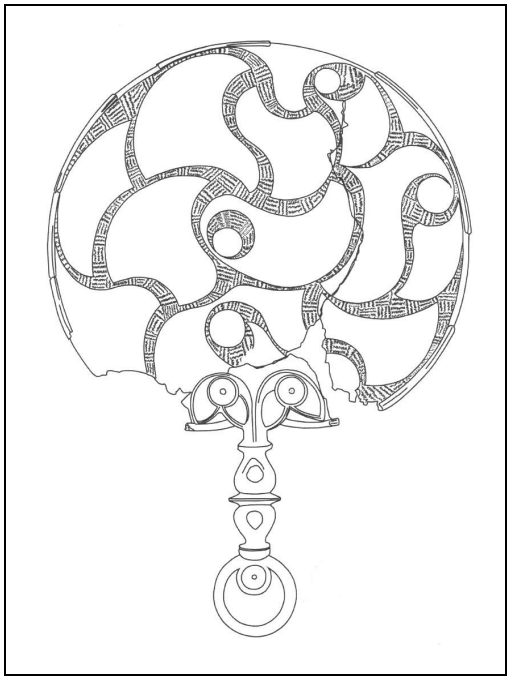

Figure 59. The Old Warden I mirror (Joy 2010: 114).

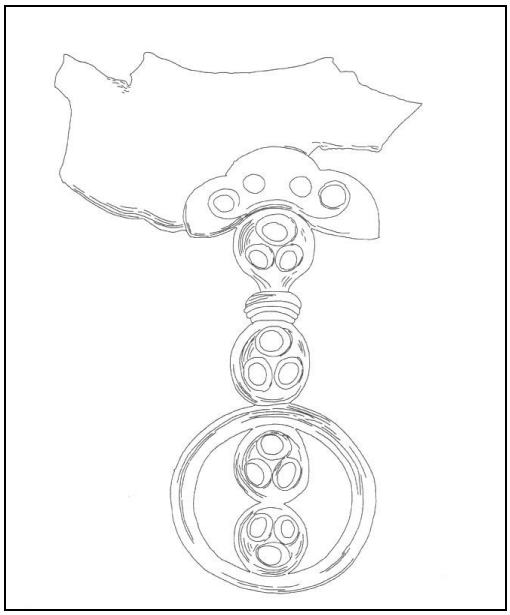

Figure 60. The Old Warden II mirror (Spratling 1972).

The mirror from Llechwedd-du Bach (sometimes spelled Llechwedd-ddu), near Harlech (Merioneth, Wales) may have come from a burial, but its context is not truly known. It was found along with a tinned bronze bowl (ibid: 158). The plate is undecorated sheet bronze, and the handle, of cast bronze, is similar to that from Portesham, except that the collars joining the loops run parallel to the axis of the handle rather than perpendicular.

Old Warden I (Bedfordshire, England) was found by railroad laborers sometime between 1853 and 1857 (Spratling 1972: 9). The exact place and date of the find were not recorded (ibid). According to a local Bedfordshire antiquary, James Wyatt, "Roman coins and portions of large amphorae" and "a large bronze pan" were found along with the mirror (ibid). This assemblage is suggestive of a burial (ibid). The handle is formed of two opposed teardrop loops, joined by a collar, with a terminal ring; where the handle joins the plate, and within the terminal ring, are circular hollows which once held enamel, probably red (ibid: 10). The handle mount is composed of leaf shapes, which, together with the enameled circles, rather resemble birds' heads, although the similarity is ambiguous (ibid: 12). The design of the plate is executed in zigzag hatching (ibid).

Old Warden II (Bedfordshire, England) is lost, and known only from a watercolor illustration made in the 19th century (Dyer 1966: 55). The illustration was found inserted into a book of local history, dated 1841 and owned by Rev. Frederick Pawsey (d. 1843), vicar of Wilshamstead (ibid). Pawsey had added numerous illustrations and early photographs to the volume, one of which depicts a mirror handle with a fragment of plate attached, labeled simply "Old Warden" (ibid). The handle has a large terminal loop, and four disks with triple perforations—two within the terminal loop, and two, separated by a collar, forming the rest of the handle (ibid). Four more perforations pierce the moulding where the handle joins the plate (ibid). It is unclear from the drawing whether these perforations pass clear through the metal, or if they are hollows, perhaps once filled with enamel or other inlay (ibid).

Bac Mhic Connain is a handle made of cetacean bone and metal, found in 1919 in a wheelhouse on Uist in the Outer Hebrides (Scotland) (MacGregor 1976: 141). The handle is shaped like an open triangle with a terminal ring. Other finds from the site included a fragment of *terra sigillata* and a bone knife handle inscribed in ogham and dated to the 6th-7th centuries AD (ibid: catalogue 271).

An almost identically shaped handle, but made of bronze, came from a crannog site at Lochlea (or Lochlee), excavated in 1878 (ibid: catalogue 272). Associated finds ranged from 2nd century AD *terra sigillata* to medieval objects (ibid).

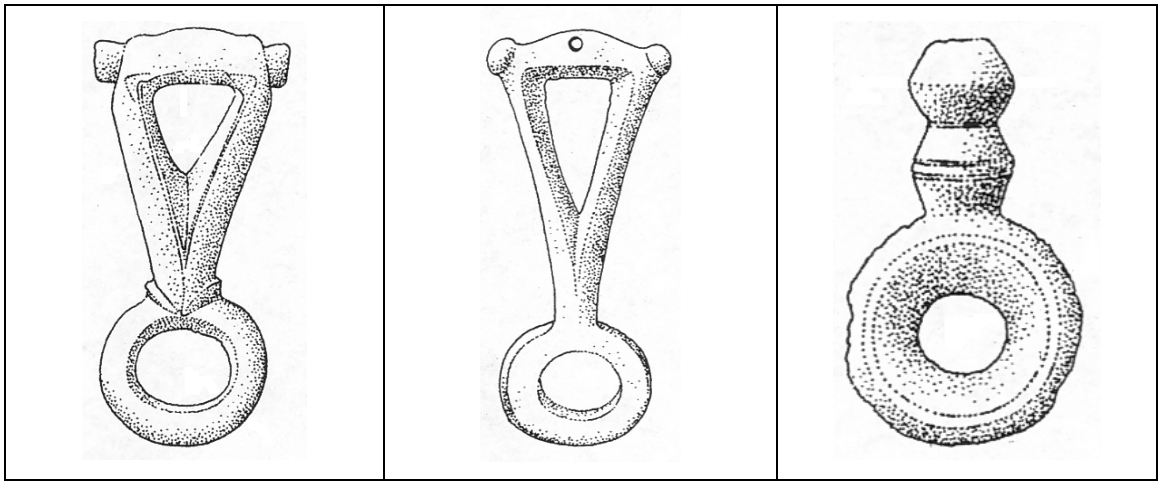

Figure 61. The Bac Mhic Connain (left), Lochlee Crannog (center), and Merlesford (right) mirror handles (after MacGregor 1976).

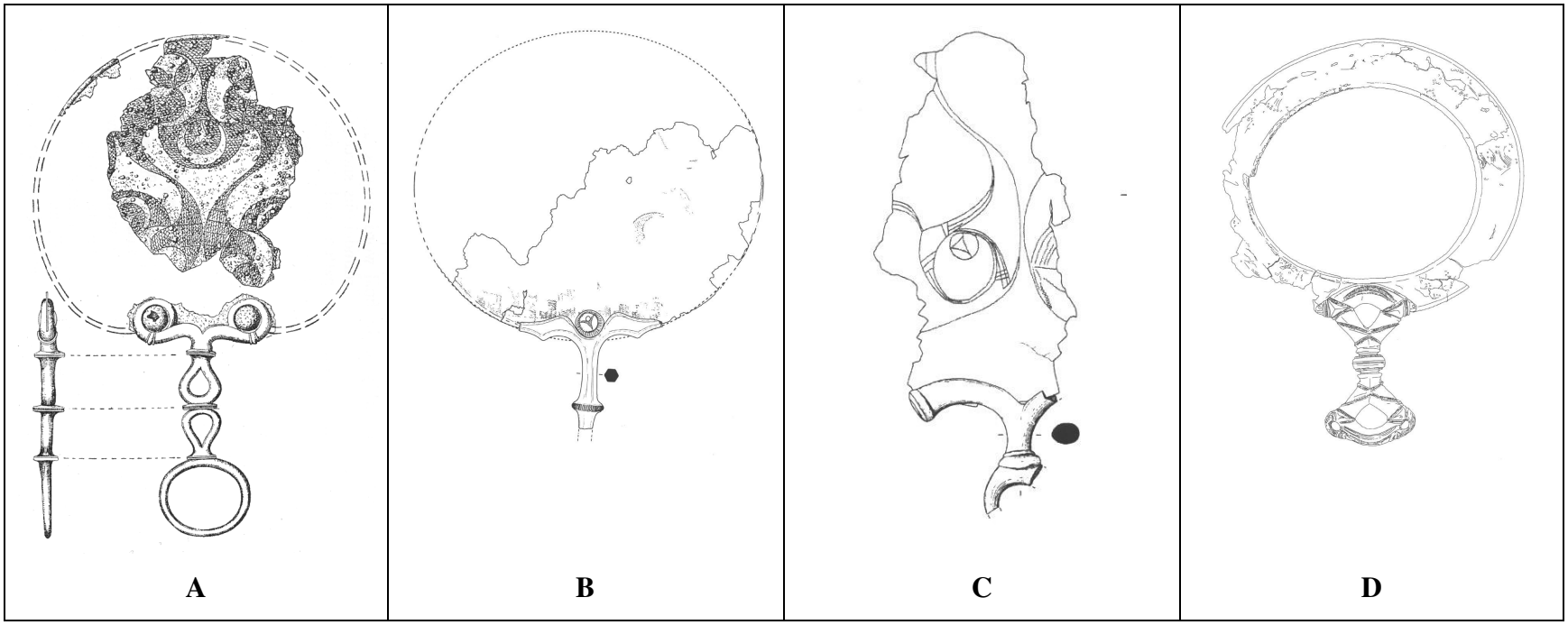

Figure 62. The Colchester I and II, Rickling, and Brecon mirrors.

A: Colchester I (Lexden Grange) (Fox 1958).

B: Colchester II (Hyderabad Barracks) (Sealey 2006).

C: Rickling (Joy 2010).

D: Brecon (Joy 2010).

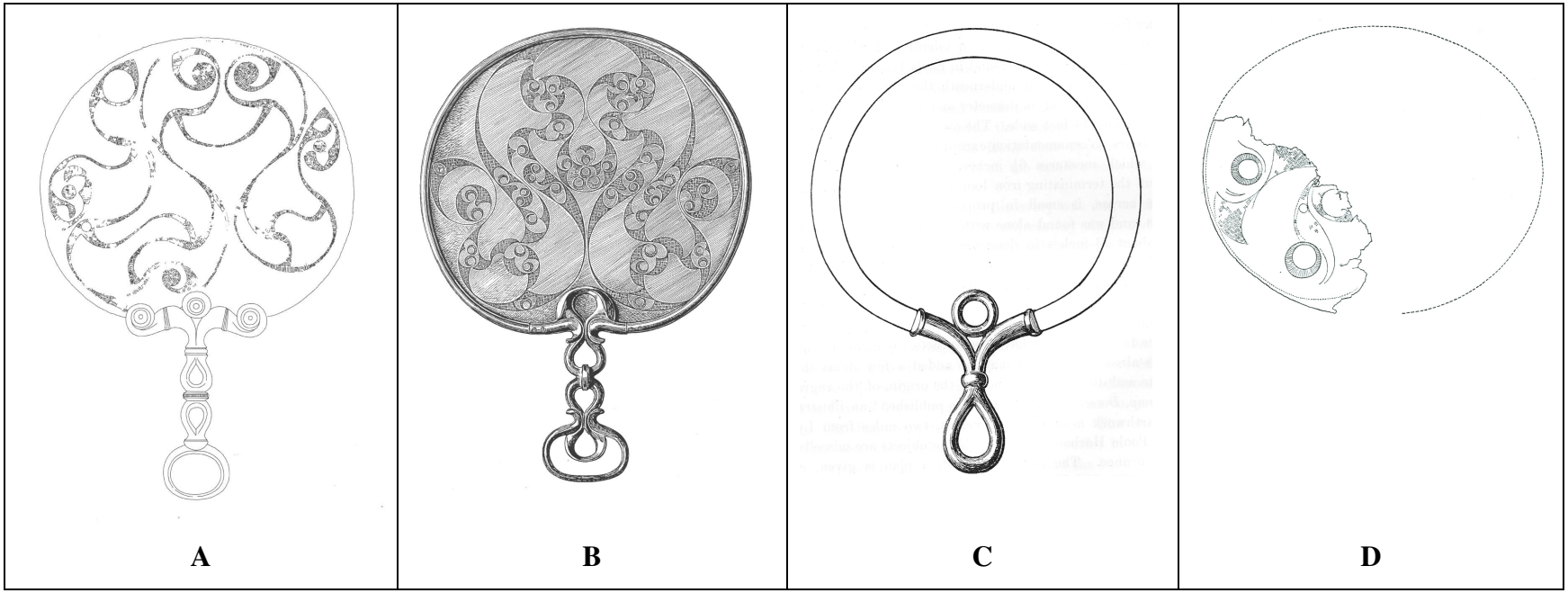

Figure 63. The Great Chesterford, Desborough, and Portland I and II mirrors.

A: Great Chesterford (Joy 2010).

B: Desborough (Smith 1909).

C: Portland I (the Grange) (reconstruction) (Smith 1909).

D: Portland II (the Verne) (Joy 2010).

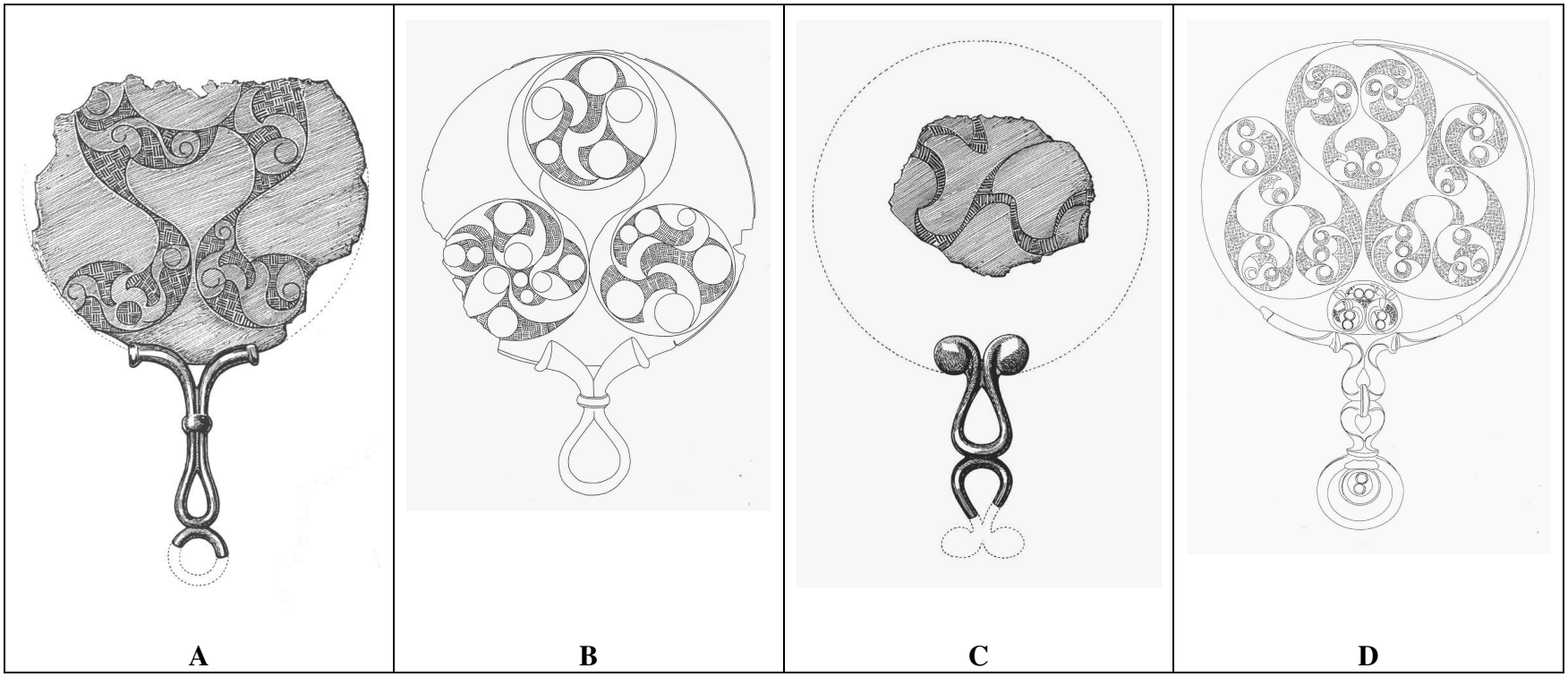

Figure 64. The Gibbs, Mayer, Disney, and Birdlip mirrors.

A: Gibbs (Joy 2010: 121).

B: Mayer (ibid: 122).

C: Disney (ibid: 120).

D: Birdlip (ibid: 93).

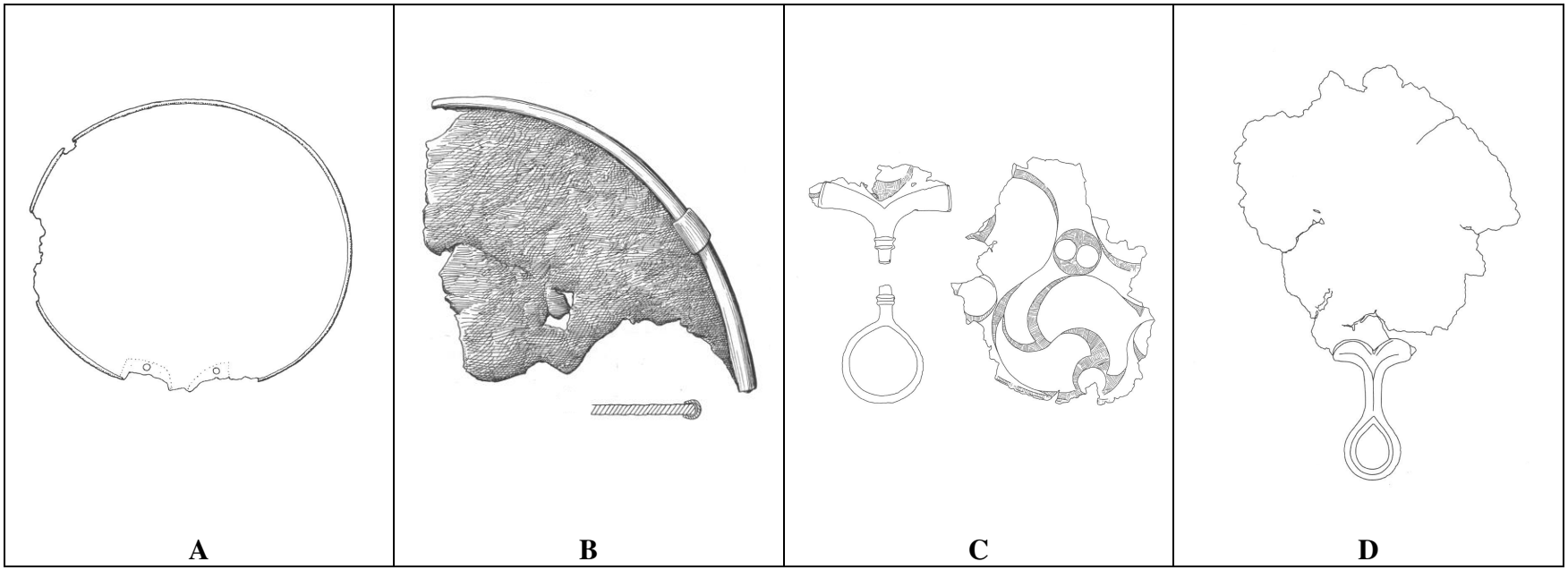

Figure 65. The Glastonbury (E100), Maiden Castle, and Billericay I and II mirrors.

A: Glastonbury E100 (Joy 2010: 104).

B: Maiden Castle (Wheeler 1936: 273).

C: Billericay I (Joy 2010: 91).

D: Billericay II (ibid: 92).

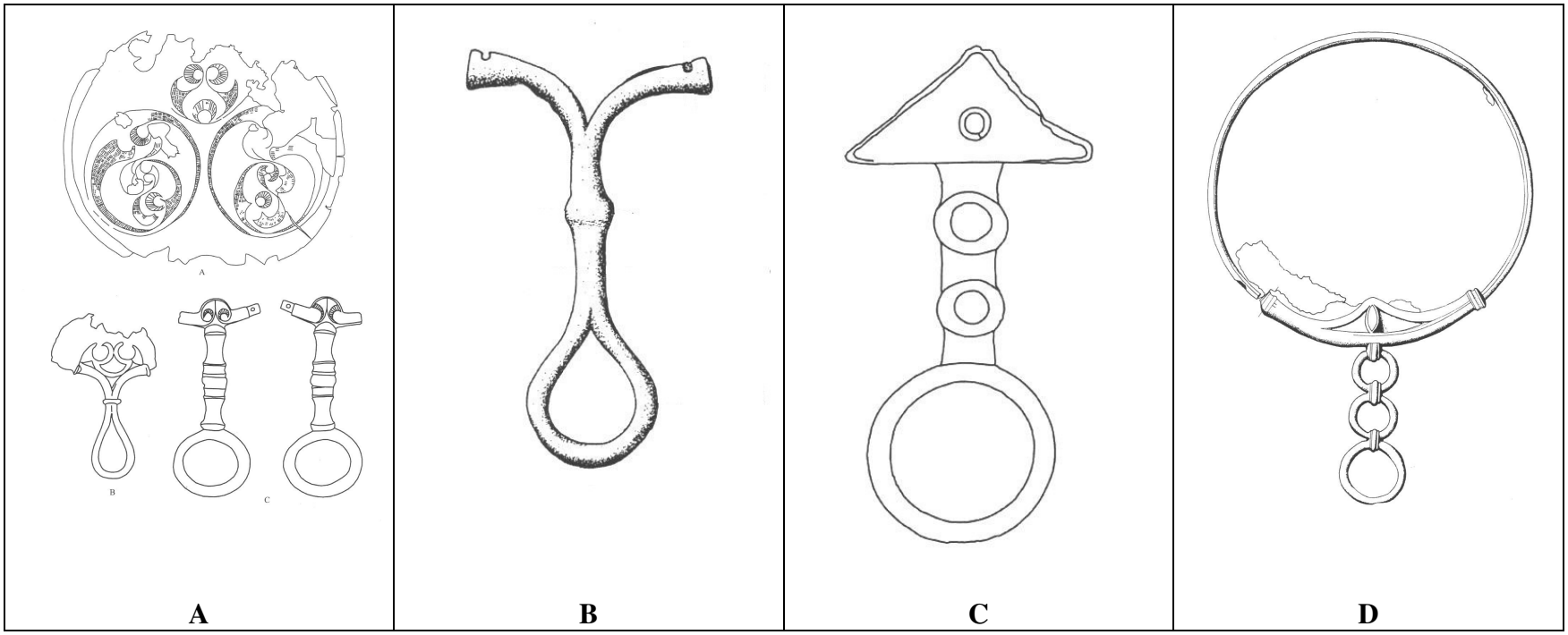

Figure 66. The Stamford Hill, Bridport, Llanwnda, and Llechwedd Du mirrors.

A: Stamford Hill (I, II, and III) (Joy 2010: 119).

B: Bridport (Wheeler 1936: 273).

C: Llanwnda (Boon 1978-80).

D: Llechwedd Du (Joy 2010: 110)

A bronze handle composed of two knobs with a terminal ring was found before 1833 and is now in the collection of the National Museum of Antiquities of Scotland (ibid: catalogue 270). Its provenience is unknown, but MacGregor (1976) gives it as "formerly attributed to Merlesford, Fife," while Joy (2010: 127) gives it as "Merlesford?"

SUMMARY

A glance at the map of Temperate European sites analyzed here reveals that there is a large gap between sites in eastern Europe (i.e., on the steppes of Russia and Ukraine) and those in western Europe. Unfortunately, although it is known that burials with mirrors have been excavated in this intermediate zone, there are few publications in English and even fewer with diagrams illustrating the position of objects *in situ* in the burials. This is, in fact, a problem that plagues mirror burials everywhere, because mirrors are not usually considered spectacular enough to merit attention, except in Britain, where the local mirrors are regarded as among the great achievements of "Celtic" art. Generally, unless a mirror is made out of gold, it is more or less ignored.

Some patterns which emerge from this examination of mirrors in Temperate Europe are summarized here: First, Iron Age mirror burials can be found across the entire region, but are particularly concentrated in Britain. Temperate Europe joined the mirror-making and mirror-burying trend rather late in the game (as will be evident from the later chapters on other regions), and Britain latest of all, but Britain joined with gusto. Britain's mirrors are also the largest and most ornately decorated in Temperate Europe.

Secondly, all the mirrors produced in Temperate Europe had lateral handles. This may reflect the influence of mirrors from Greece, which typically had lateral handles. Even though other types of mirrors were occasionally imported (e.g., the *Klappspiegel*), the vast majority of mirrors have handles. This is not entirely surprising since such mirrors have a deep antiquity in western Eurasia, going back all the way to Mesopotamia and ancient Egypt.

The distribution of Late Iron Age mirrors in southern Britain is densest in the area of two Roman forts, Verulamium (modern St. Albans) and Camulodunum (Colchester) (see Fig. 22). Burleigh and Megaw (2011: 57) have commented on the relative profusion of mirror finds in the Bedford region (including Bromham, Ruxox, Pegsdon, Old Warden, Aston, Dorton, and Great Chesterford), which lies between and to the north of Verulamium and Camulodunum. This distribution may simply reflect dense Iron Age settlement and sufficient accumulation of wealth and prestige to access the surfaces of skilled mirror-makers; however, it may be that the fashion for mirror burial was in some way influenced by the presence of large Roman settlements.

Although contacts between Temperate Europe and Mediterranean civilizations were certainly influential in the development of mirrors north of the Alps, the contacts with peoples to the east must not be underestimated. In particular, nomadic and semi-nomadic peoples must have been instrumental in bringing some mirror-related beliefs and practices.

Table 3. List of Caucasian sites discussed in Chapter 4.

Mirror/Site	Location	Context
Tsemdolina 9	Krasnodar, Russia	inhumation
Vani 24	Imreti, Republic of Georgia	inhumation

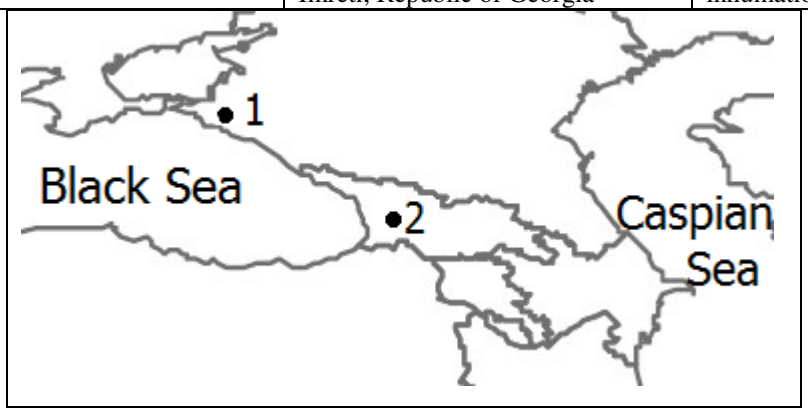

Figure 67. Map of Caucasia, showing sites discussed in Chapter 4. 1. Tsemdolina, 2. Vani.

BURIALS

Vani Grave 24 (4th century BC)

Vani is situated in the fertile foothills east of the Colchian plain in present-day Republic of Georgia. This part of Caucasia was in regular trade contact with the Aegean, the Crimea, and the north coast of the Black Sea, and was famed for its fine horses in antiquity (Braund 1994: 55-56). Goods exported included wine, linen, salt, precious metals and semiprecious stones (ibid: 55, 58, 62, 71). Not surprisingly, given its geographical position, Vani Grave 24 shows a blend of Mediterranean, Persian, and Eastern European characteristics.

The ancient town of Vani occupied three terraces near the confluence of the Sulori and Rioni rivers, on a hill 200 m high and overlooking a fertile valley (Kacharava and Kvirkvelia 2009: 237). The settlement was occupied from the 8th to the 1st centuries BC (ibid). Burials, located on the upper terrace of the site, evidenced variable mortuary

rites, but iron nails indicated some kind of wooden construction surrounding the burials (ibid). In addition to graves, buried figurines wearing jewelry (neckrings, earrings, headbands) and "sanctuaries" have been discovered on the upper terrace at Vani (ibid: 240-246).

Grave 24 was one of several burials arranged in a line running roughly northeast-southwest along the eastern edge of the upper terrace (ibid: 239). The location of the graves would have given them good visibility over, as well as from, the valley. Although Kacharava and Kvirkvelia (2009: 237) refer to the 4th century, when Grave 24 was constructed, as "Hellenistic," the burials at Vani have many characteristics that are not at all Greek, including hoards of coins and horse sacrifices.

Grave 24, like Graves 21-23, contained both a pit and a platform 50 cm wide and 1 m high made from a slab of sandstone (ibid: 263). A mound of pebbles covered the pit, but not the platform (ibid: 265). Some kind of wooden structure was present as well, indicated by iron nails (ibid: 266).

The skeletal remains in Grave 24 have decayed such that it is impossible to determine the sex of the individuals interred there. The positions of jewelry and clothing appliqués, however, indicate the burial held five individuals and one horse. One individual was buried in the grave pit and provided with the richest accoutrements; two more were found in the northwestern corner of the grave, another was beneath the platform and the fourth was on top of the platform (ibid: 267). A Panticapaean coin provides a *terminus post quem* of 340-330 BC, so the burial has been ascribed to the second half of the 4th century BC (Kacharava and Kvirkvelia 2008: 175; 2009: 239).

The individual in the pit—interpreted as the most important—was buried with a rich and varied assortment of personal ornaments. Among these were a headdress featuring dangling beads and pomegranate-shaped pendants; gold necklaces with bird- and leaf-shaped pendants; gold bracelets; finger rings; beads "in great profusion," among them faience, jet, silver, and glass (the glass beads in particular appear to have been sewn on a shroud); gold appliqués on the clothing; and a gold brooch (Kacharava and Kvirkvelia 2008: 175-180). Particularly noteworthy is the variety of animals represented by the personal ornaments, including griffins and stags on the headdress, and eagles and

ducks on the clothing appliqués. The other four individuals, identified as "servants," wore glass beads and ornaments of silver and bronze.

Figure 68. Vani Grave 24 (after Kacharava and Kvirkvelia 2008).

This individual was surrounded by a large number of local and imported objects. A silver repoussé strip, apparently once attached to leather or fabric to make a belt, depicts a feasting scene, processions of animals, and sphinxes (ibid: 180). Additionally, there were imported Greek ceramics: four amphorae made in Heraklea Pontica and Attic *lekythoi* and a red-figure *skyphos*. Indeed, feasting equipment is prominent, and in addition to the above-mentioned ceramics, there were five Achaemenid *phialai*, a ladle, and a situla, all in silver; and a beak-spouted *oenochoe*, phiale, and flat-bottomed basin in bronze. The bronze phiale is described as being of Greek type, while the basin is a type known from Scythian and Thracian contexts, and the oincochoe is found in these as well as Macedonian and Getic contexts. Somewhat further from the central body were an iron spearhead, "bronze ritual bells," and a Mesopotamian stamp seal dated to the 5th century BC (ibid: 181-182). Finally, a bronze mirror lay to the left of the individual's head with the reflective surface up (ibid: 181).

The mirror was a simple cast disk with concentric circles decorating one side (Kacharava and Kvirkvelia 2009: 304). It has no handle or loop (ibid: 305). This style of mirror is known from burials of the 5th, 4th, and 3rd centuries BC (ibid: 304). Mirrors are primarily associated with women in Greek contexts, but the individual buried in the pit was also accompanied by a spearhead, traditionally viewed as a male accoutrement (ibid: 269). Given that the grave goods from Vani represent a mix of Greek, eastern European, and Near Eastern sources, it would be unwise to rely too much on analogies with Greek cultural practices to interpret the site.

From the assortment of imported goods it is clear that Vani was well-situated to participate in exchange networks reaching from the Greek world in the west to Mesopotamia in the south. The profusion of animal iconography, gold appliqués, and the burial of a horse suggests contacts with nomadic groups to the north ("Scythians," who were said by some ancient authors to have been resident in the northern Caucasus—see Petrenko 1995: 5-6), and the presence of specific animals such as birds of prey, stags, and griffins fits well within the tradition of the animal style art of the steppes; but the ducks are more suggestive of contacts with temperate Europe. The feasting paraphernalia and representation on the belt suggest one of the major preoccupations of Caucasian, and indeed most if not all, elites. The goods in Grave 24 were ones that spoke of elite status in many idioms. In such a cosmopolitan context, the presence of a mirror is not surprising, since all the cultures surrounding Caucasia were producing mirrors at this time. Mirrors were well-established as elite accoutrements among all the groups with which the individual buried in Grave 24 would have been in contact.

Tsemdolina (1st century AD)

The Tsemdolina burial ground is located near the Tsemes River and the modern city of Novorossiysk; nearby was a contemporary defensive structure which was destroyed by fire during the first century AD (Malyshev and Treister 1994: 31). The tumuli had been flattened over the years, and the graves were discovered during a salvage operation (ibid).

Burial 9, dated to the beginning of the first century AD, consisted of two parts, an entrance pit and a niche or alcove which contained the body (ibid). In the entrance pit were the skeletons of "a particularly large horned bovine," a sheep, and two horses wearing ornate harnesses decorated with coral, sard, chalcedony, and bronze. On the harness of one of the horses were two brass medallions which had once been part of basins (ibid).

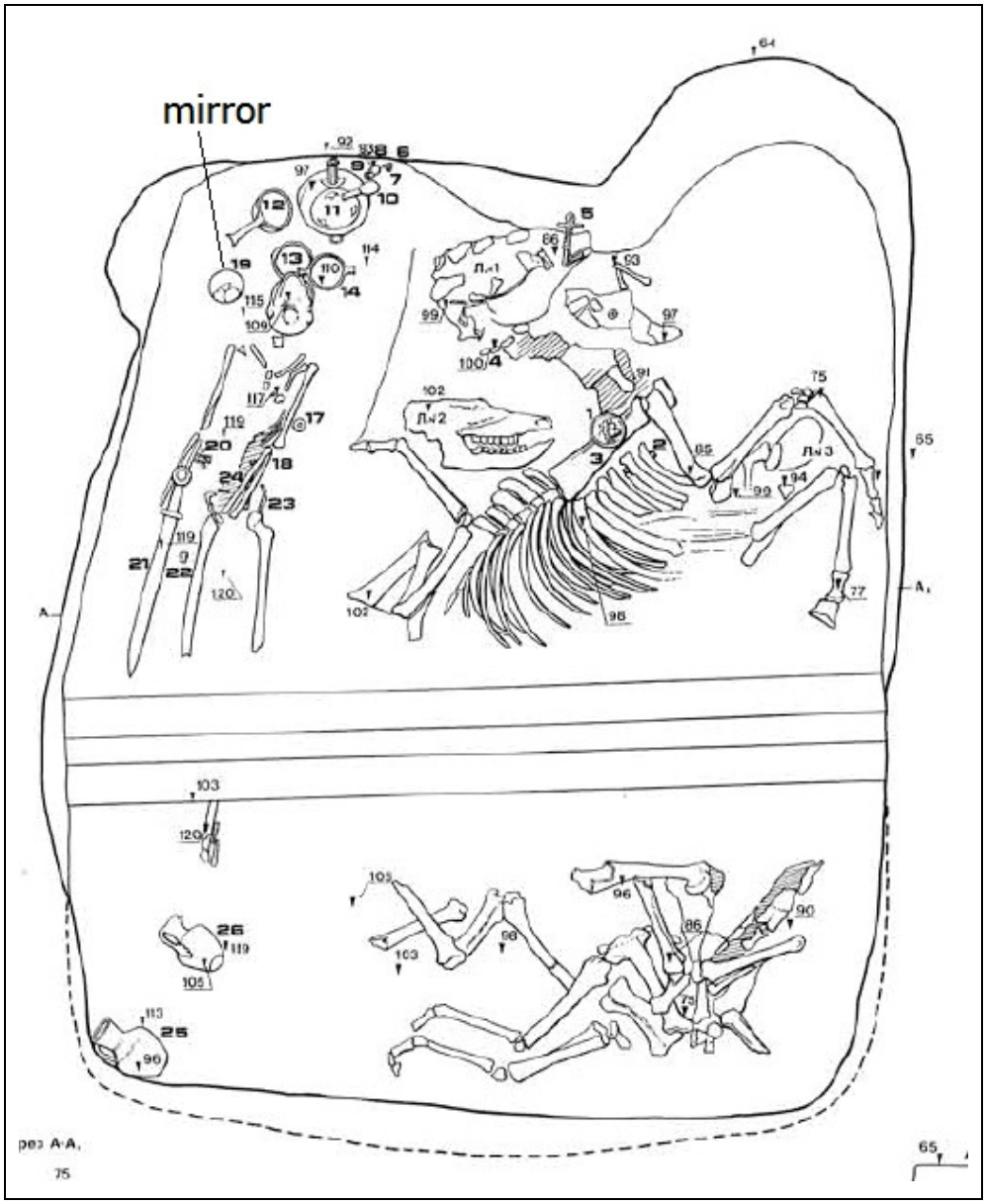

Figure 69. Plan of Tsemdolina Burial 9 (after Malyshev and Treister 1994: 30).

The alcove contained the skeleton of a man aged about 30 who was interred in a supine position (ibid). The man wore a short iron sword at his right hip, while nearby were 19 iron arrowheads (ibid). On the man's belt were a small whetstone and a shark tooth (ibid: 33). Malyshev and Treister suggest that "the belt…played an important role in the life of the ancients: tied to it were not only essential items of everyday life, but also protective amulets which guarded health and strength, pointing to the eminence and power of their owner" (ibid).

In addition to the weapons, a number of items of personal ornamentation were present: a gold and garnet intaglio ring with a representation of Tyche-Fortuna holding a cornucopia (dated to the first century BC and considered to be a local product); a gold fibula; and a pile of beads of various shapes and materials, including glass, glass paste, chalcedony, sard, and amber, as well as one eye bead of a type normally dated not later than the 4th century BC (ibid: 31, 33).

Near the man's head were bronze vessels associated with wine drinking, including a *patera*, ladle, and *oenochoe* (ibid). There are few signs of wear on the bronzes. Together with the bronzes were two glass cups and a ceramic *unguentarium* (ointment bottle); the glass cups are of a type common on the Asiatic side of the Bosporus (ibid: 32). There were also a ceramic pitcher and a silver-alloy bottle (ibid: 34). Wine-drinking paraphernalia is common in elite burials from many parts of temperate Europe and may point to the socio-political significance of feasting.

At the right side of the man's head was a plain bronze disk mirror, somewhat unusual insofar as the alloy from which it was made contained 26% tin and 10% lead (ibid: 32-33). The presence of a mirror and the grave architecture of Tsemdolina 9 are just two of several characteristically Sarmatian elements; however, there are some unique features, such as the placement of the horses in the entrance pit (ibid: 35). The authors therefore speculate that the burial may embody a synthesis of exotic "Sarmatian" and local "Maeotian" practices, as well as those of the Greek Bosporan colonies (ibid: 35, 37).

SUMMARY

There are few known mirror burials in Caucasia, but this will likely change as more rich burials are discovered and published more widely. Since parts of Caucasia (e.g., present-day Republic of Georgia) were very wealthy in antiquity, there is the problem of great amounts of treasure overwhelming the mirrors when it comes to what is deemed significant and worthy of publishing. Mirror burials are known from sites on the borders of Caucasia (e.g., Achaemenid graves at Deve Höyük, Gordion, and Hacinebi in Turkey [see Moorey, 1980, MacMahon 1996 and 1997, and Kohler 1980, respectively], and many in the Crimea), so it is unlikely the practice would not be present there as well. The two burials discussed here seem to conform to general patterns in wealthy grave goods observable in central Eurasia, including metal drinking vessels, horses and horse trappings, clothes ornamented with gold plaques, and of course, mirrors.

Table 4. List of Inner Eurasian/steppe region mirrors discussed in Chapter 5.

Mirror/Site	Location	Context
Ak-Alakha	Altai Republic, Russia	inhumation
Ak-Alakha 3	Altai Republic, Russia	inhumation
Aksai 1-1	Rostov, Russia	inhumation
Aksai 2-2	Rostov, Russia	inhumation
Aksai 6-1/2	Rostov, Russia	inhumation
Aksai 8-13	Rostov, Russia	inhumation
Aksai 8-15	Rostov, Russia	inhumation
Arzhan 2-5	Tuva Republic, Russia	inhumation
Bekteniz 1	North Kazakhstan, Kazakhstan	inhumation
Bike III Kurgan 1	Altai Republic, Russia	inhumation
Bike III Kurgan 8	Altai Republic, Russia	inhumation
Bitak 155-XX	Crimea, Ukraine	inhumation
Chertomlyk "queen"	Dnipropetrovs'ka, Ukraine	inhumation
Filippovka 3-1	Orenburg, Russia	inhumation
Filippovka 4-4	Orenburg, Russia	inhumation
Filippovka 7-Central	Orenburg, Russia	inhumation
Filippovka 11	Orenburg, Russia	inhumation
Filippovka 16-4	Orenburg, Russia	inhumation
Ilekshar I-5-1	West Kazakhstan, Kazakhstan	inhumation
Issyk	Almaty, Kazakhstan	inhumation
Koktepe	Samarqand Viloyati, Uzbekistan	inhumation
Lebedevka II-6	West Kazakhstan, Kazakhstan	inhumation
Mirny 1	Chelyabinsk, Russia	inhumation
Nikolayevka II-2-2	Chelyabinsk, Russia	inhumation
Niyä 95MN1M3	Xinjiang Uyghur Autonomous Region, China	inhumation
Niyä 95MN1M5	Xinjiang Uyghur Autonomous Region, China	inhumation
Niyä 95MN1M8	Xinjiang Uyghur Autonomous Region, China	inhumation
Pazyryk 2	Altai Republic, Russia	inhumation
Pazyryk 6	Altai Republic, Russia	inhumation
Pokrovka 02-3-2	Orenburg, Russia	inhumation
Pokrovka 02-3-3	Orenburg, Russia	inhumation
Pokrovka 02-7-2	Orenburg, Russia	inhumation
Pokrovka 02-7-6	Orenburg, Russia	inhumation
Pokrovka 02-8-5	Orenburg, Russia	inhumation
Pokrovka 02-16-1	Orenburg, Russia	inhumation
Pokrovka 08-6-1	Orenburg, Russia	inhumation
Pokrovka 10-3-1	Orenburg, Russia	inhumation
Prokhorovka B-3	Orenburg, Russia	inhumation
Shumaevo II-3-6	Orenburg, Russia	inhumation
Shumaevo II-3-9	Orenburg, Russia	inhumation
Shumaevo II-9-11	Orenburg, Russia	inhumation
Shumaevo II-9-12	Orenburg, Russia	inhumation
Tillya Tepe II	Jowzjan, Afghanistan	inhumation

Tillya Tepe III	Jowzjan, Afghanistan	inhumation
Tillya Tepe V	Jowzjan, Afghanistan	inhumation
Tillya Tepe VI	Jowzjan, Afghanistan	inhumation
Ust'-Al'ma 620	Crimea, Ukraine	inhumation

INTRODUCTION

Inner Eurasia as defined in this project is a vast region, and it must not be assumed to represent cultural or linguistic continuity on the part of its inhabitants. Nevertheless, the mirror burials discussed in this chapter reveal many common mortuary practices among the nomadic and semi-nomadic societies of the steppes.

The topic of Inner Eurasian nomads inevitably leads to discussion of their most famous representatives, the Scythians. A brief look at the use of the term, however, reveals considerable complexity in the archaeological nomenclature. The first references to *Scythians* (*Σκύθαι*) around the Black Sea and in Asia Minor appeared in the 7th century BC (ibid: 74). In the first century BC, Strabo located the Scythians all across northern Inner Eurasia, from the Caspian Sea to what is now China's Xinjiang region (Strabo 11.8.2). However, he also stated that among the Scythians were many different subgroups with individual names. Similarly, during the first and 2nd decades AD, Ovid, living in exile on the coast of the Black Sea in present-day Romania, uses *Scythians* as a generic term along with more specific names for ethnic groups (Batty 1994: 91). Some of these "Scythians" did not actually speak the same languages, since Ovid says he found it necessary to learn both Getic and Sarmatian, while he describes both of these groups as Scythians (ibid: 91-92). Similarly, Herodotus states that the Persians referred to his *Σκύθαι* as *Σάκαι* (Sakai, or Saka) (Herodotus 7.64), suggesting that the Persians also used their term in a rather sweeping manner. Evidently, then, *Scythian* was used in antiquity to convey certain broad social characteristics, and not necessarily a single specific ethnic, linguistic, or cultural group (Batty 1994: 97).

The use of the terms *Scythian*, *Sauromatian*, and *Sarmatian* in the archaeological literature is nothing short of a web of confusion, with historical, linguistic, and artifactual lines of evidence cobbled together. On the one hand, drawing together multiple lines of

evidence is laudable; on the other, it is not always clear which is under discussion. And while the terms may be used with consistency by any one author, there is a lack of consistency across authors. Assumptions have been allowed to stand untested for decades. Fully problematizing this issue is a matter worthy of its own investigation, but a basic outline of the concepts *Scythian*, *Sauromatian*, and *Sarmatian* follows, considering the use of the terms chronologically, ethnoculturally, and archaeologically.

When these names are used chronologically, an ethnocultural meaning is often implicit. This is problematic since *Sauromatian* (Σαυρομάται) is simply the Greek form later rendered in Latin as *Sarmatae* (Sulimirski 1970: 21; Pliny the Elder IV.80). The names, then, were interchangeable. Ovid goes a step further and says that the Scythians were also contemporaries (*Tristia* II: 197-198, in Batty 1994: 105), which is supported by Herodotus who wrote that the people west of the River *Tanais* (Don) were Scythians, while those east of it, and around the Sea of Azov, were Sauromatians (Sulimirski 1970: 21). Based on the ancient accounts, then, Scythians and Sauro/Sarmatians were contemporaries, yet it is common in the archaeological literature to find chronological schemes that place the Scythian period earlier than the Sauromatian, which in turn preceded the Sarmatian (see e.g., Davis-Kimball and Yablonsky 1995 for one such). This only leads to unnecessary confusion.

Turning to the issue of the use of *Scythian*, *Sauromatian*, and *Sarmatian* as ethnonyms, the picture becomes more complicated. It is assumed here that historical and proto-ethnographic descriptions of the peoples around the Black Sea and on the steppes of Inner Eurasia were attempts at accurate representation (albeit perhaps with varying degrees of "spin" depending on the purposes intended for individual texts by their respective authors). Therefore, names such as *Scythians*, *Saka*, *Sarmatians* and so forth may have been transliterations of words actually in use by those various peoples. However, it is *not* accepted *a priori* that ancient writers necessarily understood the nuances of how those names related to the identity of individuals, groups, or geography. There are myriad possible answers to the question "Who are you?" or "What do your people call themselves?"—even more so when translation is involved. Wells (2001a: 75) compares the problem to a more recent example: "We know that Columbus' use [of the

name 'Indians' for indigenous Americans], and the near universal application of this name, failed to take account of the variation in language, religion, economy, social organization, political systems and material culture throughout the Americas."

It seems likely based on phonetic similarity Greek *Scythian*, Persian *Saka*, Indian *Śaka*, Chinese *Sai*, and Persian *Sogdian* (these being the English transliterations of the names in various languages) are cognates. The common (*Sak-*) root of the names Scythian, Saka, Sogdian, and Sai suggests that there was linguistic affinity among these groups, and at some time(s) perhaps even ethno-cultural affinity, though Szereményi (1980: 45-46) proposes that *Scythian* and *Sogdian* are derived from one root, **Skuda*, "archers," while *Saka* and perhaps *Sai* are derived from a different root, Iranian *sak-*, meaning "to go, roam," i.e., "nomads." Furthermore, personal names and words recorded by ancient Greeks and Persians lend further weight to a close linguistic relationship among a number of Inner Eurasian nomadic communities; they are thought to have been speakers of languages belonging to the Eastern Iranian branch of the Indo-European language family (Lubotsky 2002: 190). Sarmatian names recorded in Greek inscriptions along the northern Black Sea coast show similarities to modern Ossetic, which is classified as Eastern Iranian (Hinge 2005).

Leaving aside the issue of endo- versus exonyms, and how they related to emic identities, we come to the question of whether names from the ancient histories can be used for the sake of convenience; after all, the peoples in question were non-literate and have not left evidence of their own concepts of identity. In order to be used in such a manner by archaeologists, the names should correspond to distinct clusters of material culture, which will establish the chronological and geographical boundaries of each group. Based on excavations in the northern Black Sea area, a diagnostic cluster of artifacts was identified in the 1950s, i.e., the "Scythian triad": animal-style art, weapons, and horse harness (Yablonsky 2000: 3-4). Subsequently, whenever the triad was encountered, the site was labeled "Scythian"—Yablonsky considered this "misuse of the ethnonym…a disservice to the science" of archaeology (ibid: 4). Because burials of various cultures incorporated the elements of the Scythian triad, because the triad was found at sites far distant from Herodotus' *Scythia*, and because the triad pertained only to very wealthy

burials, its use as diagnostic resulted in the cultural mis-identification of burials from other cultures (ibid: 5). Because Herodotus believed that the Scythians of the Black Sea originated somewhere to the east, and were pushed west by tribal warfare, archaeologists have been seeking their roots in Inner Eurasia so fervently that material culture patterns which resemble those of the Black Sea region have been dubbed—perhaps erroneously—"Scythian" (ibid: 3-4). Unfortunately, attempts to formulate and propagate more specific terms, and/or the adoption of the concept of archaeological "horizons," have been largely unsuccessful when it comes to Inner Eurasia and eastern Europe (ibid). Instead, the term "Scytho-Siberian cultural complex" or—far more problematic—"Scytho-Siberian cultural unity" have found some currency (ibid; Kroll Lerner 2006: 12).

Adamson (2005: 50) states that "…while *technologically and culturally equivalent to the Scythians*, [the Sarmatians] were quite distinct in being one of the group of cultures in which it seems a significant degree of equality existed between the sexes" (emphasis added). Meanwhile, Baev (1986) states that no archaeological evidence for a single, coherent culture corresponding to what the ancients called "Sarmatia" has been found (cited in Batty 1994: 104, note 57). In any society, fluctuations in expressions of gender roles over time and space are to be expected. For example, the status of Mongol women changed radically when in the 13th century Genghis Khan established new laws to protect their rights (Weatherford 2010). American women in the 20th century have seen major changes in material culture associated with feminine gender. Such social transformation can happen within a single generation, without changing the ethnic identities of the individuals involved. On the other hand, clan affiliations among the Mongols are known to have shifted almost constantly (ibid), so changes in cultural identity are very possible. Insofar as writers in antiquity often used *Scythian* simply as an umbrella term for nomadic pastoralists, including Sarmatians, and that the principal difference between Scythian and Sarmatian mortuary remains is what archaeologists interpret as a greater degree of gender equality, we must consider the possibility that we are seeing, not distinct ethnocultural identities, but diachronic change (see Hanks 2002 for further discussion).

The general characteristics of Scythians and Sauro/Sarmatians are: nomadic pastoralism including horse husbandry, though with some small-scale agricultural activity in certain areas (Chang and Tourtellote 2000; Sulimirski 1970: 26); hierarchical status distinctions including an elite level conventionally termed "royal;" monumental elite tumulus burials ("kurgans") frequently containing horse harness, weapons, mirrors, personal ornaments such as headdresses and clothing plaques, assorted objects decorated with the so-called Scythian animal style, and, in the richest burials, horse and even human sacrifices. As mentioned above, after the 4th century BC, there is an increase in the number of female burials with weapons as grave goods. To assert a "Scytho-Siberian cultural unity" elides regional and local diversity, and what may have been many distinct cultures; on the other hand, because the lifestyle attributed Scythians, Sauro/Sarmatians, and later the Alans in the 4th century AD, as described by ancient authors, is virtually identical (Sulimirski 1970: 26), we may hypothesize that even over long stretches of time, the nomadic pastoral lifestyle could be broadly similar. We must conclude that unifying cultural elements existed alongside diversity, and that communities experienced fission and fusion through time (Kroll Lerner 2006; cf. Thurston 2009). And, as Karen Rubinson (2002) has cogently argued, "the meaning of mirrors can be arrived at only by studying the complete context in each case and *assessing the evidence on its own terms*" (Rubinson 2002: 68, emphasis added; see also Rubinson 1985, 2006, 2007).

Mirrors were already widely distributed across Inner Eurasia by the late second millennium BC; these mirrors were circular, either with no handle (more common in the south, e.g., Afghanistan) or with a loop in the center of one side of the plate (more common in southern Siberia), and ranged in size from 3 to 17 cm in diameter (Rubinson 1985: 46-47). It is not clear where these types of mirror originated, though southern Siberia and western China have been suggested (Jacobson 1995: 182; Rubinson 1985: 47). Around the end of the second millennium, the mirrors with suspension loops became infrequent in southern Inner Eurasia, though they continued in vogue in the north; from the 8th through the 5th centuries BC, they reappear throughout Inner Eurasia, and as far west as the Urals (Rubinson 1985: 47; 2006: 36). In this same period, the mirrors with lateral handles, which apparently originated in the eastern Mediterranean region, also

became more widely distributed, but remained concentrated in western Eurasia, especially around the Black Sea (Jacobson 1995: 182; Rubinson 2006: 37). By the period under consideration, Inner Eurasian/steppe mirrors show a variety of influences: Chinese, Greek, and Indian, as well as incorporating elements of the Scythian animal style. Direct imports from China and India are also found in Inner Eurasia.

The spread of mirrors after the 8th century BC is likely directly related to the spread of horseback-riding nomads and their contacts with civilizations at their periphery. At this time, archaeological and historical evidence combine to show major social transformations around the Inner Eurasian steppes, and nomads entered the annals of the Greeks and Near Eastern civilizations (Rubinson 2006: 32).

At the same time, there was a change in the placement of mirrors in burials relative to the body of the deceased. In many second millennium BC burials across Inner Eurasia and the steppes, the mirror was placed on the deceased's chest, while an increasing preference was shown for the head after the 8th century BC (Rubinson 2002: 70; 2006: 35). However, as this analysis shows (see Chapter 8), there was an increase in variability of mirror position relative to parts of the body after the 4th century BC, with a concomitant increase in mirrors placed on the chest.

Mirrors are found in Inner Eurasian burials belonging to males and females, adults and children, and in burials of various levels of wealth—although most are found with mature, wealthy adults (ibid: 68-71; see also Jacobson 1995: 182). At the site of Ulandryk (*ca*. 4th century BC) in the Altai, poor burials had wooden copies of mirrors (ibid: 70; Hajdas et al. 2004). Although mirrors are important elements in an Inner Eurasian shaman's regalia (Eliade 1964: 153-154), the fact that everyone at Ulandryk had been provided with a mirror or pretend mirror suggests they had other uses and meanings (Rubinson 2002: 71). The Ulandryk cemetery also demonstrates the variability in mortuary mirror use even within sub-regions of Inner Eurasia, in this case, the Altai. Thus, as Rubinson notes, the context of any given mirror is more than just the burial in which it was found (ibid: 72).

Jacobson (1995: 182) notes that Inner Eurasian mirrors are generally lacking in the kind of decorative elaboration seen on other media, such as gold jewelry, opining that

"the mirror had limited and practical functions within the lifetime of its owner and within the burial ritual; in the latter context, it may have been thought to have protective properties." While it is true that Inner Eurasian mirrors typically lack the sort of imagery that could be textually "read," this does not necessarily mean that their functions were limited. The use of mirrors in Japanese burials and in myth-histories show that their social significance—primarily ritual-religious in nature—was not at all linked to their ornamentation (which were usually Chinese in origin/meaning); thus by comparison we may suggest that the lack of elaboration on "Scythian" mirrors does not necessarily correlate with the scope of their powers. Moreover, even if their functions were limited in number, this does not necessarily mean that they were limited in magnitude.

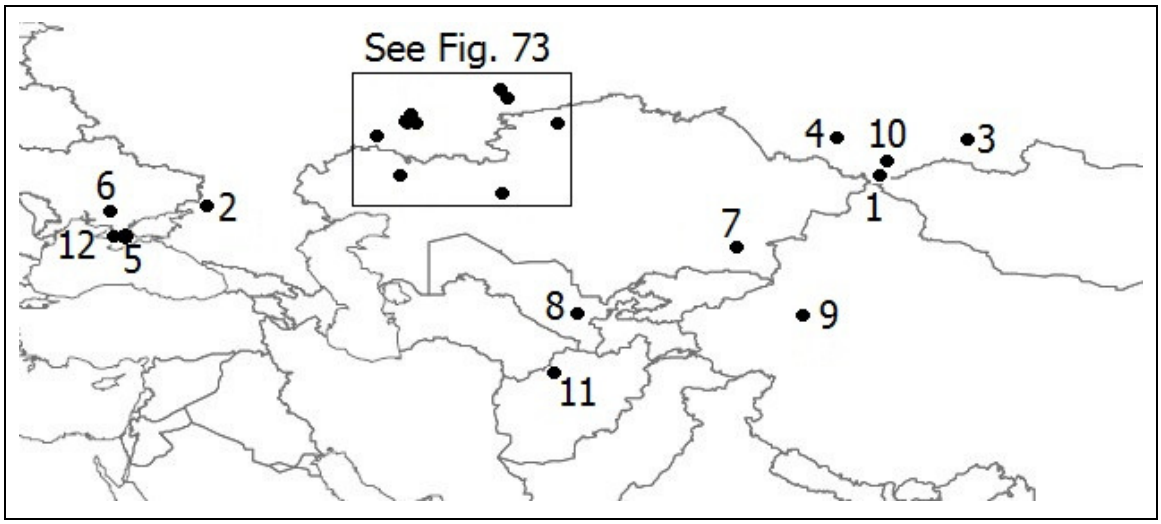

Figure 70. Map of Inner Eurasia and the steppes, showing sites discussed in Chapter 5. 1. Ak-Alakha, 2. Aksai, 3. Arzhan, 4. Bike, 5. Bitak, 6. Chertomlyk, 7. Issyk, 8. Koktepe, 9. Niyä, 10. Pazyryk, 11. Tillya Tepe, 12. Ust'-Al'ma.

BURIALS

Bekteniz (8th-7th centuries BC)

The central burial from Kurgan 1 at the Bekteniz cemetery (North Kazakhstan) contained an extended supine inhumation with head oriented to the northwest (Tairov and Bushmakin 2002: 182). This burial is older than most included in the present analysis,

but is still within the usual dates assigned to the Iron Age. Moreover, as will be seen, it bears marked similarities with other burials considered here. It has been included in order to demonstrate the continuity in Iron Age burial practices in the south Ural region. A disk-shaped bronze mirror with a raised lip and a loop handle in the center was found in a leather bag between the individual's right hip and arm (ibid: 182-183). At the right shoulder was an oval stone "altar" containing traces of gray-blue paint and a bone pipe containing more of the same paint (ibid). Polishing on the pipe suggests repeated use (ibid: 182). The pipe had been plugged at one end with a wooden stopper, while the other end was fitted with a curved wooden point, which the authors hypothesize may have been used for tattooing (ibid: 182, 189). The paint consisted of azurite, charcoal, and small amounts of malachite and quartz, ground to a powder (ibid: 182-183). Given the presence of paint traces in the stone "altar," it might perhaps better be interpreted as a palette.

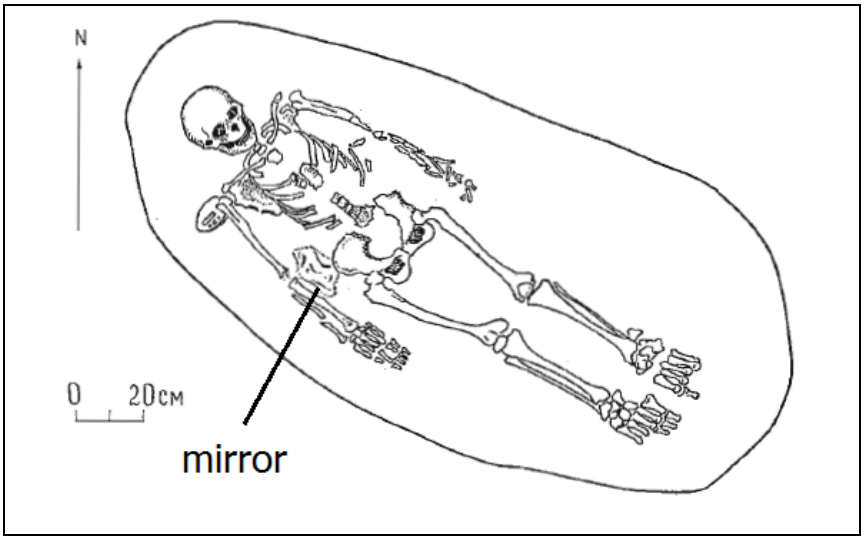

Figure 71. Plan of the Bekteniz Kurgan 1 central burial (after Tairov and Bushmakin 2002: 183).

The presence of a mirror in conjunction with body painting or tattooing equipment may suggest that the mirror should be thought of as a "technology of the body," as Hill (1997) suggested for mirrors in early Roman Britain. Of course, use in the process of body decoration does not rule out other uses or meanings for mirrors.

Arzhan (7th century BC)

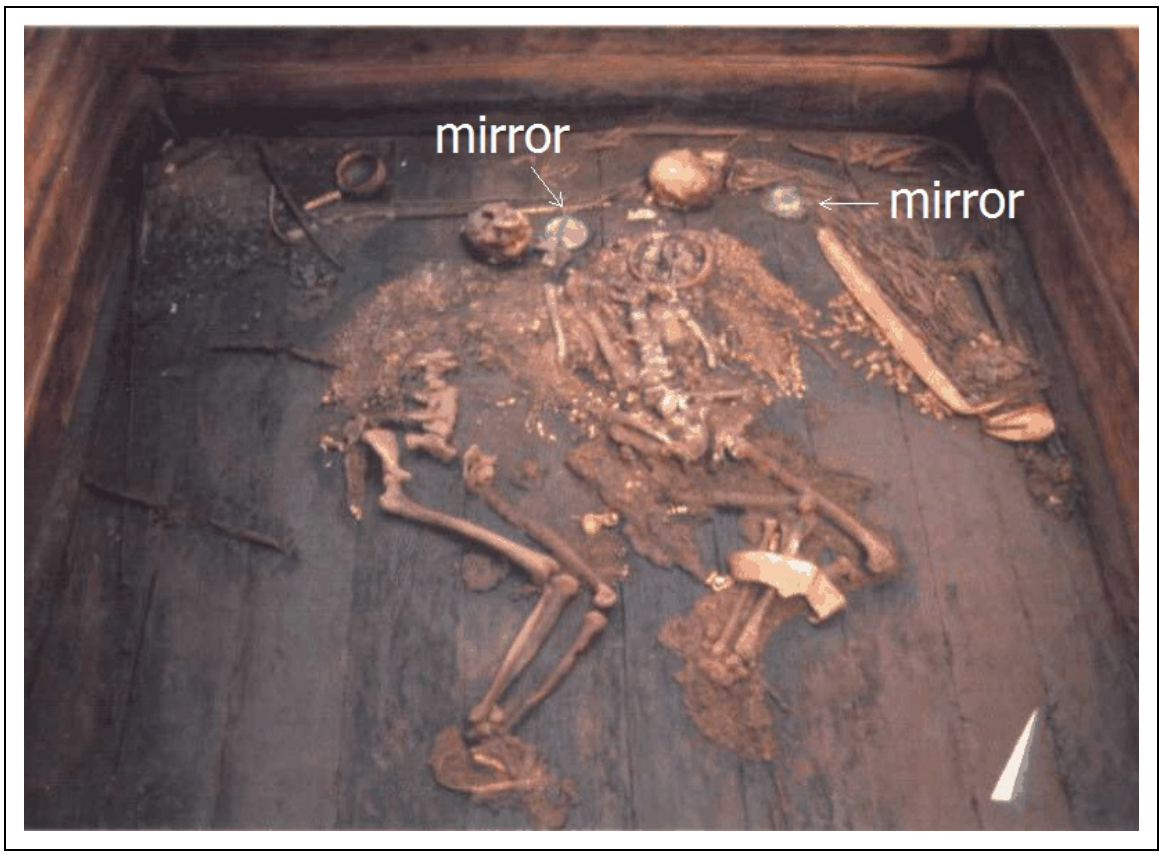

Figure 72. Plan of the Arzhan 2 burial (Chugunov et al. 2006).

The Arzhan kurgans (Tuva Republic, Russia) are arranged in "long parallel chains across the plain" and the cemetery was evidently in use for centuries (Chugunov et al. 2001: 39). The Arzhan 2 kurgan was surrounded by three or four concentric stone circles, while the kurgan itself is unusual in that it was constructed with a platform of slab stones and clay covered with earth (ibid: 40). It measured 80 m in diameter and over 2 m high (ibid). Burial 5 was happily unlooted and was extremely rich—over 9,300 gold objects, not including "uncountable" tiny gold beads, were recovered (ibid: 41-42). The burial, dated to the 7th century BC, featured good preservation of wood, but not bones or textiles (Zaitseva et al. 2004).

Two individuals, a male and female, were interred within a chamber built of larch wood, possibly hung with curtains (Chugunov et al. 2001: 41). The bodies had been

placed in a semi-flexed position on their left sides. Their clothing had been richly ornamented with gold appliqués: 5,000 plaques shaped like panthers forming vertical stripes on the front, and "wings" on the back of the clothes of both individuals, tiny gold beads on the man's trousers, and sheet gold bands on the tops of his boots. In addition, both wore headdresses decorated with gold animal appliqués in the shape of horses, stags, and panthers (Chugunov et al. 2001: 41 and 2006: 131).

The man wore a heavy gold neckring decorated with horses, stags, rams, boars, camels, panthers, and wolves. The woman wore earrings and necklaces made of gold, turquoise, garnet, malachite, and Baltic amber beads (Chugunov et al. 2001: 41 and 2006: 131; Shredinsky et al. 2004). On her belt was an iron knife and next to her were leather vessels holding grain, a gold pectoral, wooden ladle, and stone censers; the man had a bow, quiver, and battle axe attached to a belt, and an *akinakes* sword, knife, and arrowheads—all made of iron decorated with gold. In the western corner of the chamber were three large amber beads, a gold-handled wooden cup, a gold comb with wooden teeth, and a pile of seeds, including wild pistachio and perhaps poppy (Chugunov et al. 2001: 41).

Bronze mirrors had been placed just to the left of both individuals' heads (Chugunov et al. 2006: 131). The mirror next to the woman was larger than the other and had a gold handle (Chugunov et al. 2001: 41).

Lebedevka II (Esen-Amantau) (5th century BC)

The Lebedevka burial ground is located on the Esen-Amantau plateau, near the confluence of the Ural and Ilek rivers in present-day Kazakhstan, (Gutsalov 2007: 75). Thirty-seven burial mounds have been discovered, stretching over a kilometer in an east-west linear arrangement (ibid: 75-76).

Burial mound 6 is the largest and is located at the center of the Lebedevka II group; it measures 30 m in diameter and 2.25 m high (ibid: 76). The tomb consists of an inner and outer chamber, with walls made of unfired brick and a ceiling of logs overlain with branches (ibid: 78). Within the inner brick-walled chamber was a third chamber of timber, containing the burial of a single individual (ibid). The individual was

accompanied by a wide variety of grave goods, including cattle and sheep bones, an iron knife, whetstones, spindle whorls, "golden plates," glass and clay vessels, beads of various materials, *Gryphaea* shells, one of which contained red ocher, long pendant gold earrings or headdress pendants, gold appliqué plaques, "ritual pebbles," and a bronze mirror (ibid: 78-80). Near the head was a cluster of gold plates and beads of different colors, apparently a headdress (ibid: 79). More gold plates and beads around the neck and chest indicate necklaces (ibid).

Figure 73. Map of South Urals sites. 1. Bekteniz, 2. Filippovka, 3. Ilekshar, 4. Lebedevka, 5. Mirny, 6. Nikolayevka, 7. Pokrovka, 8. Prokhorovka, 9. Shumaevo.

The mirror has a projecting handle decorated with animal-style motifs (Fig. 75). At the proximal end is a ram or goat, while the distal end is shaped like a boar. The handle shaft resembles two parallel braids (ibid: 76).

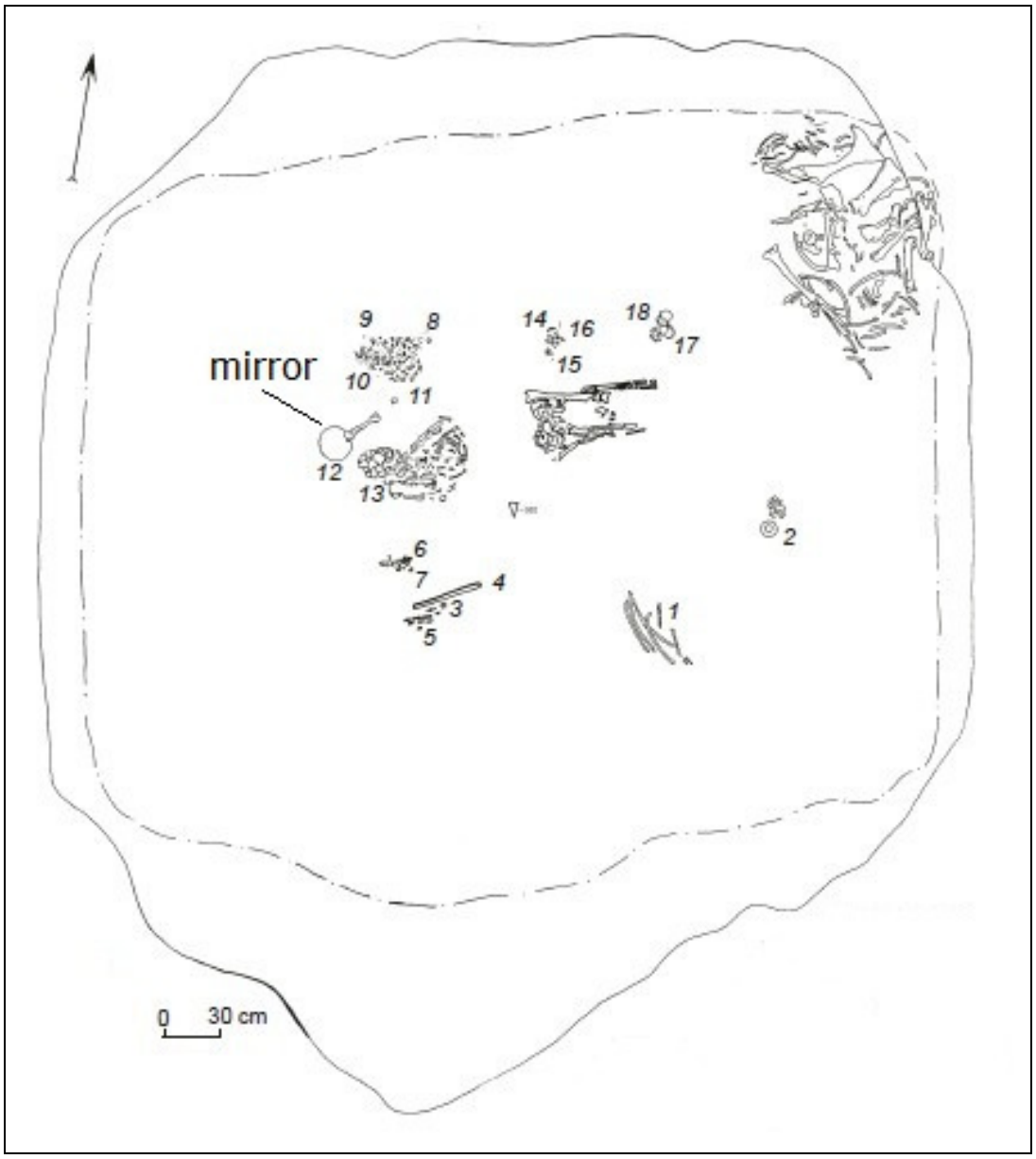

Figure 74. Plan of the Lebedevka II Mound 6 burial (after Gutsalov 2007: 79).

Gutsalov (2007) does not describe the skeletal materials in any detail, but from the published burial diagram it appears they were not well preserved (ibid: 79). The individual's sex—if known—is not specified. The assemblage of grave goods includes items of both quotidian and potentially ritual use, but is most characteristic of a female. That is, aside from one or two iron knives, there are no weapons present, while spindle whorls are rarely associated with males. However, gender does not appear to be strongly

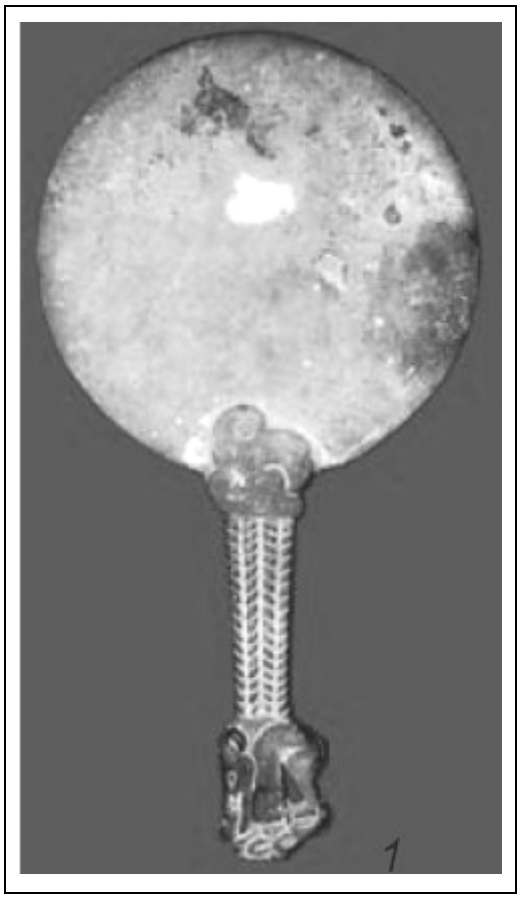

Figure 75. The Lebedevka II mirror (after Gutsalov 2007).

associated with grave good assemblage in the south Ural region during the mid-first millennium BC, so this conclusion remains tentative.

Filippovka (5th-4th centuries BC)

Filippovka, Russia is located at the southern end of the Ural range, near the confluence of the Ural and Ilek Rivers, close to the Kazakhstan border. The cemetery contains 29 barrows dating ca. 550-300 BC (termed the "Early Sarmatian" period) and is located on elevated ground (Pschenichniuk 2006: 40; Yablonsky 2010: 130-131; see also Pschenichniuk 2000). Kurgan 1 is the largest, and evidently the central, mound, with the remainder arranged in a rough arc to its west, north, and east (Pschenichniuk 2006: 40). As at other sites in the area, a number of the Filippovka kurgans' wooden ceilings show evidence of having been scorched in antiquity. That is, they were not burned, but must have been subjected to high heat after earth had been piled over them, but before the grave had sunk; Pschenichniuk concludes the fires were set by grave robbers. Indeed, many of the central burials were robbed, probably shortly after the burial was sealed, and Kurgan 1 was robbed no fewer than five times (ibid: 43).

Kurgan 3, Burial 1. Burial 1 is the central burial of Kurgan 3. Here the human remains were poorly preserved and the grave disturbed by robbers. Nevertheless, archaeologists were able to determine there had originally been at least seven individuals interred in the burial, laid in extended position with heads to the south. Based on grave goods they concluded that there were at least two men and one woman (ibid: 42). Items

left behind by the robbers included remains of quivers, wooden bowls, gold jewelry, iron armor, and iron knife and sword, bronze pendants, and a handled bronze mirror. The burial diagram indicates that the mirror was found near human arm bones. Close to the mirror were parts of two quivers, wooden bowls, and some bronze jewelry (ibid: 45).

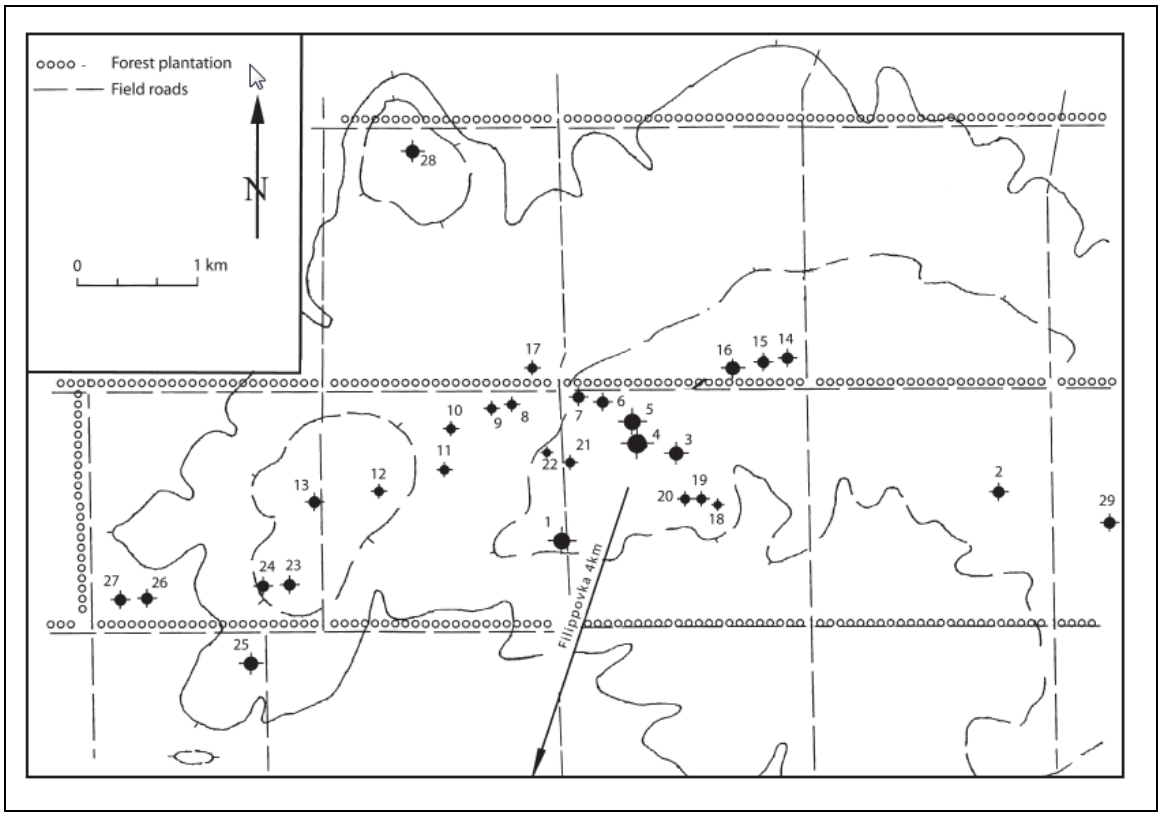

Figure 76. Plan of the Filippovka cemetery (Yablonsky 2010).

The mirror, dated to the 4th century BC, has a silvery color. The reverse of the mirror plate was engraved with geometric (or "floral") motifs surrounded by birds and other animals, while engraved on the obverse of the handle were two human figures with bird heads (Pschenichniuk in Aruz et al. 2000: 168 and plate 110).

Kurgan 4, Burial 4. Kurgan 4, due to its large size, was termed "royal" by excavators (Yablonsky 2010: 133). It had a circular roof constructed of radially-oriented logs, which had been burned sometime in antiquity. In the southwestern quadrant of the kurgan, excavators discovered a "sacrificial assemblage" consisting of an animal skin and

the claws of some large predator. On top of the animal skin was the skeleton of a large bird of prey and pieces of horse harness made of bone, bronze, and iron—altogether about 200 objects. In addition, bones of at least nine horses were found on the south side of the mound. The nine skulls were aligned to face north (ibid: 134-135).

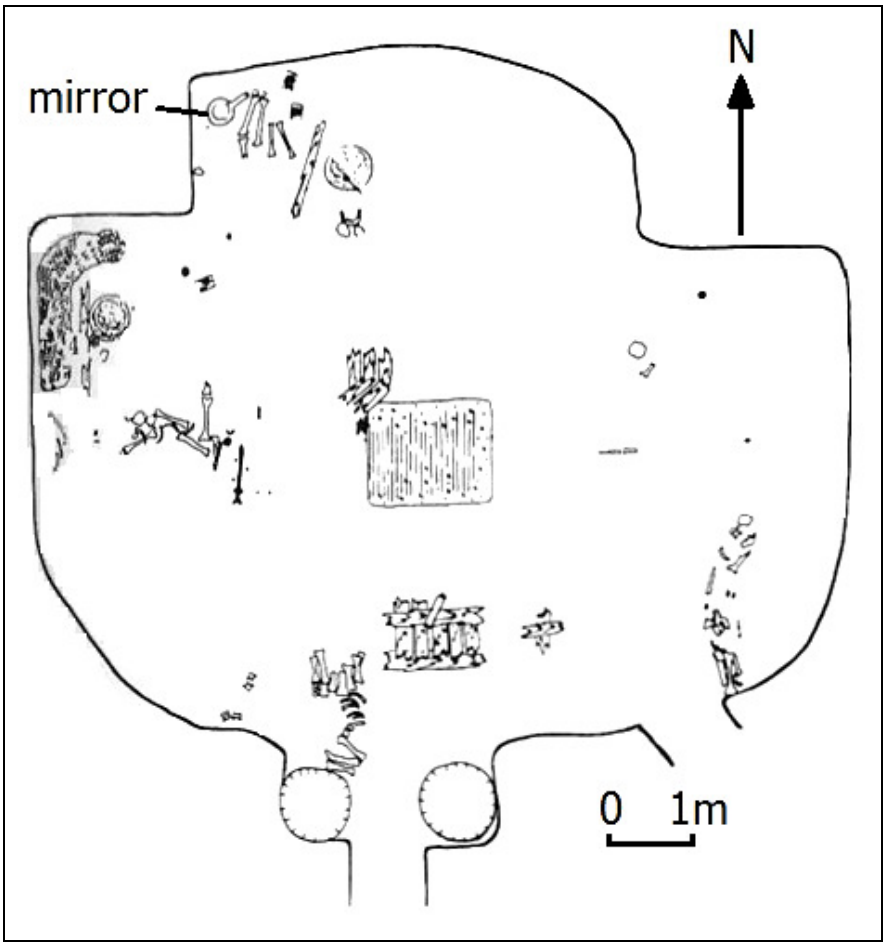

Figure 77. Plan of Filippovka Kurgan 3, Burial 1 (after Pschenichniuk 2006).

The mound covered five burials; Burial 5 was the primary grave and the remaining four were secondary burials. Burial 1 was dated to the early Middle Ages, and the rest to the Early Sarmatian period (ibid: 135). Burial 4, located on the western side of the mound, was fortunately unlooted; this may be due to the grave's depth. It was dug through the mound and 4 m beneath the ancient soil surface. The burial pit was roofed with logs (ibid: 138).

Burial 4 contained two individuals, a young male and young female, in extended supine position with heads to the south. Near the head of the male was an iron *akinakes* sword and above it, a spouted silver vessel. Originally double-handled, the vessel had lost one of its handles in antiquity and the evidence of the breakage soldered and polished. The remaining handle is decorated with a three-dimensional figure of a bull. This vessel is dated ca. 450-350 BC. Another sword lay across the man's hips, and a quiver with 98 bronze arrowheads of various types was placed by his right arm. The man wore a cast gold neckring with ram terminals, and cast gold bracelets. One of the bracelets is decorated with ram terminals as well, the other with unidentified animal. Similar bracelets have been dated to 400-350 BC (ibid: 138-139).

At the male individual's feet were two wooden bowls. One contained beads, pearls, and pieces of unidentifiable iron objects, while the other contained a round silver mirror with an attached bone handle. The mirror is engraved with a wolf. Gold beads, red paint, and pieces of anthracite were also found. Yablonsky identifies these articles as typical of Sarmatian women's burials and finds it curious that they were placed at the feet of the male (ibid: 139).

The female, aged 18-20, was buried next to the male, and wore a cloak decorated with gold and enameled gold plaques depicting lions and tigers. A fluted cast gold neckring had terminals in the shape of lions, and she wore cast gold bracelets with goat-shaped terminals. At her feet were various beads, a bronze pendant shaped like a duck, and a heap of bronze bells. On the eastern side of the grave was a large iron spearpoint (ibid: 140).

Kurgan 7, Central Burial. The burial chamber is roughly cross-shaped and contained the skeletons of six individuals buried in extended supine position: two in the north niche (Individuals V and VI), three in the west niche (Individuals I-III), and one (Individual IV) laid diagonally between the two niches. All the individuals had their heads oriented towards the center of the burial chamber, except Individual IV, whose head pointed roughly west. Individuals III and V were provided with mirrors.

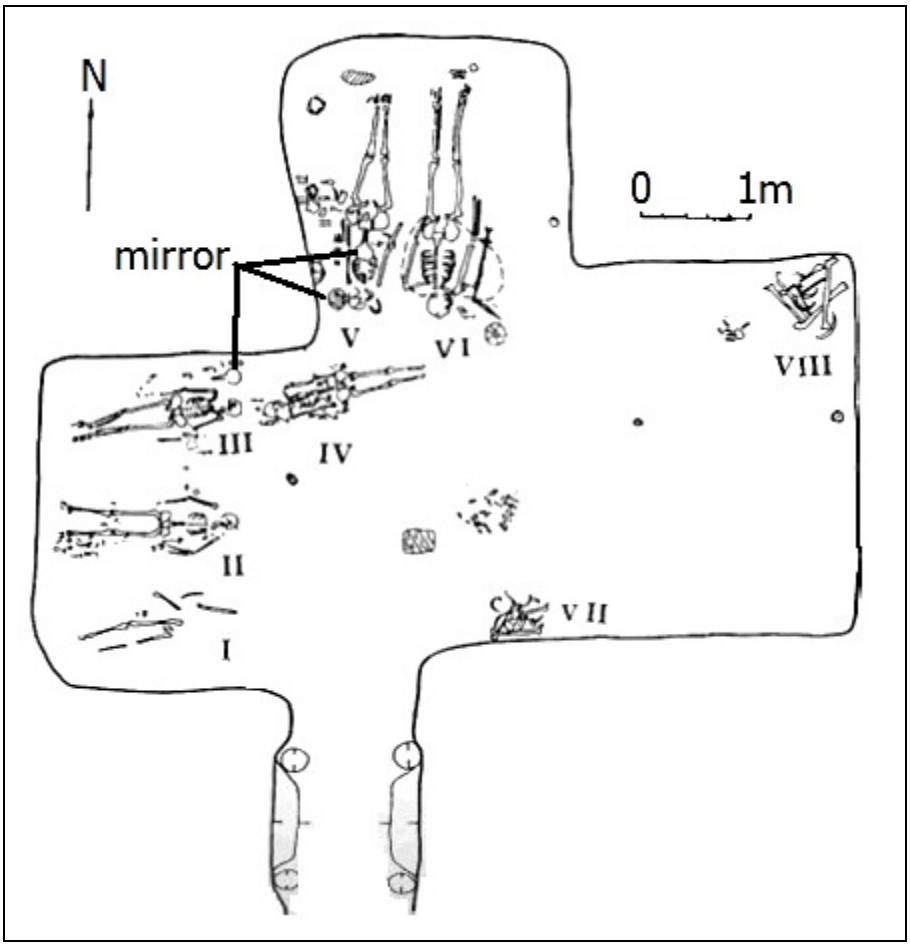

Figure 78. Plan of Filippovka Kurgan 7, central burial (after Pschenichniuk 2006).

Individual III occupied the northernmost position of the three burials in the western niche. A round mirror with a projecting handle was placed to the left of the individual's head. Other grave goods placed around the skeleton included the remains of a leather bag, beads, an iron knife, and gold earrings (Pschenichniuk 2006: 45).

Individual V lay on the west side of the north niche and had two handled mirrors. The first was placed to the right of the skull, with the head lying on top of the handle. The second mirror had been placed on the stomach with the handle oriented downwards. In addition, this individual was accompanied by fragments of a stone altar, a quiver with bronze arrowheads, an iron knife, two ceramic vessels, and a bronze cauldron, making it the most richly outfitted in the burial (ibid: 45).

Kurgan 11. The grave here contained four individuals and an assortment of goods, including horse harness, arrowheads, armor, pottery from Inner Eurasia and the Caucasus, and a bronze mirror. It is dated stylistically to 450-300 BC (Yablonsky 2010: 131).

Kurgan 16, Burial 4. The primary burial of the kurgan was looted, but the secondary burials along the edges of the mound remained intact. Burial 4 contained a female aged 50-60 years old at death, along with a tattooing kit. The kit included an iron knife, a bone needle with its tip bound inside a leather bag, a bone spoon, a stone palette with round hollows, evidently for containing different pigments, and a bronze mirror (ibid: 133).

Pokrovka (6th-2nd centuries BC)

The site of Pokrovka lies at the confluence of the Ilek and Khobda rivers, tributaries of the Ural, in the Orenburg region of present-day Russia, near the border of western Kazakhstan. The Ural range (with Pokrovka at its southern end) conventionally defines the border between Europe and Asia. Although the land is now under cultivation, it was formerly dry steppe (Davis-Kimball and Yablonsky 1995: 19); it is located close to valuable resources including copper, iron, and workable stone in the foothills of the Urals (Morgunova and Khokhlova 2006: 303). Thirteen tumulus cemeteries had been discovered at Pokrovka as of 1993, and attributed to various nomadic cultures spanning the Bronze Age, Iron Age, and medieval period (Davis-Kimball and Yablonsky 1995: 17, 25).

The Iron Age burials are broadly classed as "Sauro-Sarmatian," that is 6th-5th centuries BC (Davis-Kimball and Yablonsky 1995: 18). The problems inherent in using such names have already been discussed in Chapter 2. Most tumuli contain multiple burials, and occasionally Bronze Age kurgans were reused during the Iron Age (ibid). Generally, grave goods include:

> bronze and iron weapons and tools, complete or fragments of bronze mirrors deliberately broken before being placed in the burial, cast bi-metal and carved bone objects, and beads manufactured from stone, bone, glass, and faience….Other mortuary offerings such as meat is [sic] evidenced by remaining animal bones and liquids placed in the mortuary pots (ibid).

No habitation sites have been found in the vicinity of the Pokrovka burial grounds. The excavators concluded that Iron Age nomadic communities would have been resident only during spring and summer, during which time the burials must have taken place.

Jeannine Davis-Kimball, who excavated at Pokrovka and who is the author or co-author of all the English language publications on the site, has focused on determining the social statuses of Iron Age nomadic Eurasian women (e.g., Davis-Kimball 1998a and b, 2000, 2002; Davis-Kimball et al. 1995; Davis-Kimball and Yablonsky 1995). For example, she has delineated the categories "woman of the hearth," "priestess," and "warrior woman," as well as combinations such as "priestess of the hearth" and "warrior priestess" (Davis-Kimball 1998a and b, 2002). The presence of weapons in a burial were taken as an indicator of warrior status, "cultic" objects such as mirrors, amulets, and altars were considered accoutrements of priestesses, while quotidian objects like spindle whorls and loom weights were connected with the "hearth," i.e., domesticity and traditional femininity (hearth, warrior, and priestly statuses could also be applied to males) (Davis-Kimball 1998a).

The difficulty with such an approach is that it presupposes the function and meaning attached to certain object classes. If a bow and arrows are assigned to "warrior" status, we may overlook their use in hunting, for example. Artifacts, furthermore, may have symbolic associations: Spindle whorls are used in making textiles, but textile production has social meaning outside the domestic context. In early medieval Scandinavia, textile work was associated with *seiðr*, a magical practice, and thus the "quotidian" spindle whorl could also be seen as "cultic" (Heide 2006: 167). Certainly mirrors have had both mundane and magical uses. The juxtaposition of these object categories in individual burials (e.g., weapons and spindle whorls) suggests that social identity among Iron Age nomads was far more complex than Davis-Kimball's categories suggest. And finally, grave goods do not necessarily directly represent an individual's occupation or status during life (e.g., Arnold 1995, 2001; Crass 2001; Flowers 2005; King 2004; Robb et al. 2001).

Davis-Kimball's main point is that "Sarmatian" burials indicate considerably more gender equality than is evident among more sedentary contemporaries, or among

their "Scythian" predecessors, because some 20% of "Sarmatian" weapon burials are of females (Adamson 2005: 40-41). In part this points to the need for biological assessment of sex using skeletal remains, so as not to allow traditional gender biases to underestimate the presence of women's burials; but, according to Davis-Kimball (e.g., 2002), a woman warrior is the equal of a man in her society. Unfortunately, we do not know the details of warrior status in any Iron Age society, much less the way this related to gender identity.

Pokrovka 02, Kurgan 3, Burial 2. The 02 cemetery includes 15 kurgans situated on a terrace overlooking the Khobda River (Davis-Kimball and Yablonsky 1995: 26-27; Davis-Kimball 1998b: n.p.). Mirrors were found in Kurgan 3 (Burial 2), Kurgan 7 (Burials 2 and 6), and Kurgan 8 (Burial 5), excavated in 1993 and 1994.

Burial 2 contained the burial of a "priestess," so identified due to the presence of a mirror, fossilized shells, and amulets (Davis-Kimball 2002b: 337). The woman was buried wearing gold pendants at her temples, and gold plaques in the shape of felines were found around the neck (ibid). There was also an object identified as a portable stone altar (ibid; Davis-Kimball 1998a). The mirror—a large flat bronze disk with incised lines around the rim—and the altar were located in the northwestern corner of the burial, in a niche above and to the left of the woman's head (Davis-Kimball 1998a). The woman was laid in extended supine position with her head oriented to the west (ibid).

Pokrovka 02, Kurgan 7, Burial 2. The individual in Burial 2 was a female, identified as a "hearth woman," whose social role included domestic duties. Grave goods included imported semi-precious stone beads, a spindle whorl, bronze ornaments, and a fragment of a deliberately broken bronze mirror (ibid).

Pokrovka 02, Kurgan 7, Burial 6. This burial contained the body of a teenage girl, along with a variety of grave goods: animal bones, and iron knife, a spoon made from an animal scapula, a spindle whorl, a boar's tusk, beads of imported material, and a handled bronze mirror. The mirror was placed under the young woman's upper back. This

individual was identified as a "priestess" because of the presence of the mirror, "cultic" spoon, and probably the boar's tusk (ibid).

Pokrovka 02, Kurgan 8, Burial 5. This burial contained the body of a woman, along with iron arrowheads, jet beads, gold foil covered earrings, an iron knife, a spindle whorl and loom weight, and a fragment of a deliberately broken bronze mirror. Because of the presence of arrowheads, the woman was identified as a "woman warrior" (ibid).

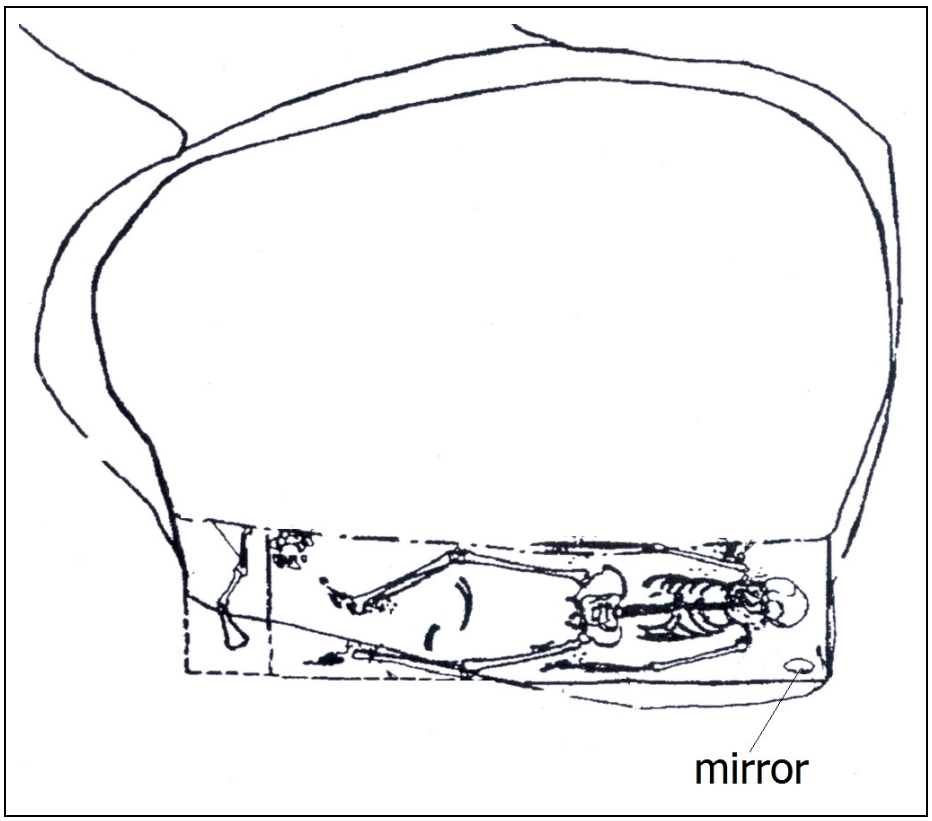

Figure 79. Plan of Pokrovka 08, Kurgan 6, Burial 1 (Davis-Kimball and Yablonsky 1995).

Pokrovka 08, Kurgan 6, Burial 1. This cemetery contains six kurgans with 21 burials; all were excavated in 1992. It lies on a lower terrace than cemetery 02 (Davis-Kimball and Yablonsky 1995: 17, 30). Only one burial, Kurgan 6 Burial 1, contained a mirror.

Kurgan 6 measured 18 m in diameter but only 32 cm high and contained five burials (ibid: 83). Burial 1 was located in the southwestern quarter of the mound and

dated to the 4th-2nd centuries BC (ibid). The skeleton, identified as a female 16-17 years old, was interred within a wooden coffin. The interior of the coffin was painted red, possibly with ochre or cinnabar. The grave goods included bones of a sheep and another, unidentified but larger, domestic animal; a bronze buckle, bronze earrings, and a bronze animal-style plaque; a bone portion of a comb, decorated with symmetrical birds; a ceramic vessel; a needle; a lump of chalk; and hundreds of beads, many of glass and coral (ibid: 84). Beads at the ankles, wrists, and neck may have originally been sewn at the openings of a garment. To the left of the woman's head was a fragment of a bronze mirror, roughly semi-circular in shape (ibid: 145). There appears to be an engraved line running parallel to the edge of the rim, but otherwise the fragment is undecorated (ibid: 155).

Figure 80. Pokrovka 10, Kurgan 3, Burial 1 (after Davis-Kimball 1998b).

Pokrovka 10, Kurgan 3, Burial 1. Cemetery 10 was unusually large, containing 97 kurgans (Davis-Kimball 1998b: n.p.). Burial 1 in Kurgan 3, dated 4th-2nd centuries BC, contained the skeleton of a middle-aged woman in "horseback-riding" position—that is, with legs flexed and knees apart. Next to the woman's left hand lay a bronze handled mirror (ibid).

Ilekshar I (5th century BC)

The Ilekshar I cemetery is located near the village of Ulguli, near the Lebedevka burial site at the confluence of the Ilek and Ural Rivers (Gutsalov 2007: 81). Sixteen mounds form a line running along the river for 420 m (ibid).

The cemeteries of the Ilek river region in the mid-first millennium BC (i.e., Pokrovka, Lebedevka II, Filippovka, and Ilekshar I) all share a common linear east-west arrangement. The largest mounds are located at the center of the groups, suggesting that these may be the earliest and/or most elite burials. However, there was considerable cultural heterogeneity in the southern Urals, as revealed in the construction methods used for building burial chambers within the mound (ibid: 90).

Mound 5 is not one of the largest mounds at Ilekshar I (at 31 m diameter and 1.25 m high), though it lies close to the center of the cluster (ibid: 86). Periodic reuse of Bronze Age mounds is not uncommon in the southern Urals (Morgunova and Khokhlova 2006: 306), and the Iron Age burials in Mound 5 had obliterated an earlier Bronze Age grave (Gutsalov 2007: 86). Apparently after the mound was constructed, another burial construction was introduced to the south of the center of the tumulus; on a rectangular platform covered with a layer of bark up to 5 cm thick was a chamber of logs, the whole surrounded by an earthen wall with a gap on its south side (ibid). This construction contained three burials (Burials 1, 2, and 4) (another burial occupied the mound outside of the chamber) (ibid). All three burials have been dated to the first half of the 5th century BC (ibid: 89). Associated with the construction, but not clearly linked to any specific individual, were a horse harness and bones of horse, sheep, goat, cow, and possibly wild boar (ibid: 86).

Burial 1 occupied the northeastern corner of the chamber, lying extended on a birch bark mat. Near the head a bronze handled mirror (Fig. 81) overlay a *Gryphaea* shell containing traces of ocher (ibid). Beads lay around the individual's neck, and at the feet, a stone "sacrificial plate" resting on a tripod next to two bronze arrowheads (ibid).

By comparison, Burial 2 similarly lay on a birch bark mat, on the western side of the burial construction, but apparently without grave goods. Both Burials 1 and 2 were laid out on the original ground surface (ibid). Burial 4, however, was a pit reaching 24

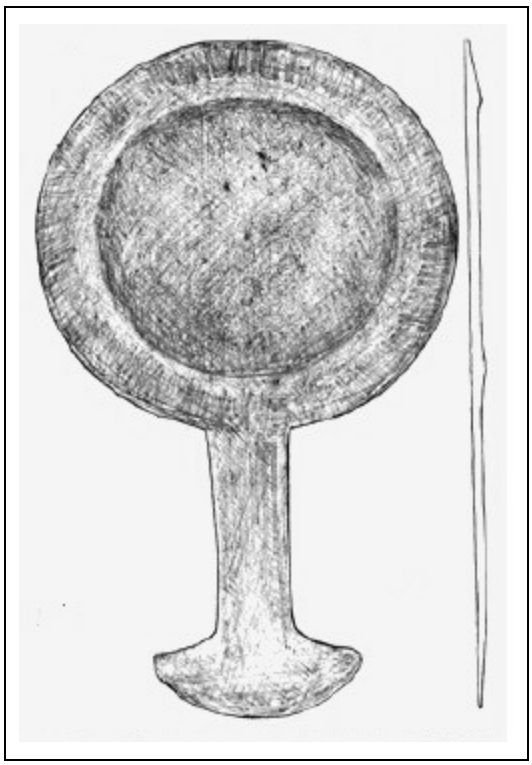

Figure 81. The Ilekshar I mirror (after Gutsalov 2007: 88).

cm below the original ground surface, and surrounded by a construction of birch and poplar logs. This individual was accompanied by fragments of an iron sword (ibid: 86-87).

None of these burials is particularly wealthy, but many of the mounds at Ilekshar I were plundered in antiquity. The individual in Burial 1 seems to have been accompanied by objects for ritual use, but these do not indicate gender or age.

Mirny (5th century BC)

Kurgan 1 was an earth mound covered with stone, under which a circular ditch was discovered (Tairov and Bushmakin 2002: 177). Within the ditch was a supine extended inhumation with head oriented toward the west. The skeleton was identified as that of a male (ibid). In the northwestern corner of the grave, approximately 25 cm to the left of the skull, lay an inverted stone "altar" with traces of red paint (ibid: 177-178). Next to it was a simple bronze disk mirror in a leather case; within the case and under the mirror was a yellow crystalline substance containing a "great number" of fly chrysalises, fragments of wood, and fine wool (ibid). Close to the mirror, fragments of *Gryphaea* shell were found mixed with another mineral substance (ibid: 177). Finally, this group of artifacts included an iron knife and a white oval pebble (ibid). In the southwestern corner a handmade pot stood upright, and two ram carcasses were laid along the southern wall of the grave (ibid). Beads were found in the region of the neck and scattered in the grave fill (ibid).

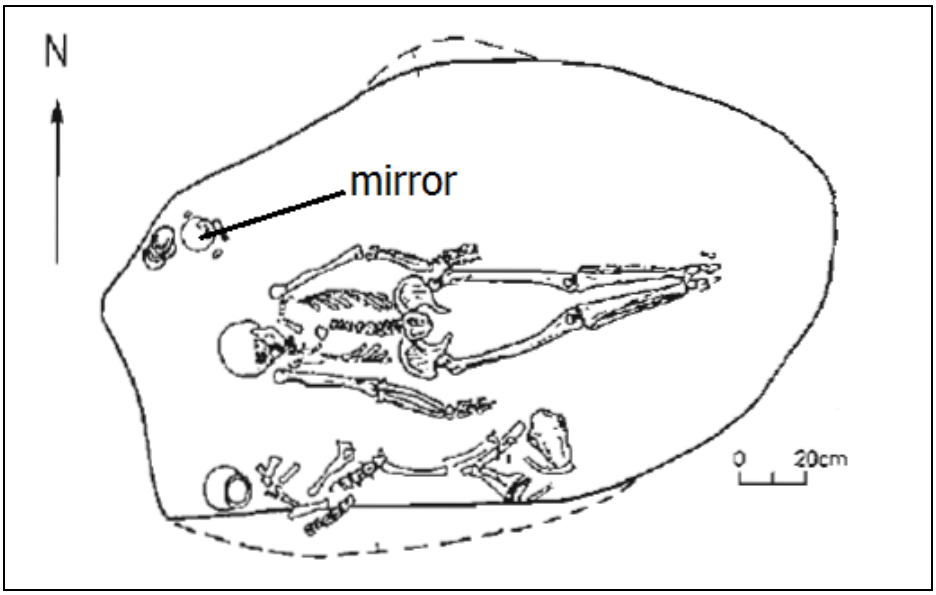

Figure 82. Plan of the Mirny Kurgan 1 central burial (after Tairov and Bushmakin 2002).

Nikolayevka II (5th century BC)

The burial with a mirror was dug into an earlier Bronze Age tumulus (Kurgan 2, secondary burial 2) (Tairov and Bushmakin 2002: 180). In an oval grave lay a skeleton in extended supine position with head oriented toward the northwest (ibid). The sex of the individual, if known, is not given. In the neck region, white paste beads were found (ibid). The mirror—a simple bronze disk with flat handle—had been placed between the right hip and forearm (ibid). The handle of the mirror was pierced (ibid: 181), perhaps to allow it to be suspended. Between the right femur and hand lay a bone pipe filled with gray-blue mineral powder, a "pounded natural aggregate" of azurite, malachite, and quartz, which Tairov and Bushmakin (2002: 180) term an "artificial paint." Finally, a flat stone "altar" was found beside the right knee (ibid).

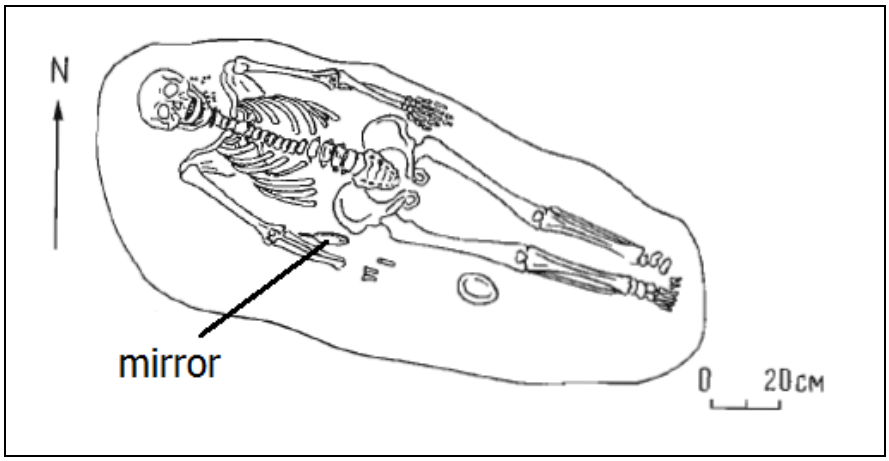

Figure 83. Plan of Nikolayevka II, Kurgan 2, Burial 2 (after Tairov and Bushmakin 2002).

It is interesting that the Nikolayevka II-2-2 burial contained virtually the same assortment of grave goods, including the composition of the mineral paint, as the Bekteniz Kurgan 1 burial, although Nikolayevka postdates Bekteniz by as much as three centuries. The Nikolayevka mirror is of a more "western" type, insofar as the handle projects from one site of the mirror plate, while that at Bekteniz is an early or perhaps "eastern" type with a central loop. This is probably less an indicator of chronological change and more reflective of the variety of mirror forms found in the south Ural/North Kazakhstan region. In fact, the grave good assemblages suggest a remarkable degree of continuity in Iron Age burial practices within the south Ural region.

Bike III (5th-4th centuries BC)

The three Bike cemeteries lie on a terrace above the northern bank of the river Katun, in Russia's Altai Republic (Kubarev 2001: 134-135). In each, the tumuli are arranged in a line stretching roughly northeast-southwest (ibid: 135). Between 1988-1991, some 52 graves were excavated, ranging from the Eneolithic to the Middle Ages (ibid: 133). Seventeen burials were assigned to the "Scythian" period, and Kubarev (2001) assigns them to the Pazyryk culture (ibid: 133, 154).

Two kurgans in the Bike III cemetery—the largest and furthest west of the three cemeteries—contained mirrors (Kurgans 1 and 8). In both, the deceased was interred in a rectangular wooden box or coffin, under a stone mound (ibid: 141-142, 158-159). The

two kurgans each held only a single burial, roughly beneath the center of the mound (ibid). Neither burial is very rich, which demonstrates that mirrors were not only the possessions of the wealthiest strata of nomadic Inner Eurasian societies.

Kurgan 1. The deceased was a woman, buried with head oriented to the east, although the skeleton is poorly preserved (ibid: 135). The mirror is plain bronze with a lateral handle pierced at the distal end (ibid: 142). It lay approximately in the center of the grave, beside the femora (ibid). It was likely originally placed by the woman's hip or hand (ibid).

Other grave goods included a spindle whorl, bronze knife, one gold and one silver earring, a ceramic vessel, and "bird" shaped gold plaques (ibid). All these goods, except the mirror, were located in the eastern end of the grave.

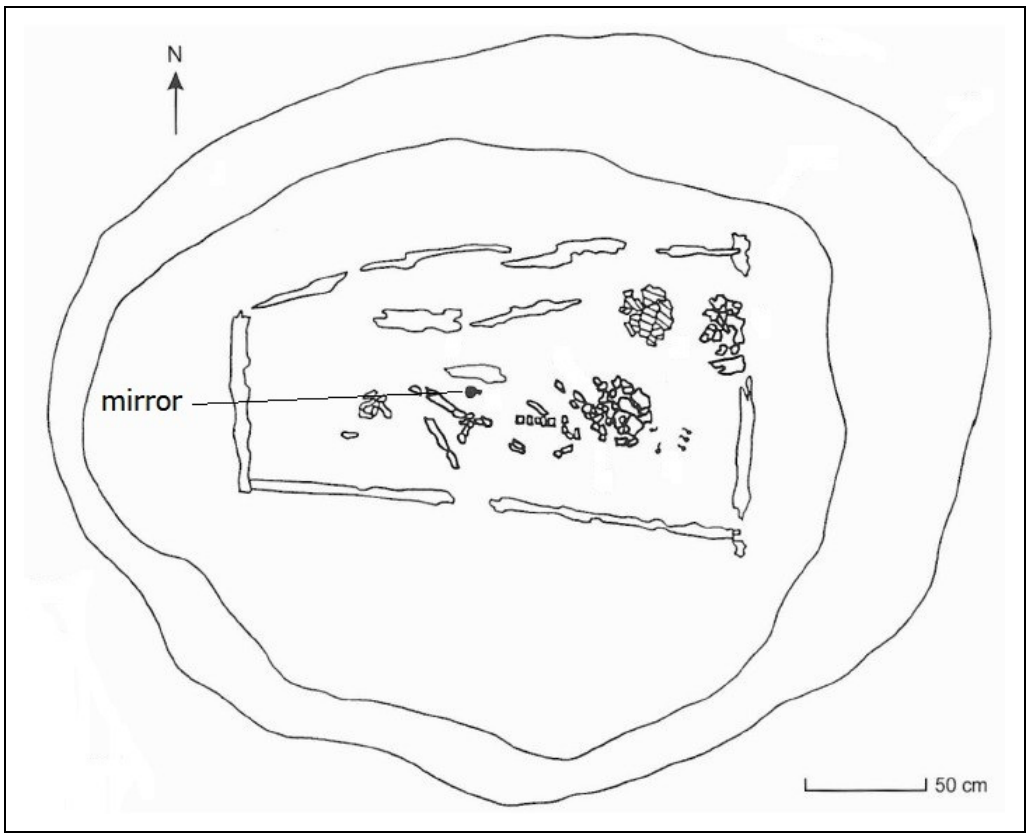

Figure 84. Plan of Bike III, Kurgan 1 (after Kubarev 2001: 142).

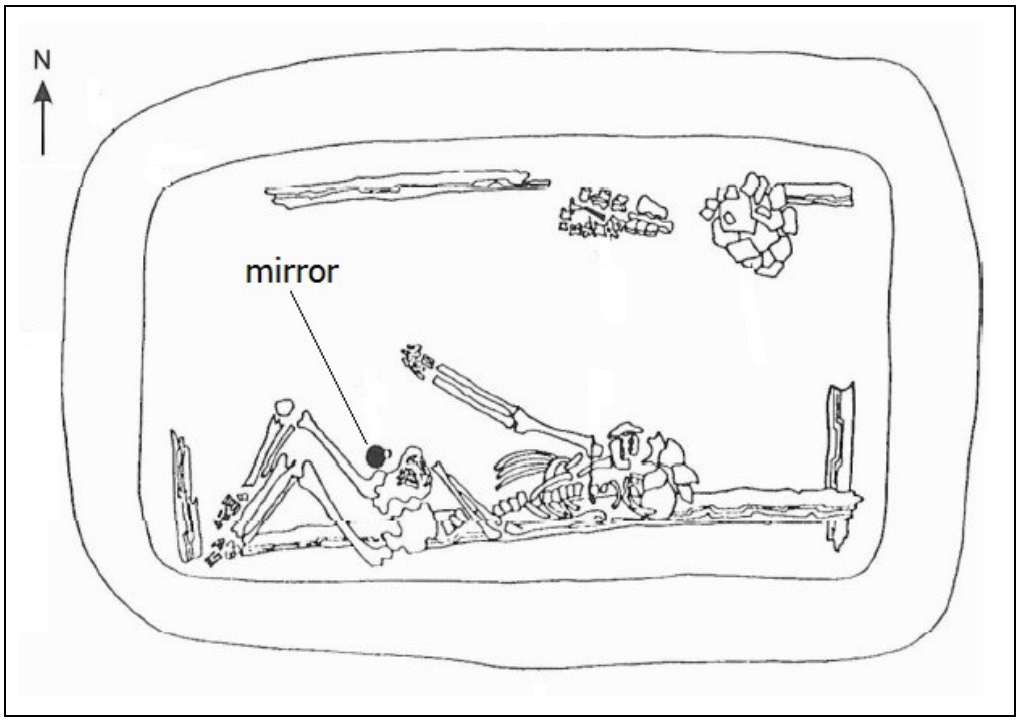

Figure 85. Plan of Bike III Kurgan 8 (after Kubarev 2001: 159).

Kurgan 8. The deceased was laid along the southern side of the burial with head oriented toward the east, with legs loosely flexed, the right arm slightly extended, and the left arm folded across the body (ibid: 159). The only grave goods were an iron knife, a tubular bronze ring, ceramic vessel, and a bronze mirror (ibid). The mirror was a plain bronze disk with a lateral loop (not really long enough to be termed a handle); it was found lying beside the right hip/left hand (ibid).

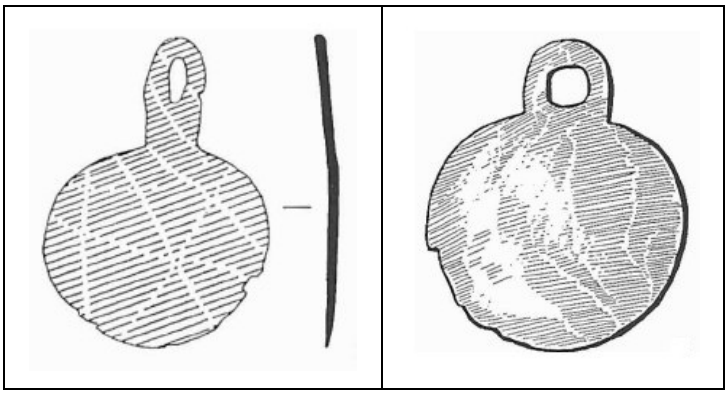

Figure 86. The Bike III mirrors. *Left*: Kurgan 1. *Right*: Kurgan 8. Not to scale.

Issyk (5th-4th centuries BC)

Located 50 km (elsewhere 31 km—Davis-Kimball 1997) northeast of Almaty, Kazakhstan, this unlooted, very wealthy burial was located in the side of a kurgan (Davis-Kimball 2002b: 345-346). It was excavated in 1969-1970. The deceased was termed the "Prince" or the "Gold Man" of Issyk; however, the skeleton was badly crushed due to taphonomic processes, and it is now missing, so it has not been possible to establish sex biologically (Davis-Kimball 2002b: 346; Menghin and Parzinger 2007: 167). The individual was buried in a caftan decorated with hundreds of gold plaques, trousers, boots, gold belt plaques, a gold torque, and a tall, conical headdress (Davis-Kimball 2002b: 346; Menghin and Parzinger 2007: 167). The headdress was elaborately decorated with gold foil mountains, branches and floral shoots, along with birds and many different types of animals (Davis Kimball 2002b: 346; Menghin and Parzinger 2007: 167).

Grave goods included a dagger, sword, carnelian and white paste beads, three turquoise and gold earrings, two gold finger rings, a spoon and ladle, two low tables, numerous ceramic vessels, and a mirror (Davis-Kimball 2002b: 346; Menghin and Parzinger 2007: 41, 166). In addition, there was a silver bowl bearing an inscription which has still not been decoded (Menghin and Parzinger 2007: 167). Davis-Kimball suggests that the Issyk individual was a woman, since multiple beads and earrings are not found in male burials of this period (Davis-Kimball 2002b: 346). She proposes that this person was a "warrior-priestess"—the sword and dagger indicating warrior status, while the tall headdress with its "tree of life" decoration, the putative koumiss (fermented horse milk) ladle, and the mirror were cultic objects (ibid). The other burials analyzed here, however, show that it is problematic to assign gender or social identities based on these grave goods, since they appear in various combinations in many graves of the period, with individuals of both sexes.

The mirror had a small tang, and had been placed to the left of the deceased's head (Menghin and Parzinger 2007: 41). It was originally contained by a leather bag (Davis-Kimball n.d.). Unfortunately, the large quantities of gold in the grave have

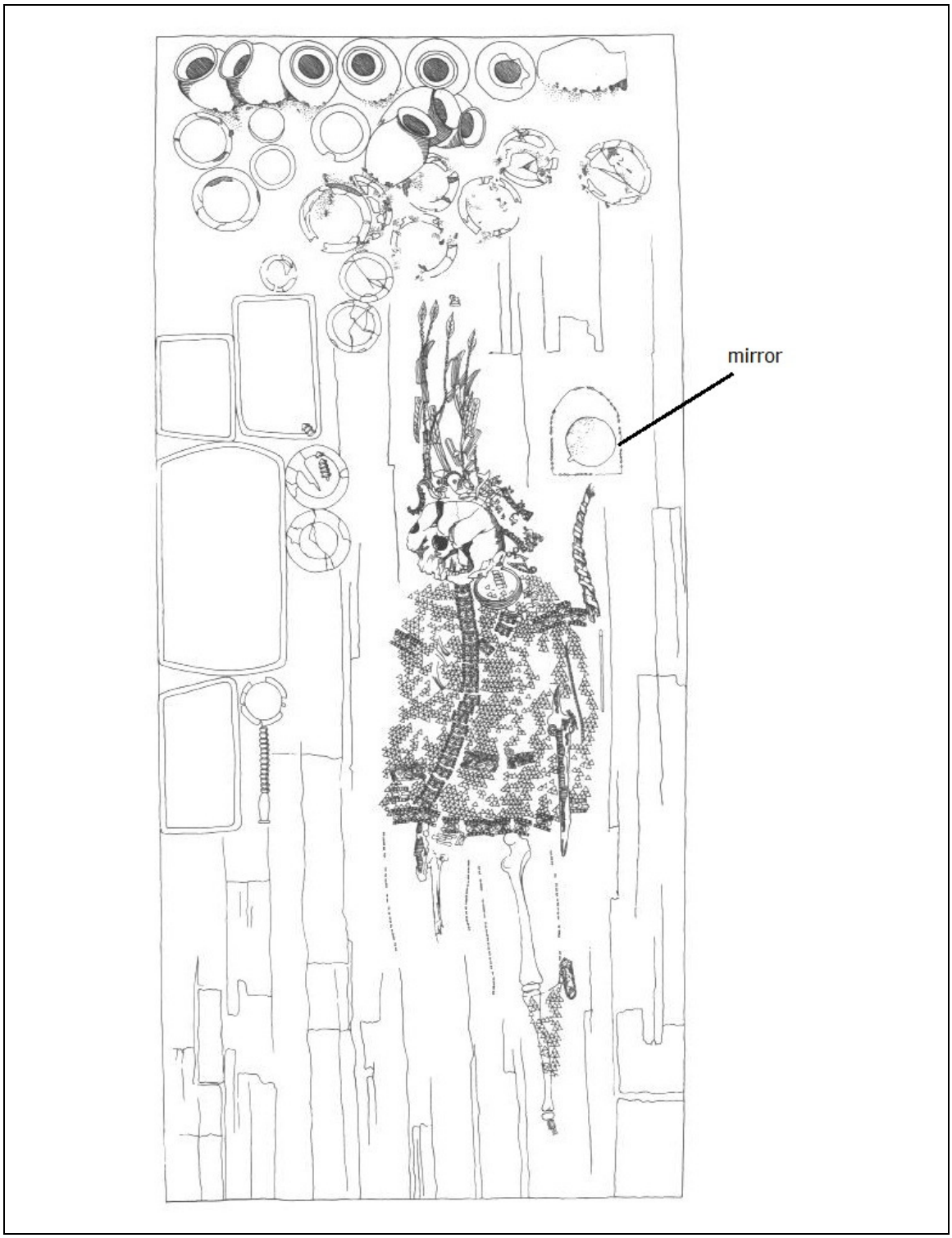

Figure 87. Plan of the Issyk burial (after Menghin and Parzinger 2007: 41). No scale or cardinal direction was indicated in the original diagram.

overshadowed the relatively humble mirror, and virtually nothing has been written about it.

Pazyryk (5th-3rd centuries BC)

Pazyryk is a mountain valley located in the Altai Republic of Russia, near the borders of China, Mongolia, and Kazakhstan. The hanging valley lies above the valley of the Great Ulagan river as it passes through the foothills of the Chulyshman mountains (Rudenko 1970: 1). The Pazyryk barrows, like those found in adjacent river valleys, consist of an earthen mound covered with stone; the stone is found abundantly in the local mountains, where erosion has created large piles of scree (ibid). The local climatic conditions—dry and with low mean annual temperatures—led to congelation of the barrows, and consequently excellent preservation of the organic materials within (ibid: 7). Aside from the barrows are a number of man-made constructions in the valley making use of local stone, including standing stones, stone circles and pavements, and enclosures (ibid: 13).

The fourteen Pazyryk tumuli form a roughly north-south linear arrangement, following the orientation of the valley (ibid: 4, 13). The tombs were constructed with a rectangular burial shaft about 4 m deep leading to a log chamber on the south side (containing the body of the deceased), and on the north side, horse burials; after burial, the upper half of the shaft was filled with logs and boulders, and an earth mound covered by stones constructed above (ibid: 7, 14). The mounds average about 4 m high, including both earth and stone portions (ibid). The stone cairn on the surface of the mounds proved to be instrumental in the freezing process:

> The climate of the Ulagan uplands, the basic factor producing barrow congelation, is sufficiently favourable for refrigeration given certain secondary factors, but in normal conditions permafrost does not exist in Pazyryk valley. The barrow congelation under the mound is to be attributed mainly to the cairn of stones, the factor that promoted the development and, above all, maintained the refrigeration. The cairn acted as a heat insulator protecting the earth from heat in the summer and thus delaying and weakening the thaw. Under winter conditions the cairn was the focus of maximum heat radiation on account of the uneven but more rapid cooling of the stone, by comparison with the ground surface (ibid: 8).

Unfortunately, the graves were plundered after congelation had begun, probably some years after burial (though it is clear that the plundering took place in antiquity). Consequently, the burial chambers filled with water, which froze to ice, while in other areas exposure of the burial contents led to their decomposition (ibid: 9-10).

In general, rich burials can be distinguished from poorer ones by the size of the barrow, the number of horses and grave goods, and the presence of a larch trunk coffin. Otherwise, burial practices and grave architecture are similar in this part of the Altai. The deceased was normally interred in extended supine position with the head oriented toward the east (ibid: 28). The preserved horse bodies indicate that the horses were in summer coat, undernourished as is typical during late spring-early summer, and the presence of flowers in the graves all indicate that the burials occurred in early summer; the bodies of the deceased were embalmed, presumably to keep them until summer when the burials could be performed (ibid).

Originally the Pazyryk barrows were dated to the 6th-5th centuries BC, but in the 1990s a more recent date (4th-3rd century BC) was proposed; Vassilkov (2010: 6) suggests the 4th century is the most likely date. The dates are still in dispute (ibid).

Barrows 2 and 6 contained mirrors. These tombs were excavated in the late 1940s by Russian archaeologists, and published in great detail in English by Rudenko (1970).

Barrow 2

Happily, the presence of ice in the chamber prevented this large (ca. 40 m diameter) tomb from being entirely destroyed by looters (ibid: 12). Nevertheless, they did rob the ice-free part of the burial, and disturbed the associations of artifacts with the bodies of the deceased.

The floor and the west, east, and south walls of the burial chamber had been lined with black felt. A larch trunk coffin along the south wall contained the bodies of an adult man and woman, laid on top of a thick felt and wrapped in a woolen rug with long nap (ibid: 33-34). The woman wore a “single-piece apron” and cloak, but looters had hacked off her head (as well as that of the male), her legs below the knees, and her right hand,

probably to access jewelry (ibid: 33). The male was buried without a shirt, but shirts were piled in the southwest corner of the tomb (ibid).

The man was aged approximately 60 at time of death, stood 176 cm (about 5 feet 8 inches) tall, and was described as being of "markedly mongoloid type" (ibid: 46). His head had been shaved but the stubble was dark, and he wore a false beard of dark brown hair (ibid: 47). The man's body has become particularly famous for its well preserved animal-style tattoos (ibid). The woman was over 40 years, with wavy black hair, and "if in [her] type we can detect slight mongoloid traits…, they are very trifling" (ibid). She appears to have suffered from resorption of the alveolar bone with consequent loosening and loss of teeth (alveolar pyorrhea) (ibid: 47, note 1).[8] Considering all the Pazyryk human remains together, they show a great deal of variability in appearance.

Leather silhouettes of trotting deer were attached with small iron nails to the upper sides of the coffin (ibid: 30-31). Rudenko speculates that they were originally covered with metal foil, no longer preserved (ibid). Although Rudenko considers it impossible to tell whether elk (i.e., red deer, *Cervus elaphus*) or reindeer (*Rangifer tarandus*) is the species depicted, concluding that figures are generalized deer (ibid), I consider it most likely that they represent male moose (*Alces alces,* known as elk in Europe), as the figures have the palmate antlers, downturned noses, and dewlaps characteristic of moose, but lacking in elk or reindeer. Admittedly, though, the forward position of the antlers more closely resembles that of reindeer than of moose.

Each tomb contained low tables with detachable tops and wooden stools; Barrow 2 contained four tables stacked with goat- and horse-meat and arranged along the east wall (ibid: 34). In addition, the grave contained two tall earthenware bottles and two wooden vessels (ibid). In the southwest corner was a censer, covered with a tent-like leather canopy, while another was placed on the west side of the tomb along with a leather flask full of hemp (ibid). Further implements included a stone lamp, a drum, a harp-like stringed instrument, a torque made from a copper tube decorated with gold-plated wooden deer, winged lions, and griffins; a horn comb; an iron knife; many pouches and purses, one containing coriander seeds; an iron mace; wooden and leather

[8] Rudenko's Plate 44C shows a woman's trepanned skull, ostensibly from Barrow 2; however, he does not mention trepanation in his description of the woman's remains, so it is unclear to whom this skull belongs.

depictions of various kinds of animals; a silver plaque showing a lion preying upon a goat; horse-shaped amulets; a fragment of a gold earring; and torn scraps of felt and other textiles (ibid: 37).

None of the horse burials in the northern parts of the burial shafts had been disturbed by looters, so the artifacts therein remained in situ (ibid: 39). The horses, always geldings[9], were killed by a blow to the forehead or crown with a pole-axe (ibid: 40). Barrow 2 contained seven horses along with their saddles, bridles, and head ornaments (ibid: 42). Attached to two saddles were wicker shields, and among the goods with the horses was found a fur-covered pouch full of cheese (ibid: 34). In addition, there were remains of a wooden cart (described as a "trolley") on solid wooden wheels (ibid: 42).

Finally, the tomb contained two mirrors—one made of a high-tin "white" bronze (incorrectly described as silver by Rudenko) with an antler handle and placed inside a wooden box, and another made of bronze with a leather-wrapped handle in a leopard-skin case (ibid: 37 and Plates 70A, B, and E; Rubinson 2002: 69; Vassilkov 2010: 1). The fact that so many grave goods occurred in pairs suggests that one may have been intended for each of the deceased. Certainly this is how Rudenko interpreted the burial; since the wooden box held toilet items along with the mirror, Rudenko thought it belonged to the woman, although it was not found *in situ* (Rubinson 2002: 69).

The high-tin bronze mirror is decorated with 12 concentric circles filled in with zigzags, with a raised rim, center ring, and within the latter, a central boss (Rudenko 1970: Plate 70A, B; Vassilkov 2010: 1). Vassilkov declares the decoration to be a solar design (ibid). He also describes the mirror as a "rattle-mirror," that is, between the two discs that constitute the faces of the mirror are small objects (probably bits of metal) that produce a rattling sound when the mirror is shaken; the sound may have been more musical before the metal became corroded (ibid: 2).

Rattle-mirrors are characteristically made of high-tin bronze "bell metal," which produces a high tone when struck, and while they look similar to silver (albeit with a

[9] Moore-Colyer (1993/4: 60) notes that "In contemporary Mongolia…geldings are frequently consecrated to a variety of spirits, while stallions in old age are never slaughtered, but allowed to succumb to natural causes." Whether the preference for geldings over stallions is due to culinary taste (the reason for slaughter in the Mongolian case being to eat the animal) or ritual-religious dictates is not made clear.

golden tinge), they can be used to produce a bright golden reflection (ibid). The mirror may thus also be considered a musical instrument. Another rattle-mirror was discovered in 1968 at Mechetsai (a.k.a. Mechet Sai) in the South Urals, and a third at Rogozikha in the Altai in 1985 (ibid: 2-4). The Mechetsai mirror features a depiction of two women, deer, and floral motifs flanking what appears to be a mustachioed face (ibid: 4). The Rogozikha mirror is decorated with an illustration of an elephant with a bird on its back and several women (ibid: 4-5). The style of the representations leave no doubt that these mirrors originally come from India (ibid). A fourth mirror was found at Lokot'-4 (Altai region) in 1994; it is decorated with more women and deer (ibid: 5-6). All four of the mirrors have a raised rim and a central boss surrounded by another raised circle (Fig. 89). The burials from which they were recovered date from the 6th-3rd centuries BC.

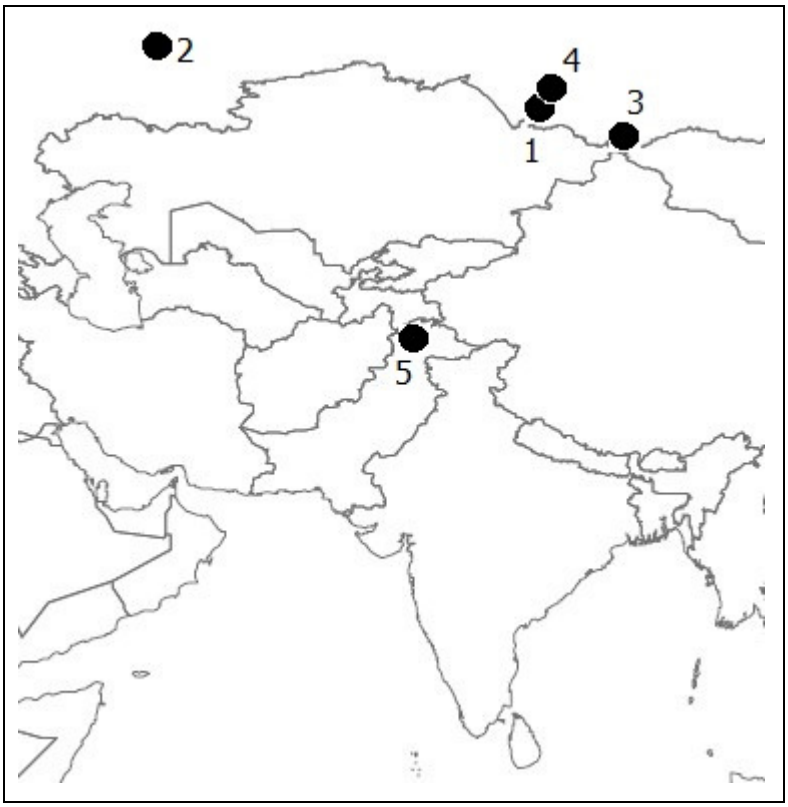

Figure 88. Map of sites with rattle-mirrors, and Taxila, a possible source of Indian mirrors traded to Temperate Eurasia. 1. Lokot', 2. Mechet Sai, 3. Pazyryk, 4. Rogozikha, 5. Taxila.

The rattle-mirrors are an enigma insofar as no such mirrors have been found in India, (ibid: 6). However, the design and composition resembles 3rd-2nd century stone discs found in various parts of northern India; although the purpose of these discs is unknown, one surface was polished to a degree described as "specular" while the reverse was decorated with concentric rings and figures in low relief (ibid: 9). It is, moreover, hard to argue with the evidence of the elephant representation. All four rattle-mirrors are made from a copper alloy with about 20% tin, which was also characteristic of early Indian bronzes (ibid: 20-21). Vassilkov proposes that the Rogozikha mirror depicts a story, originally recorded in the 1st-2nd centuries AD but possibly dating back much earlier in its oral form, of a king who owned a magical flying white elephant (ibid: 13-14). The elephant was pecked in the back of the head one day while flying and sickened, and could only be cured by the touch of a chaste woman who had never thought of any man but her husband (ibid). The king came to realize that a chaste woman was of greater value than a beautiful or high-born one (ibid: 14). Of course, it was probably not unusual to see birds such as egrets perched on the back of elephants.

Vassilkov speculates that between the 4th century BC and the 4th century AD, mirrors were produced in large numbers in northern India specifically for trade with communities of Inner Eurasia, referencing a large stock of mirrors found at the city of Taxila (1st century BC-1st century AD) in present-day Pakistan (ibid: 22-23). These mirrors featured the raised rim and central boss seen on the rattle-mirrors, but were not hollow and did not have elaborate pictorial decoration.

Barrow 6

Barrow 6 was a small tomb, 14-15 m in diameter (ibid: 24). Subsequent to being robbed, a secondary burial was made in the filled-in looters' pit (ibid). An adult, presumed to be a woman, and an adolescent, presumed to be a girl, were found in the tomb; the bones were disturbed by looters (ibid: 24-25).

Grave goods included beads of marble, glass, carnelian, and gold, four cowrie (*Cypraea moneta*) shells, remains of red lacquer, gold pins, an iron knife, ceramic sherds,

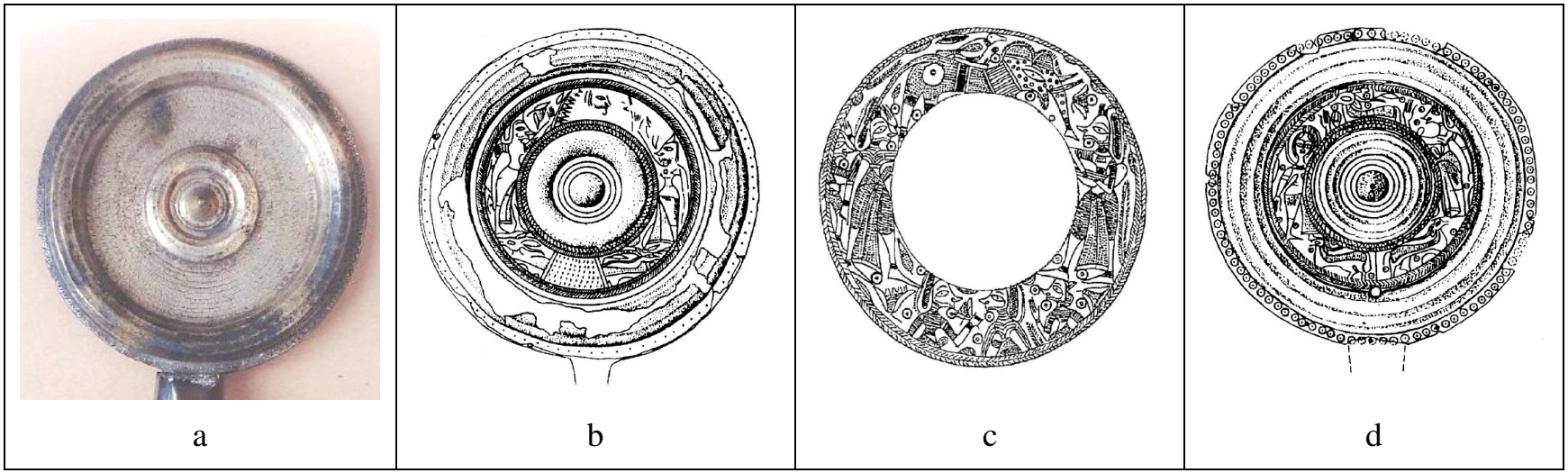

Figure 89. Rattle-mirrors. (a) Pazyryk 2, (b) Mechetsai, (c) Rogozikha, (d) Lokot' (Vassilkov 2011).

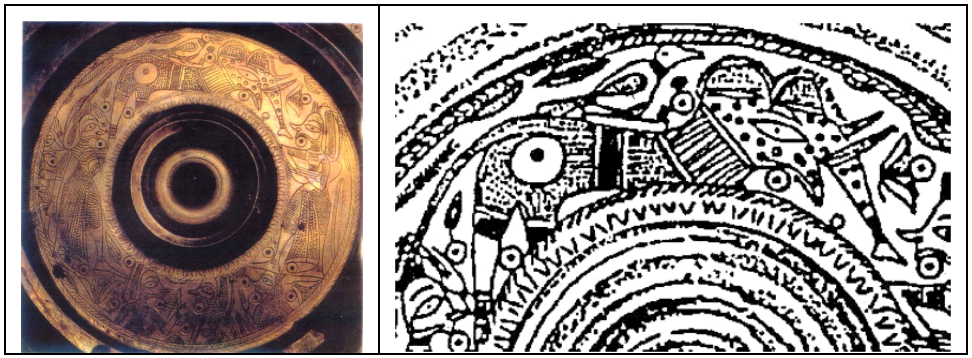

Figure 90. (a) The Rogozikha mirror, (b) detail showing the elephant (ibid).

and a fragment of a Chinese-made mirror (ibid: 39). Three horses were still wearing their tack, although the bronze bits had been stolen (ibid: 42, 326).

The mirror features a "broken mountain" motif against a background design called "wings and feathers," and may date to the 5th century BC; however, it has no very chronologically diagnostic characteristics (ibid: 304-305). It is probably roughly contemporary with the burial, which is noteworthy, since it indicates that it did not take generations for exotic goods to slowly osmose through the steppes.

Chertomlyk (4th century BC)

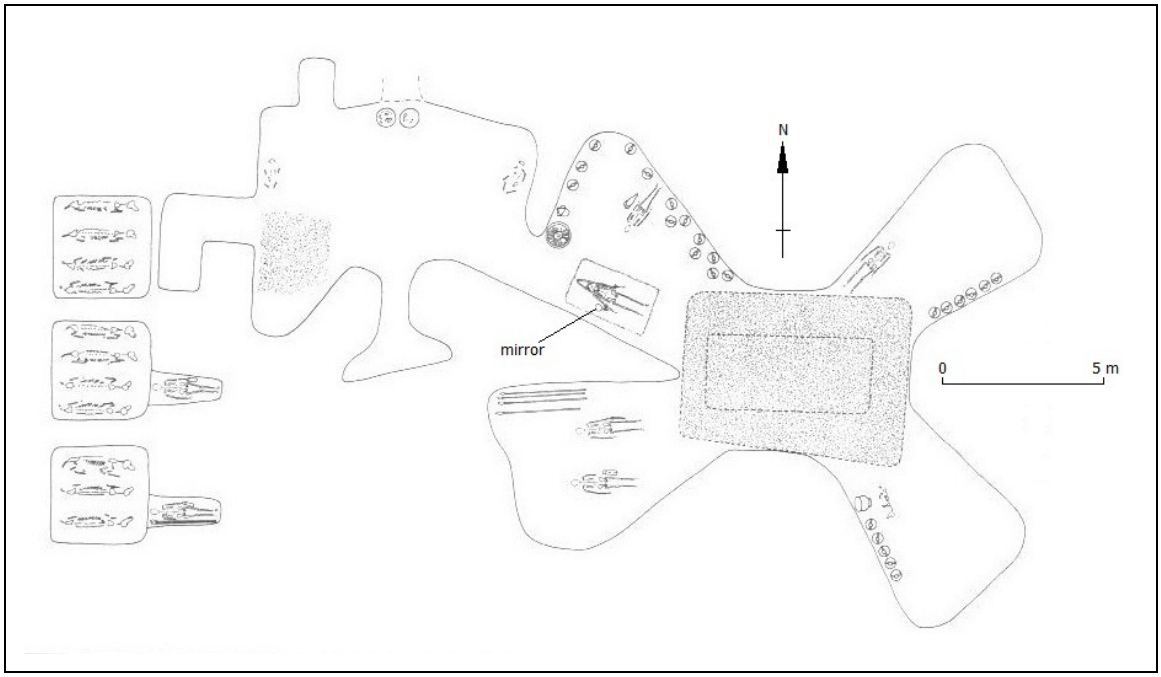

Figure 91. Plan of the Chertomlyk burial (after Boltryk and Fialko 2006 and Menghin and Parzinger 2007). The northern chamber/dromos is not shown.

Lying on the north bank of the Dnepr, Chertomlyk (Dnipropetrovs'ka, Ukraine) is one of the three largest "Scythian" burial mounds, and has been dated to ca. 340-320 BC (Boltryk and Fialko 2006: 78). It was previously believed that there were two separate burials within the tumulus (a central and a northern one); however, it now appears that there was a single burial with a complex entry system (*dromos*), which links Chertomlyk to other contemporary large kurgans (ibid: 79). This would mean that the eight humans

and eleven horses buried here were inhumed as part of a single multi-chamber assemblage (ibid).

Figure 92. Scythian seated-woman-with-mirror iconography (Vassilkov 2010: 20).

Although certain artifacts from among the grave goods (e.g., bronze vessels, a silver amphora, an Achaemenid sword scabbard) have been studied extensively, there is little literature on the assemblage as a whole (ibid: 78-79). A bronze mirror with ivory handle was buried with an individual called the "Queen" or "Tsarina,"[10] to the northwest of the main chamber (Fig. 90). This individual was buried wearing bracelets and finger rings, and a tall headdress composed at least partly of purple cloth and decorated with numerous gold plaques (Jacobson 1995: 142; Minns 1971 [1913]: 161) and with the

[10] Note that *tsarina* refers to a queen by virtue of marriage to a man who holds power in his own right (as opposed to a *tsaritsa*, who rules in her own right). The implication is that this burial may represent an act of suttee.

mirror placed immediately next to her left hand. Interestingly, some of the gold clothing plaques show a seated woman wearing a conical headdress and holding what looks like a mirror in her left hand; before her stands a man (Jacobson 1995: 179) (Fig. 92). This imagery is repeated on plaques at other sites, e.g., Kul'-Oba, which suggests that it may have had mythological significance (ibid: 176, 179).

The Chertomlyk tumulus was exceptionally wealthy. The central (assumed to be "king's") chamber was apparently looted; however, the putative "queen" was buried lying on a bier painted dark blue, light blue, green, and yellow (Minns 1971 [1913]: 161). Another skeleton in the same chamber was outfitted with an ivory handled knife, iron and bronze bracelets, and arrowheads (ibid). Along the wall were arranged 13 amphorae, including the most famous artifact from the site, a silver vase decorated with birds of prey, horses, griffins, and lions (ibid: 159-161). The southwest chamber contained an individual buried wearing a gold torque decorated with lions, bracelets, rings, gold clothing plaques, belt plaques, bronze and silver vessels, a quiver with arrows, and a whip; another skeleton in the same chamber had much the same suite of goods (ibid: 161).

In separate chambers to the west, 11 horses were buried with "an immense number of objects pertaining to harness," and two humans, identified as "grooms" (ibid: 165). Each of these people had a torque and a quiver full of arrows (ibid).

Prokhorovka (4th century BC)

The Prokhorovka burial ground is a roughly north-south linear arrangement of tumuli, first excavated by Sergei Rudenko in 1916 after local farmers had begun looting the graves; however, the structure Rudenko dubbed "B," now known to be a tomb, was initially mistaken for a fortified site (Balakhvantsev and Yablonskii 2009: 167-169). In 2003 it was recognized that Structure B contained three burials, as well as four horse heads and parts of horse harness (ibid: 169, 171).

Burial 3 in Structure B was found to be unlooted. It consisted of an entrance pit and a niche which contained the skeleton and most of the grave goods (ibid: 169). It has been assigned to the 4th century BC and the "Early Sarmatian" period (ibid: 178-179). (In fact, Prokhorovka is the type site for the Early Sarmatian, or Prokhorovka, phase [ibid:

169]). Inside was the skeleton of a young woman, inhumed in supine position with her right leg and left arm extended, and left leg and right arm flexed at a 90° angle (ibid: 173). The body had been placed on a ladder-like stretcher covered with a thin layer of bark (ibid: 174).

Near the entrance to the niche where the body lay were two fragments of a deliberately broken iron javelin head, and next to the woman's right knee were 110 iron arrowheads and one bronze (ibid: 173). Personal ornaments included an earring with dangling pendants, a pendant of moss agate edged with gold, and beads of amber, glass, agate, carnelian, Egyptian faïence, and limestone, apparently sewn to the cuffs of the woman's garment (ibid: 173-174).

The burial also contained a wooden bowl (now decayed) decorated with gold appliqués and nails, an iron hook shaped like a mythical beast and covered with gold, two limestone distaffs, a ceramic jug, a possible whip handle, a marble container for cosmetics, a dish made of elk antler, sheep bones, an iron knife, a Late Achaemenid silver bowl decorated with a gilded frieze of ivy and grapes, and a mirror (ibid).

The mirror was made of bronze with a tang, originally inserted into a (probably wooden) handle. The mirror had been wrapped in cloth and placed in a container made of fur and bark, and was found next to the woman's head (ibid).

Balakhvantsev and Yablonskii date the silver bowl to *ca*. 350-375 BC, but note that it shows signs of wear in antiquity, so may have been in use for some time before the burial (ibid: 178-179). They postulate that the bowl was made in the eastern Mediterranean region, and might have reached the steppes with a soldier in the army of Alexander the Great or that of Seleucus I (ibid: 180); however, given the trade networks of the time, it seems equally possible that the bowl could have reached the southern Urals through exchange, or the mobility of the steppe pastoralists.

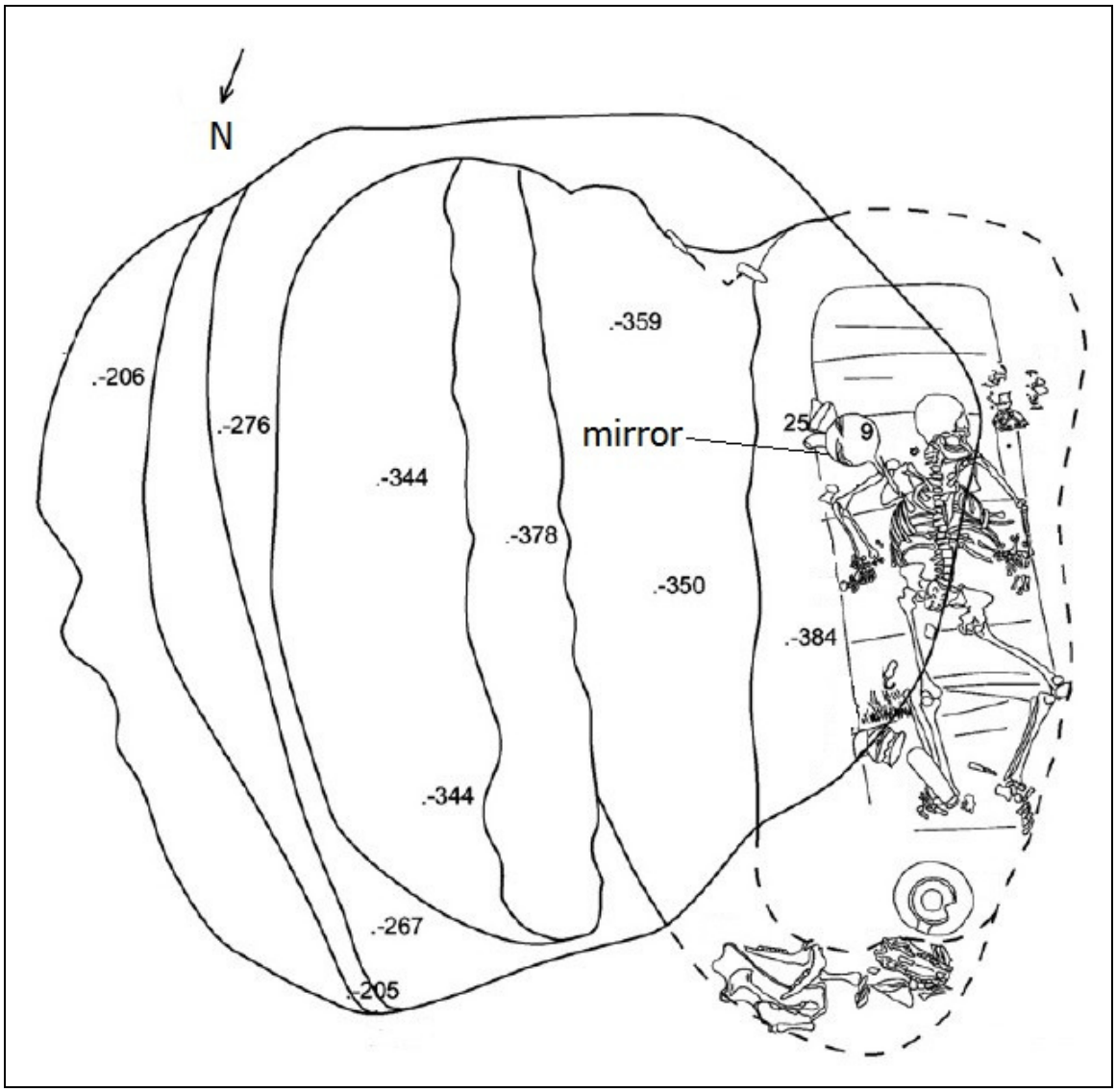

Figure 93. Plan of Prokhorovka Structure B, Burial 3 (after Balakhvantsev and Yablonskii 2009: 172). The mirror is numbered 9, and next to it, numbered 25, are fragments of its case.

Ak-Alakha (4th-3rd centuries BC)

In 1990 a frozen kurgan was discovered near Bertek on the Ak-Alakha (or Ak Alakh) River (Altai Republic, Russia), dating to the 4th-3rd centuries BC (Polosmak 1995: 346). The discovery was the first in the region for some thirty years, as archaeologists had found the task of preserving the organic remains in frozen burials to be daunting:

> The study of 'frozen grave' barrows is a distinct branch of archaeology which is still in its infancy, notwithstanding the fact that barrows of this kind were excavated as far back as the end of the last century. The process of investigating 'frozen graves' can hardly be

> called 'excavation.' It is something more like 'thawing,' demanding its own special methods and special equipment (ibid: 346-347).

The mound is part of a complex funerary landscape; it is the largest of a cemetery of six mounds aligned on a north-south axis. It is 18 m at its maximum diameter, but only 70 cm high. West of the mound seven interlinking stone circles, each 5 m in diameter and partly covered by turf, were found, while on the east were two stelae approximately 1 m high (ibid: 347). The kurgan itself consists of an interior structure composed of large stones and pebbles, while the burial chamber was reinforced and partially roofed with logs, some of which appear to be re-used from some kind of building. The grave measured 5 m by 5 m; in the northeast nine horses had been buried. At least seven horses' tails had been braided while at least four wore bridles and saddles decorated with felt appliqué animals (ibid: 347-349).

Inside the burial chamber were two individuals, a male and female, each inside a coffin made from a single larch log. The coffins were arranged side by side in the southern part of the chamber. Outside the coffins were two place settings, complete with hindquarters of rams (ibid: 349).

The male individual, aged 45-50 years, wore a neckring made of wood and leather and covered in sheet bronze; its feline terminals were made of wood and linked by a stag's head covered in gold foil. His belt clasp was also made of gold-leafed wood. Along his left side were found an iron "battle-pick," an iron dagger, a bow and five arrows with bone heads (ibid: 349-350).

The woman, nicknamed a "princess" in the popular press, was in her late teens. She wore a neckring decorated with wolves covered in gold leaf. At her left was another iron "battle-pick," a bow, and bone-headed arrows, while an iron dagger was found at her right thigh. Next to her waist was a mirror with a loop handle in a leather case (ibid: 350-353).

The excavator, Natalia Polosmak, concludes that the individuals buried at Ak-Alakha were "middle-level" nobility—"middle-level" in that the grave goods were not as rich as those found in some contemporary kurgans such as Pazyryk, but "noble" in that the presence of horses and of animal style art (which so far has not been recovered from

any local "common" burials) indicate high status. The construction of the kurgan and the type of grave goods resembles that seen at other sites in the region (ibid: 353-354).

Two features of the burial stand out as noteworthy: First, compared to burials of the same period from the southern Ural region (discussed below), the personal ornaments (and horse ornaments) found at Ak-Alakha utilized very little metal. Although the types of grave goods are quite similar between the two regions, the use of organic materials at Ak-Alakha is distinctive. Second, the gender of the individuals buried at Ak-Alakha does not appear to be represented in their grave goods, as both are equipped with the same type of weaponry and ornaments. Possibly the mirror carried gender significance here in that only the woman had one, though this seems unlikely given that males are found with mirrors elsewhere; but it is likely that, if the two individuals were in fact regarded as being of different genders, this was represented in some other manner. Ak-Alakha thus stands as one more caution against assigning sex on the basis of grave goods alone.

Ak-Alakha 3. In another burial at Ak-Alakha, Polosmak excavated the grave of a tattooed woman, approximately 25 years old at death, wearing a tall headdress (Davis-Kimball 2002b: 343; Rubinson 2002: 69). The headdress was made of felt stretched over a wooden frame, and took up fully 1/3 of the length of the woman's coffin (Davis-Kimball 2002b: 343). It was decorated with gilded wooden animals and birds (ibid).

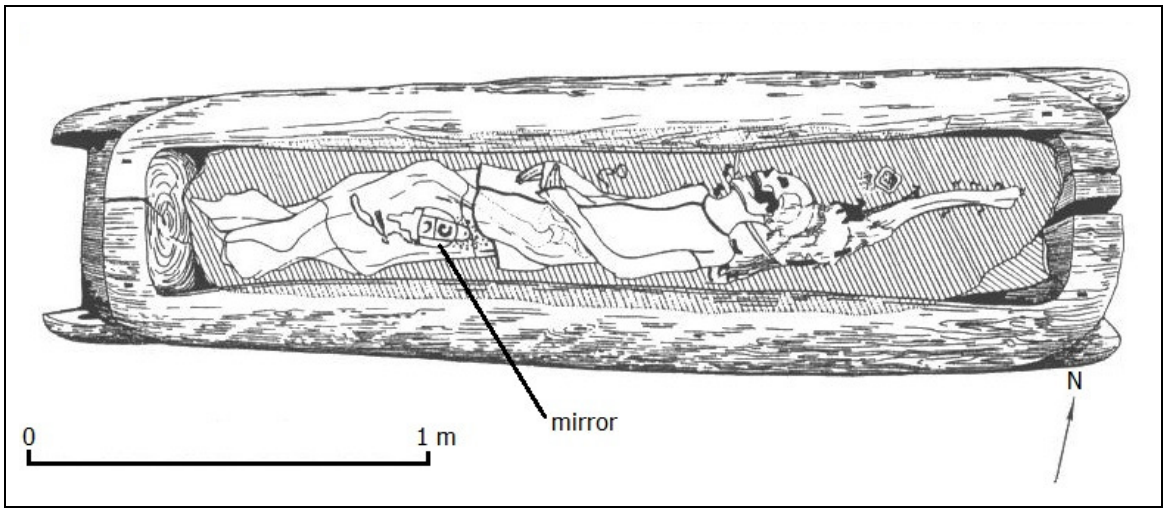

Figure 94. The Ak-Alakha 3 burial (after Menghin and Parzinger 2007: 142).

Among the other grave goods were a bowl which originally contained koumiss (fermented horse milk) and a gold torque decorated with winged panthers (ibid: 344). A mirror had been placed in an appliquéd red felt pouch, in the crook of the woman's left knee (ibid: 343): "The mirror was formed from a piece of silver cut down from another object and set in a wooden frame with handle and carved back decorated with the image of deer with oversize antlers" (Rubinson 2002: 69).

The good preservation of organic materials in these frozen tombs allows us to see that mirrors were often kept in some kind of protective covering. This may have been true in many other cases as well, where perhaps the cases or coverings have decayed. Keeping mirrors covered might have helped to preserve their reflective capabilities, by slowing the accumulation of tarnish, but it also suggests that high value was ascribed to mirrors.

Shumaevo II (3rd-2nd centuries BC)

Two burial grounds and a single isolated mound lie near the village of Shumaevo (Orenburg, Russia) on the edge of a terrace overlooking the Irtek River, a tributary of the Ural (Morgunova et al. 2003: 6; Morgunova and Khokhlova 2006: 304-305). Shumaevo II, the northern cemetery, was in use from the Bronze Age (4th millennium BC) to the Middle Ages. The twelve kurgans in the cemetery form a cluster oriented roughly southwest-northeast (ibid: 59). Bronze Age kurgans were reused for later secondary burials; most of the burials in the cemetery date to the Iron Age (8th century BC-4th century AD) (Morgunova et al. 2003: 380; Morgunova and Khokhlova 2006: 306). Shumaevo II was excavated from 2001-2002, and the archaeologists employed experts to assess biological information from the skeletons and reconstruct the regional environment (Morgunova et al. 2003: 378).

Kurgan 3. Nine burials were contained within Kurgan 3, a mound 20 m in diameter and 0.6 m high (ibid: 62-63). Two of these, Burials 6 and 9, contained mirrors (ibid: 69, 75).

Burial 6 contained an adult inhumation in extended supine position on top of the remains of a wooden stretcher, with head oriented toward the southeast (ibid: 69). To the left (southwest) of the individual's head lay a cluster of beads and a fragmentary mirror (ibid). At the level of the left knee, on the edge of the grave, was a spindle whorl, and near this, the bones of a sheep and an iron knife (ibid). A child's skull had been laid upon the adult's shins (ibid). Less than half of the mirror's original circumference remains; it appears to have been a plain disk with a raised rim (ibid).

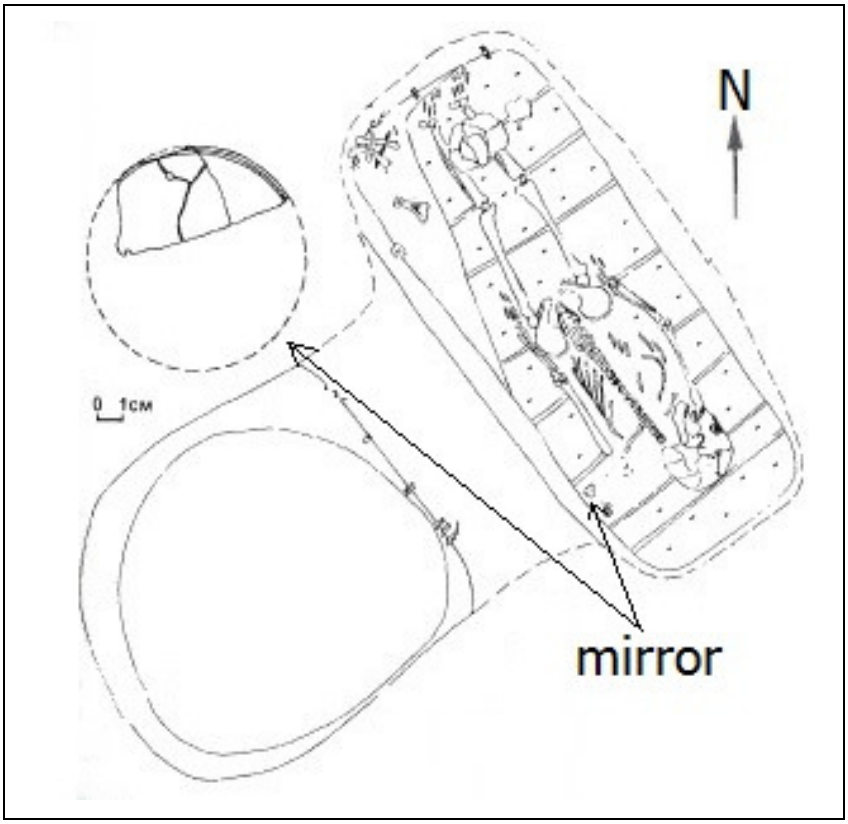

Figure 95. Plan of Shumaevo II Kurgan 3, Burial 6 (after Morgunova et al. 2003: 69).

Burial 9 contained an extended supine adult woman (45-60 years old) with head toward the southwest (ibid: 75, 278, 285). The grave had been partially cut into in the creation of Burial 5 (ibid: 75). The grave goods included an iron knife; two ceramic vessels, placed at head and feet respectively; a few small beads; and a plain bronze handled mirror next to the individual's right hand (ibid).

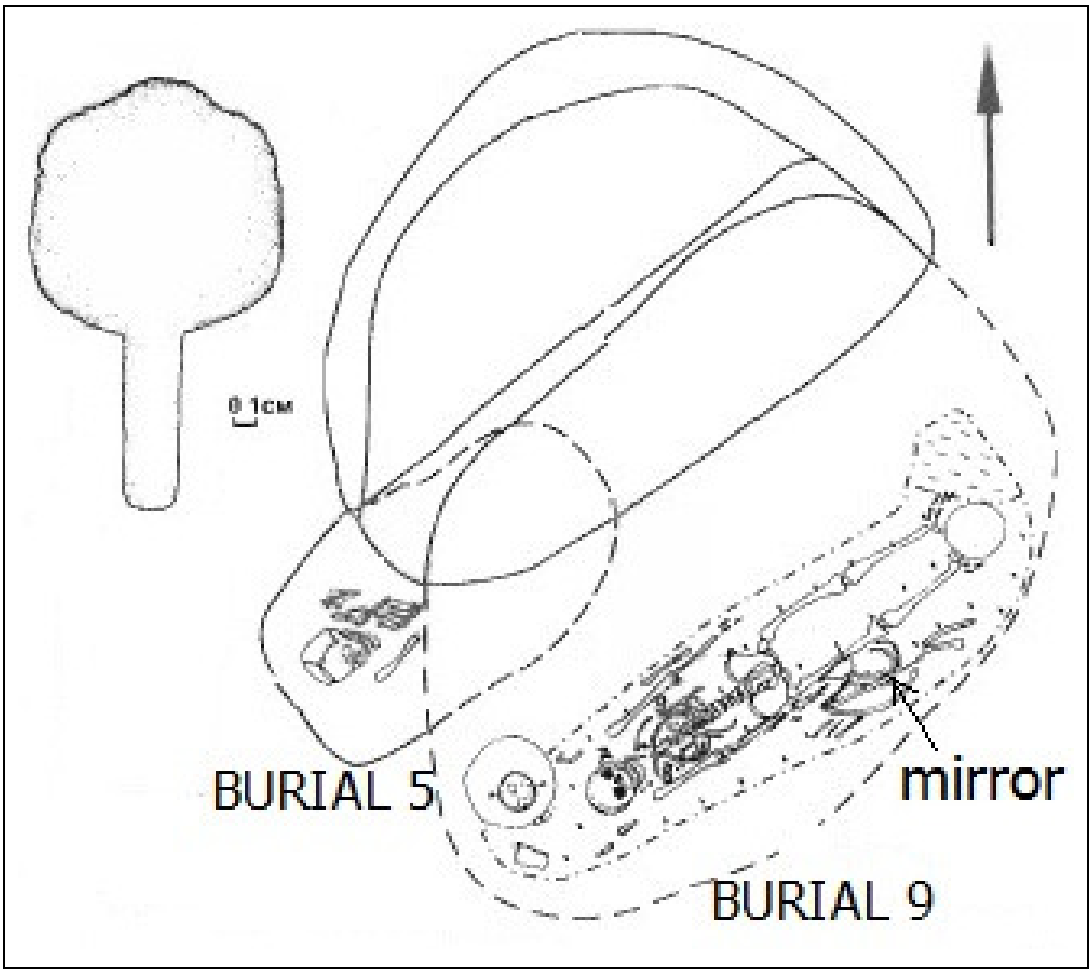

Figure 96. Plan of Shumaevo II Kurgan 3, Burial 9 (after Morgunova et al. 2003: 75).

Kurgan 9. This kurgan contained 18 "Early Sarmatian" burials (ibid: 380). Nearly all were catacomb-type tombs, with the deceased laid in wooden coffins or on wooden stretchers. In the case of Burial 12, the wood had been painted red (ibid). Grave goods generally included ceramics, bones of horse and sheep, and personal ornaments (ibid). The deceased individuals' heads were usually oriented to the south (ibid). Although for the most part, men were buried with weapons while women were buried with earrings, beads, mirrors, and spindle whorls, four women were buried with weapons (ibid).

Four burials contained mirrors, Burials 4, 8, 11, and 12. The grave goods in Burial 4 included two pots, numerous beads, and a mirror; the mirror was gilded on both

sides, with a round plate and a flat handle attached to one side. The center of the mirror plate is slightly thickened (ibid: 129, 132). The individual buried in this grave was identified as a mature adult female (ibid: 278).

Burial 8 was that of a woman, 25-30 years old, with weapons, in particular, an iron short sword (Morgunova et al. 2003: 286; Morgunova and Khokhlova 2006: 313). The mirror was a simple tanged disk with an incised circular line (Morgunova and Khokhlova 2006: 313).

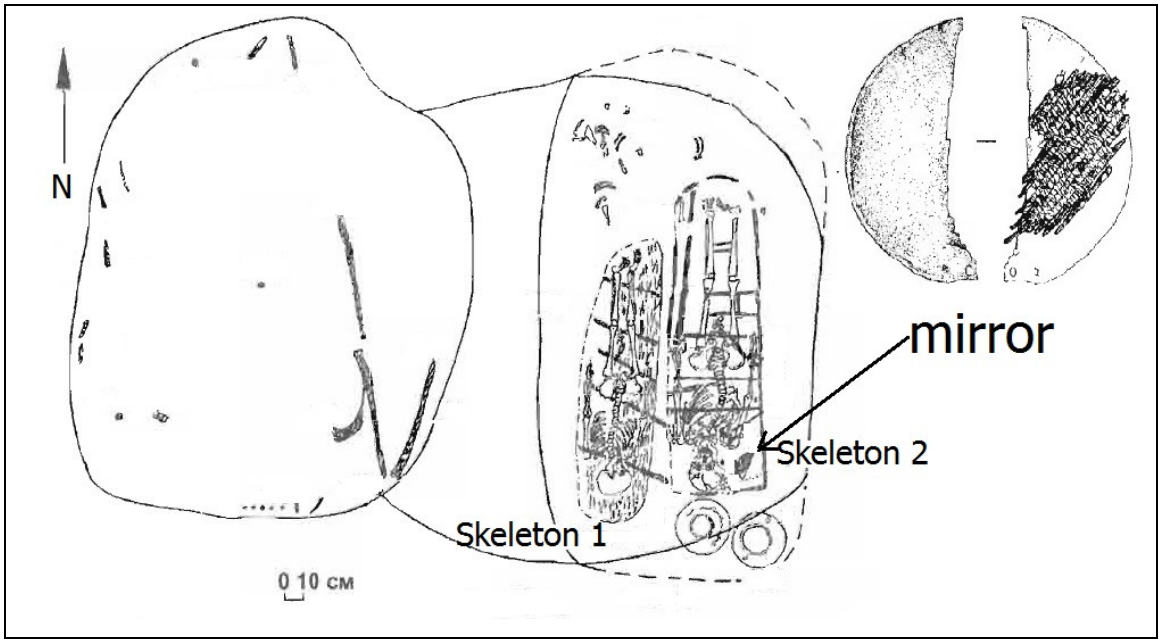

Figure 97. Plan of Shumaevo II Kurgan 9, Burial 11 (after Morgunova et al. 2003: 145, 148).

Burial 11 contained the skeletons of two individuals, in supine extended position, with heads to the south (ibid: 145). The individual on the west was designated Skeleton 1, and that on the east as Skeleton 2 (ibid). Skeleton 1 was smaller in stature than Skeleton 2, and no grave goods were closely associated with this body (ibid). A number of animal bones, however, were laid north of both skeletons' feet. Skeleton 2 was identified as a young adult woman, 16-19 years old (ibid: 278, 286). South of her head were two large ceramic vessels, while a bronze mirror lay to the right (east) of the individual's head (ibid: 145). Organic matter adhered to one side of the mirror (ibid: 148).

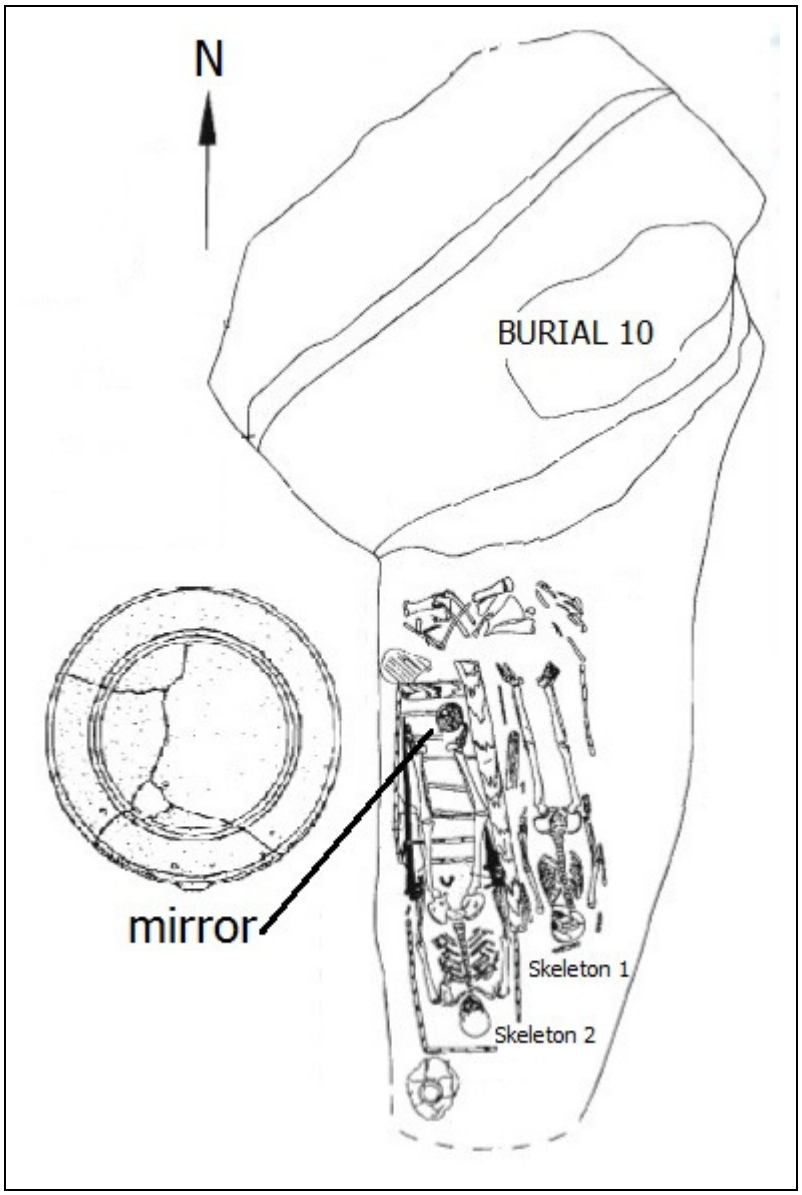

Figure 98. Plan of Shumaevo II Kurgan 9, Burial 12 (after Morgunova et al. 2003: 154, 156).

Burial 12 was also a double inhumation, with heads pointing to the south. The individual on the east was named Skeleton 1, while that on the west was Skeleton 2 (ibid: 154). Animal bones were arranged north of both skeletons' feet. (ibid). Skeleton 1 had no grave goods, or at least, none arranged intimately with the body. Skeleton 2, identified as a male 35-45 years old, was enclosed in a wooden coffin; outside the coffin, south of the individual's head, was a large ceramic vessel (ibid: 154, 278, 286). Along

this individual's left side was a sword scabbard, while on the left was a short sword, and a mirror lay by the right foot (ibid: 154). In addition, the coffin contained an iron knife and several iron arrowheads (ibid: 156). The mirror, made of bronze, was decorated with concentric circles; it once had a tang or a handle on one side, now missing (ibid).

Aksai (3rd century BC-AD 4th century)

Nine kurgans along the Esaul Aksai River (near the village of Aksai, Rostov, Russia) were excavated in 1997 (Dyachenko et al. 2000: 43). Among these were a number of late Iron Age "Sarmatian" burials, which included grave goods such as swords, arrowheads, ceramics, beads, whetstones, fibulae, and bones of sheep (and occasionally mirrors) (ibid). This sort of assemblage is generally the same as that from later Iron Age burials in the South Ural region, discussed in this chapter. The Esaul Aksai is a tributary of the Don and traverses a steppe environment (ibid: 43, 48).

The Aksai (also spelled Aksay) cemetery consisted of eleven kurgans; nine were excavated, containing 41 burials (ibid: 43). These burials range from the Bronze Age (*ca*. 3000 BC) through the Iron Age (which is dated *ca*. 700 BC-AD 400 in the Volga-Don region) (ibid). The kurgans are arranged in a roughly east-west line beside the river (ibid: 48). The Iron Age graves typically contained an individual inhumed in extended supine position with head oriented toward the south, or sometimes southeast (ibid: 46).

Five of the burials published in Dyachenko et al. (2000) contained mirrors or mirror fragments (Kurgan 1, Burial 1; Kurgan 2, Burial 2; Kurgan 6, Burials 1/2; Kurgan 8, Burial 13; and Kurgan 8, Burial 15). Unfortunately, the report does not make clear the position of the mirrors within the first two burials; however, diagrams show the mirrors' positions in Kurgan 6, Burials 1/2, and Kurgan 8, Burials 13 and 15 (ibid: 57-58). Kurgan 1 was constructed *ca*. AD 200-300, Kurgan 2 *ca*. 600-500 BC, and Kurgans 6 and 8 *ca*. 2000-1500 BC (ibid: 43). The mounds were reused numerous times; for example, Kurgan 8 contained 16 burials (ibid).

Kurgan 1, Burial 1. A diagram of this grave shows that it contained three ceramic vessels (a jar, pitcher, and bowl), two almost identical bronze fibulae, some beads, and a

mirror (ibid: 49). Unfortunately, the mirror's position in the burial is not shown. The mirror is a "Sarmatian" style, shaped like a small disk with a rectangular tab along one side (as opposed to a long handle). The mirror from Kurgan 1, Burial 1 is highly decorated, but the specific iconography is impossible to make out from the drawing (ibid). The grave is dated AD 150-400, and the individual buried therein was a female, aged 18-30 (ibid).

Kurgan 2, Burial 2. The head of the individual buried in this grave was oriented east, an unusual arrangement for the period ("Early Sarmatian," *ca*. 200-100 BC) (ibid: 50). The deceased was identified as a male, aged 35-40 (ibid). The grave goods included a pillow; bones of sheep, cattle, and horse; an iron knife; iron short sword; and iron long sword with fragments of a wooden scabbard, dated *ca*. 150 BC (ibid). The location of the mirror is not shown.

The sword has a diamond-shaped hilt and measures 1 m in length (ibid: 45). This sword type "bears the influence of Chinese traditions, as similar swords with long handles and diamond-shaped hilts made from iron and bronze were widespread during the Han Dynasty….We now know of about 20 swords of this type from Sarmatian burials, some of which are very similar to Chinese bladed-weapons" (ibid). A further indication of eastern connections is an iron belt hook, similar to ones from Inner Mongolia and Siberia, *ca*. 200 BC-AD 100 (ibid).

Other goods in Burial 2 included a ceramic pitcher, three whetstones, iron arrowheads, and the mirror. The mirror was a simple bronze disk without decoration, but found with fragments of a case or cover (ibid: 49).

Kurgan 6, Burials 1/2. A single grave pit (dated to the first century AD) contained two individuals, respectively numbered Burials 1 and 2 (ibid: 53). Burial 1 was identified as a male, aged 22-25; to his west/left, Burial 2 was a female aged 40-50 (ibid). At the man's left side was another "Oriental" style long sword, similar to that from Kurgan 2, Burial 2 (ibid: 46), and a short sword lay along his right thigh (ibid: 53). The man also had a *milita*-type bronze fibula, a style "widespread in western European

Roman provinces," and also known from sites around the northern Black Sea region (ibid: 46). This type of fibula is dated *ca*. 150 BC-AD 150 (ibid). A ceramic vessel lay beside the man's right foot, and some animal bones were found about a meter to the east (ibid: 53).

Specifics of the woman's grave goods are not recorded, however, a diagram of the burial shows that the mirror lay on or underneath her left hand, and a ceramic pitcher a short ways from her left foot (ibid). Beads and arrowheads were also found in the grave pit, but their distribution is unclear (ibid: 54). The mirror was a simple bronze disk, broken along the edges (it is not stated whether this damage occurred in antiquity) (ibid).

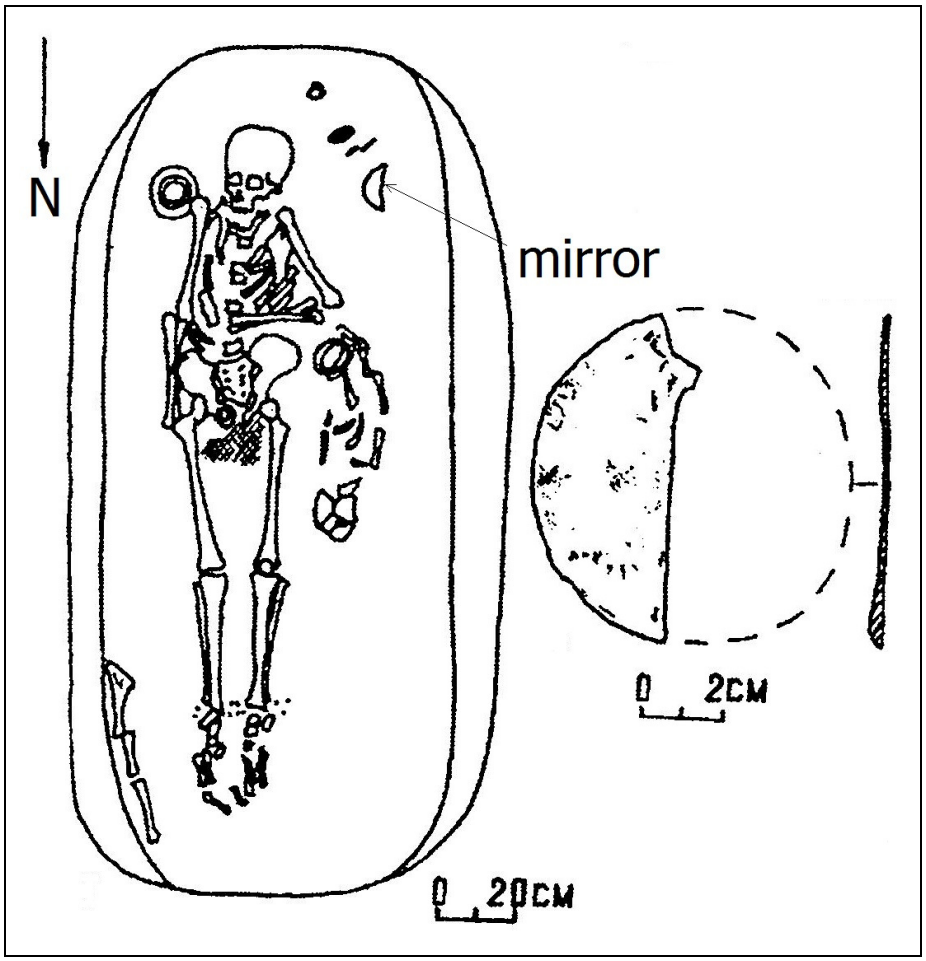

Figure 99. Plan of Aksai Kurgan 8, Burial 13 (after Dyachenko et al. 2000: 57).

Kurgan 8, Burial 13. This grave, dated to the first century AD, contained a female aged 50-60 and an infant at her left/west (ibid: 57). The grave goods included a small gray cup or bowl, a bronze wheel-shaped horse bridle decoration, spindle whorl, fragments of an iron awl and knife, 49 silver and blue glass beads, some animal bones, and a fragment of a bronze disk mirror (ibid). The mirror piece was semicircular, and lay to the left of the woman's head (ibid).

Kurgan 8, Burial 15. Burial 15, dated to the first century AD, contained a female aged 50-60, buried with legs and arms slightly bent and head oriented east-southeast (ibid: 58). Among her grave goods were a red wheelmade pitcher, a Mesopotamian faience green alabaster vessel, 83 clear glass beads, 54 yellow glass beads, a white mineral spindle whorl or large bead, and a bronze tanged mirror (ibid). The mirror was found next to and just under the woman's right knee (ibid). It had a raised rim and raised central boss, and a small tang for attachment of a handle (ibid).

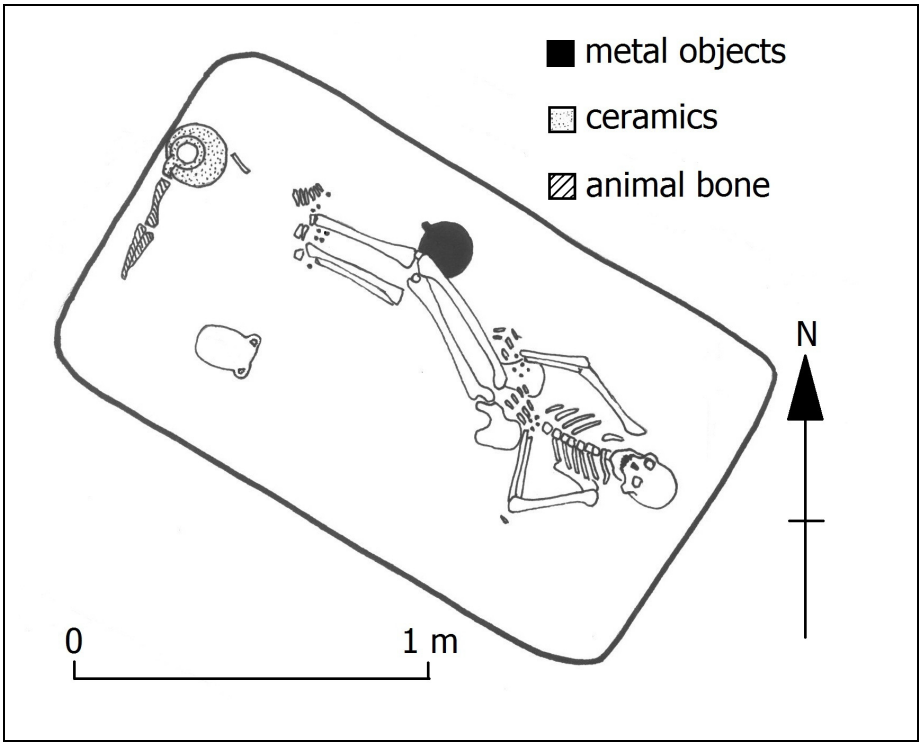

Figure 100. Plan of Aksai Kurgan 8, Burial 15 (after Dyachenko et al. 2000).

Bitak (1st century BC)

The Bitak cemetery (Crimea, Ukraine) consists of hundreds of burial mounds. Tomb 155 contained the remains of 27 individuals in three horizontal layers, each 15-20 cm thick and covered by a layer of earth. The earliest burial (Burial XXIV) was that of a young man equipped with arrowheads and elements of horse harness, probably deposited ca. 10-0 BC; "Calculations carried out on the basis of the ages and sex of the deceased that were identified and on…the date of the grave goods found in Tomb 155 show that relatives from a fairly large group of people were being buried here over the course of 50-70 years" (Puzdrovskii 2005: 85, 103-104). The burials here are not particularly wealthy, although Tomb 155 is one of the larger kurgans at Bitak (ibid: 86).

Burial XX—a woman aged 25-35 years at death—was interred in extended supine position in the second layer alongside three other individuals. The goods in Tomb 155 allow the three layers of burials to be dated narrowly; the middle layer, in which Burial XX was found, belongs to the first half of the 1st century AD (ibid: 103). On the woman's neck were numerous beads of glass, metal, and bone, and more beads made of quartz and jet were found next to the right humerus (ibid: 96). To the right (i.e., the west) of Burial XX's head lay a bronze mirror, 4.5 cm in diameter, the handle of which had been broken off in antiquity (ibid: 89, 96, 102). Puzdrovskii describes the mirror as typically "Sarmatian" in style (ibid: 103).

Tomb 155 appears to contain burials of both males and females, which is typical for Eastern European Iron Age kurgans, although Puzdrovskii does not make it clear whether assignment of sex was done on the basis of grave goods or skeletal analysis. Regardless, there are two basic categories of grave goods, the first consisting of beads and/or spindle whorls, and the second consisting of weapons. These two groups are mutually exclusive, but either may also include ceramics. Two burials of children were excavated (Individuals I and II—the former identified as male), and both of these had beads, but no spindle whorls. Two individuals had unique items: Individual XXIV, who had horse equipment (iron parts of a bridle and a spur), and Individual XX, with the bronze mirror. From the published diagram, it appears that the mirror could have been placed by the feet of Individual XVI, rather than by the head of Individual XX;

Puzdrovskii does not make clear how the owner of the mirror was determined, but due to numbering, it is likely that Individual XVI lay somewhat closer to the ground surface than Individual XX.

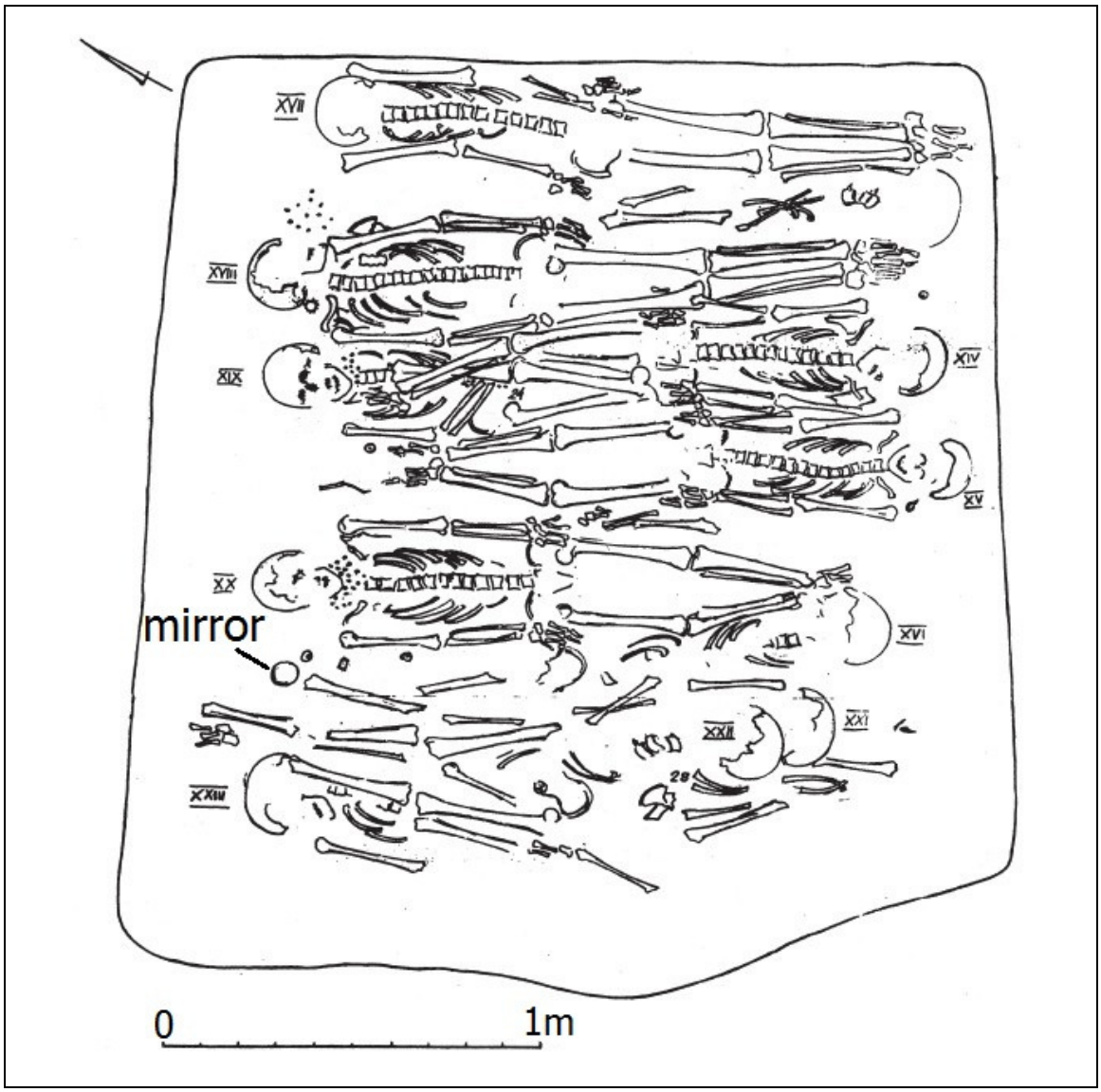

Figure 101. Plan of Bitak Tomb 155 (after Puzdrovskii 2005: 89).

Ust'-Al'ma (1st century AD)

From the 2nd century BC through the 3rd century AD, this "Late Scythian" site on the River Al'ma was one of the most populous in the Crimea (Zaitsev 2008: 67). A number of wealthy, unlooted burials have been excavated at Ust'-Al'ma since the 1990s,

many with excellent preservation of organic materials (ibid: 68). The grave goods testify to the settlement's far-flung trade relationships during the first century AD.

Ust'-Al'ma Tomb 620 has been dated to *ca*. AD 1-50 (ibid: 72). The entrance to this unlooted catacomb tomb was sealed with a large stone slab, rubble, and clay. Inside were two individuals, male and female, inhumed within hollowed-out log coffins placed side by side (ibid: 68-72). Of the two, the woman's burial is the richer in quantity of goods as well as in the number of exotics.

The woman's coffin was placed against the north wall of the burial chamber (ibid: 69). On the lid of the coffin, two sets of horse bits had been placed (ibid: 68). Within it, the woman was accompanied by a rich variety of personal ornaments, including a headdress decorated with gold leaf strips and plaques and topped with a "rich bouquet of wild grasses and flowers" (ibid: 80), gold and glass earrings, a gold bracelet, necklaces of carnelian beads and gold pendants, as well as more carnelian beads sewn on the cuffs of two dresses, the collars of which had been decorated with gold appliqués, gold and bronze finger rings, and a bronze fibula (ibid: 68-80). An object identified as a marble mace with wooden handle was found by the deceased's hand (ibid: 80).

At the feet of the individual was a Chinese lacquer box consisting of two stacked tiers. The upper tier contained a purple glass flask, a wooden papyrus scroll case (*scrinium*), two *pyxides* containing, respectively, rouge and white cosmetics, and an alabaster vessel with zoomorphic handles (ibid: 70). Although the putative papyrus scrolls did not survive, the presence of four small wooden dowels such as were normally attached to the ends of such scrolls (*umbilici*), as well as the shadow of a round organic object inside the container, suggests that there were two scrolls inside the case at the time of the burial (ibid: 74, 78, 80). The lower tier contained a piece of juniper root, spools of thread, two iron awls with wooden handles, a bronze cosmetic spoon, and another, smaller Chinese lacquered box (ibid: 70).

The number of "amulets" in the burial is noteworthy. These include a large eye-bead, a bronze openwork item shaped like a cross within a lozenge, and a cluster, to the right of the woman's head, of objects which are not described in detail (ibid: 69-70).

Based on the available illustration, at least some of these "amulets" appear to be shells and perhaps animal teeth; others were made of bronze and Egyptian faïence (ibid: 69, 70).

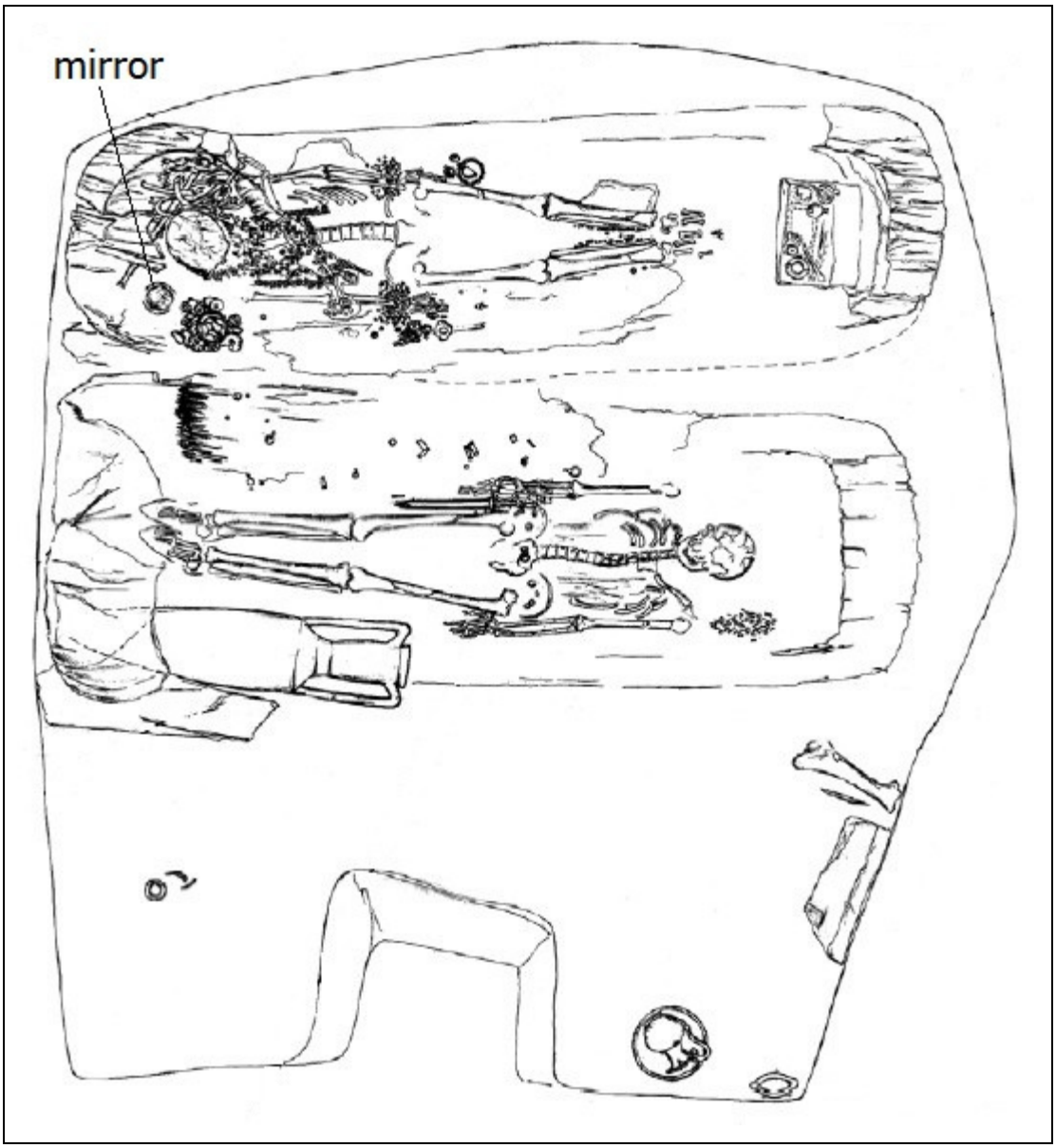

Figure 102. Plan of the Ust'-Al'ma 620 burial (after Zaitsev 2008: 69).

Between the cluster of amulets and the right side of the skull lay a small mirror in a wooden case (ibid). The mirror is undecorated and made of bronze.

The male burial contained personal ornaments and weapons. The ornaments included a headdress decorated with gold plaques and beads, a gold pendant, a gold

medallion inlaid with chalcedony, two jet beads, a large gold earring by the right temple, a silver bracelet on the right wrist, a bronze fibula, and an enameled gold belt plaque and decorated belt strap end (ibid: 70). The man wore an iron dagger in an ornamented scabbard at his right thigh, and at his right side lay a quiver. At his feet was a cluster of iron arrowheads, and at his left side, an amphora (ibid).

In the chamber's eastern corner was an iron candelabrum, a lamp, bronze paterae and oenochoai, and along the eastern wall, an iron knife and sandstone slab. Remains of two censers were found on the southern wall (ibid).

The woman's grave goods from Tomb 620 demonstrate interaction with the two Eurasian superpowers of the day, the Han and Roman Empires. The northern shore of the Black Sea, including the Crimea, was evidently well situated to take advantage of very wide trade networks, however in contrast to the woman's burial, the man's grave goods are much more restricted in origin. The mirror in the woman's coffin is placed between her skull and a pile of amulets, rather than with the cosmetics inside the Chinese lacquer box, which suggests the significance of the mirror may have been ritual rather than cosmetic.

Koktepe (1st-2nd centuries AD)

At the Iron Age fortress of Koktepe, near Samarkand, Uzbekistan, a tumulus burial of a woman aged 42-45 years was discovered (Rapin et al. 2001: 38-42). Ancient attempts to rob the tomb had been unsuccessful, and the burial was found intact (ibid). The woman was interred in extended supine position with head oriented toward the east. In a niche to the east were four ceramic vessels and an iron tripod incense burner; another niche on the west held a bronze cauldron much older than the other grave goods, perhaps 7th century BC, and cattle bones (ibid: 45-48). Rapin et al. note that most nomad tombs of the Iron Age contain sheep bones, but cattle bones are found in women's tombs in the vicinity of Samarkand (ibid: 55). The woman was dressed in a garment decorated with at least 345 round gold plaques and a belt decorated with turquoise studs (ibid: 48, 56). Around her head were some 60 glass beads arranged in two rows, gold sheets, red pigment, and impressions of fine-textured cloth—possibly the remains of a red headdress

(ibid: 48-50). Beside her right forearm was silver bowl, and a silver phiale lay beneath her head; above her head was a clay incense burner, while another was found beside her right foot (ibid: 50). The grave also contained two iron knives and a white stone head which may have acted as a toggle to fasten the knives to the belt (ibid: 58). The style of the knives—with rings at the end of the blade rather than handles—is typical of the Yenisei valley of Kazakhstan and Siberia, though they are more rarely found in the Volga-Don Basin (ibid: 57). The ceramics, on the other hand, were local (ibid: 46). Except for the goods placed in the east and west niches, the woman and her grave goods had been placed on a wooden bier (ibid).

Beneath the woman's right hand were a high-tin bronze Han Chinese mirror and a "Sarmatian" ivory comb decorated with opposed horse heads, evidently originally contained inside an embroidered cloth bag (ibid: 50). The mirror is decorated with curvilinear, stylized dragons, birds, and floral motifs and a ring of 12 small bosses surrounding the central loop (ibid: 49, 51).

The fortifications at Koktepe date from the Iron Age and lasted until the Hellenistic period (*ca*. 350-250 BC), when it was given a new wall (ibid: 36, 38). It was reused during the Medieval period (ibid: 38). Koktepe is a tell, rather than a natural elevation; on top were two areas, each with traces of buildings and "ritual (*sacrée*) platforms"—one to the northeast and one to the southeast (ibid: 36). The southeastern area, the highest, was identified as "palatial" whereas the northeastern one was termed "ritual" (ibid: 36-38). After the Hellenistic period, a "necropolis" of ten graves, now poorly-preserved, was created in the southeastern area (ibid: 38, 41). Later, a dromos tomb (a chamber with entrance passageway) containing the mirror burial was inserted into the southeastern part of the tell, effectively using it as a prefabricated kurgan (ibid). This burial is distinct in its architecture and contents from those of the earlier period (ibid: 69).

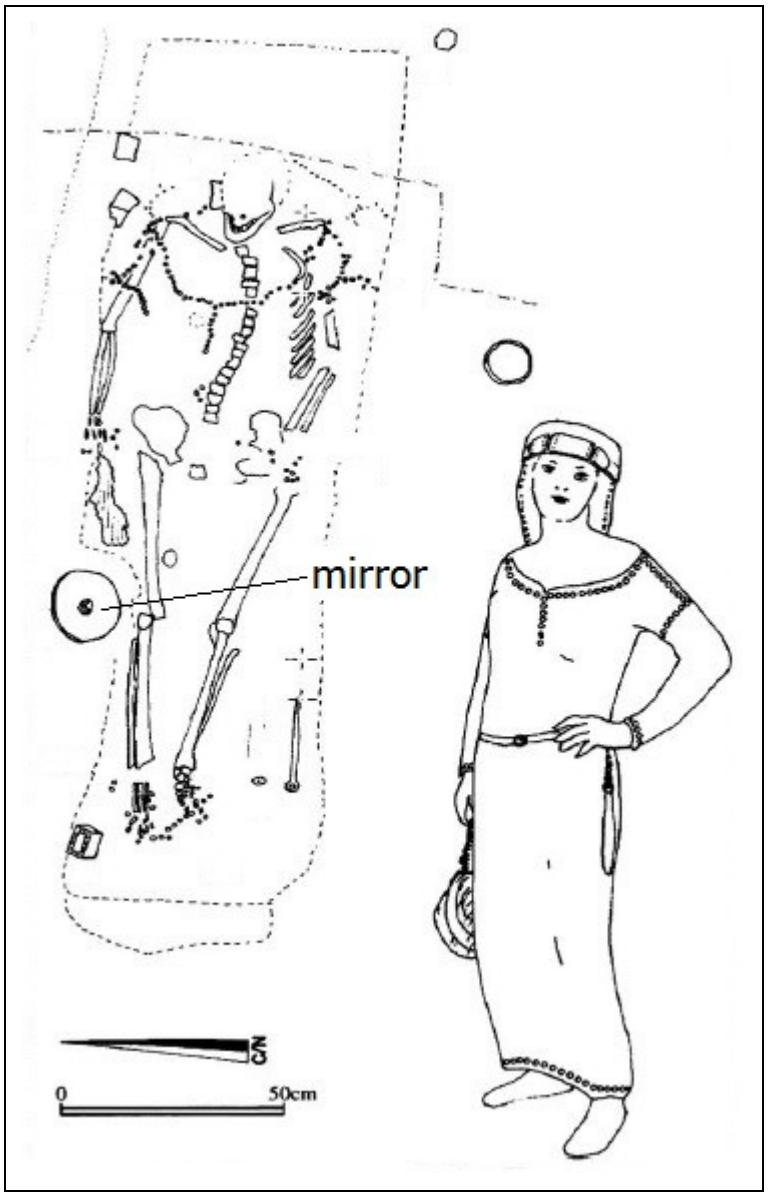

Figure 103. Plan of the Koktepe grave, and reconstruction of the woman's costume (after Rapin et al. 2001: 44). The mirror is numbered 14.

Rapin et al. note that the tomb was difficult to date, even considered in the context of other burials in the region, since burial architecture is highly variable and not clearly correlated with the types of grave goods (ibid: 64, 71). Moreover, the grave goods showed parallels with styles from both an area to the west, around the Urals and Black Sea, and the area of southern Siberia and Kazakhstan to the east (ibid: 71-72). In general terms, Koktepe shares much in common with the burials at Tillya Tepe: exotic metal

artifacts, including both weapons/tools (e.g., knives) and personal ornamentation paired with locally made ceramics, and the reuse of a pre-existing settlement site as a burial mound. There are, of course, differences as well, such as the tomb architecture. However, taken together the burials at Koktepe and Tillya Tepe suggest shared idioms of personal ornamentation and metalwork generally within Inner Eurasia.

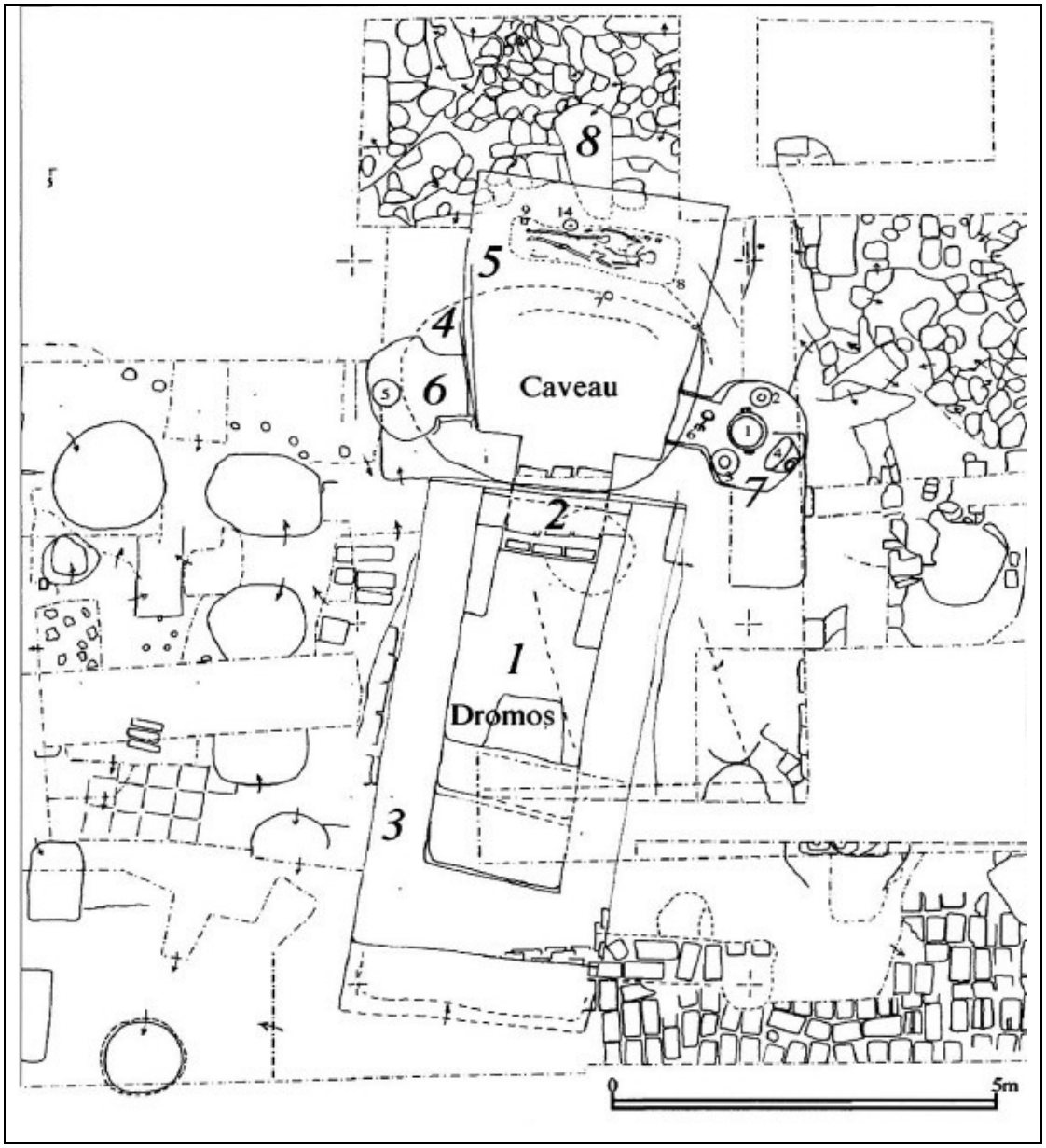

Figure 104. Plan of the Koktepe dromos tomb, showing the location of the burial (numbered 5) (Rapin et al. 2001: 40).

Niyä (1st-4th centuries AD)

Located in the Täklimakan desert in China's Xinjiang Uyghur Autonomous Region, the site of Niyä features excellent preservation of organic materials due to the arid climate and the difficulty of transportation in the desert. The site is attributed to the Jingjue Kingdom (*ca*. 0 BC/AD – AD 4th century) (Wang 1999: 125). The site was originally discovered by Aurel Stein, who recorded finding many Han-style mirrors in the cemetery, as well as texts in both Chinese and Karoṣṭhī, all of which testifies to the extensive trade links of the community; although now abandoned and swallowed by the desert, irrigation canals once allowed the cultivation of fruit trees (ibid: 126-127, 141). Although not a large site, it was an important stop on the southern Silk Road, and although nominally ruled by the Han Empire, the inhabitants, at least those represented in the cemetery, were Caucasoid and light-haired (ibid: 142).

The Xinjiang Uyghur Autonomous Region, as its name implies, has never been dominated by the Han ethnic group (the ethnic majority in China). During the 1990s the region became internationally famous after the discovery of numerous naturally preserved mummies with Caucasoid features (see e.g. Mallory and Mair 2000).

The burials from the cemetery at Niyä had coffins made of hollow tree trunks, and the grave goods included items such as the clothing worn by the deceased, tools related to textile production (e.g., spindle whorls and sewing kits), weapons (especially bows and arrows), cosmetics, feasting accoutrements, food (including pears, grapes, millet, and sheep/goat), small amounts of pottery, and in some burials, bronze mirrors, which were interred with individuals of both sexes (ibid: 141-142). The clothing included silks and heavily embroidered pieces (ibid). Taken together, the evidence suggests that the individuals buried in the cemetery were only the relatively wealthy members of the society.

Tomb 95MN1M3. This double burial contained the bodies of a man and woman who appear to have died as a result of interpersonal violence. The man's body had two deep cuts, one at the base of the neck and one above the hip, made with a sharp blade, and the woman had a large bruise on her right cheek and a broken neck (Wang 1999:

133-134). The blade wounds on the male body indicate that the deaths were probably not the result of natural causes.

Next to the body of the man were a bow and arrows and a knife sheath; beside the woman were a bronze mirror, lacquer box, cosmetics, a silk skirt, and textile scraps and silk threads (ibid). Both individuals were dressed in brocades, silks, and delicate gauze, all "of an exceptionally fine quality which had not been seen previously" at Niyä (ibid: 134). The man wore an ornament made of faceted precious stone beads, while the woman wore pearl earrings, ornaments of gold foil, and a necklace (ibid).

Tomb 95MN1M5. This was the grave of a young woman. Beside her head was a wooden basin filled with assorted foods and a wooden-handled iron knife; beside her waist was a forked wooden stick, propped up vertically, from which hung several items: first, a brocade bag containing a bronze mirror, a bag of cosmetic powder, silk thread, and buttons; second, a small wooden bucket containing a spindle whorl; and finally, another bag containing two combs and a spool for thread (ibid).

Tomb 95MN1M8. This coffin contained the bodies of a man and woman. By the man's right side were placed a bow and arrows, leather bow case and quiver, and a wooden fork with objects hanging from it: a knife sheath, a bag containing two combs, a painted brocade hat, and a brocade ceremonial arm guard with Chinese text woven in which translates, "The appearance of five stars in the east benefits the Central Kingdom [i.e., China]" (ibid: 137).

On the left side of the woman was another wooden fork, from which hung silk clothes, an embroidered bag, a small round bucket, and a brocade bag with a mirror. At her feet lay wooden cups, basin, pitchers, and food (ibid).

Wang interprets the grave goods as the belongings and everyday utensils of the deceased, and states that "Judging from the fact that every male was equipped with funerary weapons, one can see that the situation in those days required that all male citizens of the Jingjue Kingdom had to be warriors" (ibid: 142); however, since the cemetery seems to have contained only relatively wealthy people, it may be that weapons

were an identity marker for elite, adult males. It appears, meanwhile, that textile production was associated with elite, adult women. The fact that the individuals in Tomb M3 seem to have died violently suggests that elites at Niyä were subject to interpersonal aggression. Since the town was an important locale on the Silk Route, with exotic goods from many sources, it may have presented an attractive target to raiders.

All of the mirrors from Niyä are of Han Chinese manufacture, indicating that such goods were desired by elites who lived and traded along the Silk Roads. Their placement in the burials is not like that of Han burials; in Han tombs, there is often a single mirror inside the coffin, and any other mirrors are usually placed along with cosmetics kits in a special alcove for grave goods (Brashier 1995). But the mirrors at Niyä were placed near the individuals' waists, which is to say, within easy reach of their hands. Note, for comparison, that food was placed by the head or feet in these graves, which would not have been such an easily accessed position (assuming the deceased were thought to have the ability to reach for things at all). The brocade bags suggest that mirrors were probably carried and kept under wraps to protect them.

Tillya Tepe (1st century BC-2nd century AD)

Tillya Tepe, or the "Hill of Gold," is located at an oasis on the northern plains of present-day Afghanistan, in the territory of the former kingdom of Bactria and the Kushan Empire. At least seven burials, dated ca. AD 100-150[11]—six of them excavated—were dug into the ruins of a Bronze Age structure (identified as a probable fire temple) and later fortified settlement (Sarianidi 1980: 125). By around 500 BC, the tepe had ceased to be occupied (ibid), but was subsequently reused for burials in a manner similar to Koktepe.

Tillya Tepe was situated close to the fortified city of Yemshi (or Emshi) Tepe, with the graves situated on the side of the mound facing Yemshi Tepe (Pugachenkova and Rempel 1991: 11; Sarianidi 2008: 212-214; Schiltz 2008: 221). Unfortunately, details of Yemshi Tepe, as reported in English-language journals, are inconsistent: for example, it is either half a kilometer (Sarianidi 2008: 212) or three kilometers (Pugachenkova and

[11] On the basis of the five coins found in the graves, Pugachenkova and Rempel (1991: 12) date the burials to *ca*. 50 BC-AD 1.

Rempel 1991: 11) from Tillya Tepe; and dates from either the 1st century AD (Sarianidi 2008: 212) or the mid-1st millennium BC (Pugachenkova and Rempel 1991: 11). Regardless, both Yemshi Tepe and the burials at Tillya Tepe were located in the landscape of the ruined Graeco-Bactrian centers Bactra and Aï Khanoum (Holt 1999: 50; Sarianidi 1980: 130). In addition, pottery from the Tillya Tepe burials is similar to that found at Yemshi Tepe, leading the chief excavator, Viktor Sarianidi, to hypothesize that the deceased were elites from that city, even the founding family of the Kushan Empire (Sarianidi 1980: 125, 130). Pugachenkova and Rempel (1991: 11) are more imaginative, claiming that Tillya Tepe was chosen as a burial site for its remoteness from Yemshi Tepe, in order to protect the graves from looting, that the burials were created under cover of night, "and the grave diggers slain." Although a hasty burial may indeed have taken place, the reuse of an abandoned settlement as a burial mound parallels that at the contemporary grave site of Koktepe.

Although a small cemetery, the graves are remarkable in their richness, as well as for the information they provide about the period of the foundation of the Kushan Empire in the first century AD. The graves have been attributed to a confederation of nomadic tribes called *Yuezhi* by the Chinese, and also mentioned (under other names) by Persian and Indian sources respectively (Sarianidi 1980). According to these sources, the Yuezhi moved south and west into Bactria, probably contributing to the collapse of the Graeco-Bactrian kingdom (Pugachenkova and Rempel 1991: 12). These tribes were politically overshadowed by the Parthians to the west, but eventually united to form the Kushan Empire (1st-4th centuries AD) (ibid; Sarianidi 1980: 130). Alternatively, Pugachenkova and Rempel (1991: 12) suggest, on the basis of the numismatic evidence—specifically, the coins that were not found in the graves—that the individuals buried at Tillya Tepe belonged to the "Saka-Parthian and Indo-Parthian milieux" rather than to the Yuezhi. Whether the Tillya Tepe graves belonged to Yuezhi or not, they contain objects from across Eurasia, which testify to the extent of cultural contacts at the time (Sarianidi 2008: 216; Schiltz 2008: 220, 231). Stylistic relationships are apparent which stretch as far as Siberia, Rome, the Volga-Don region, Parthia, India, and China (Sarianidi 1980: 131).

The deceased were buried in lidless wooden coffins, seemingly wrapped or covered in layers of cloth with gold and silver appliqués, in pits covered with wooden planking (Schiltz 2008: 223). It is possible the burials were made at the same time or within a short period, given the similarities in decoration of many of their accompanying artifacts. For example, a particularly common motif is the heart shape, which appears in some form in all the burials (Schiltz 2008: 230). On the handle of the dagger from Tomb IV, the shape is connected to a stem, and thus it has been identified as a floral motif; Schiltz (2008) interprets it as an ivy leaf specifically (ibid: 230). It is interesting to note, however, that a very similar shape is common on Chinese mirrors of the Zhou period[12] (traditionally 1045-256 BC) and is very prevalent on gold ornaments from the Korean Peninsula during the first few centuries AD, where it has been identified as a birch leaf. Korean archaeologists have interpreted the significance of the shape according to more recent ethnographic accounts of Inner Eurasian shamanism, where the birch tree (*Betula* sp.) is regarded as "a gateway to the spirit world" (Hageneder 2008: 9; see also Covell 1983: 29). The construction and decoration of the gold crown from Tillya Tepe Tomb VI also bears marked resemblance to much later Silla crowns from the Korean Peninsula.. At any rate, the precise identification of the plant species (singular or plural) represented is not at issue here; rather, it is worth noting that we are likely seeing another indicator of wide-ranging culture contacts in late prehistoric Eurasia. The heart/leaf may indicate the transmission not only of a shape, but of its symbolic connotations as well (just as, in modern times, the heart shape as a symbol of love has spread all over the world).

Tomb IV contained the only male in the group; four of the remaining five women's burials contained mirrors among the grave goods. Pugachenkova and Rempel (1991: 13) conclude that the burials represent a king and his harem, killed as *suttee* when the king died, but there is no direct evidence of this. Indeed, if these authors' interpretation is to be believed, many (most?) of the famous gold anthropomorphic representations from Tillya Tepe actually represent goddesses and Amazons, rather than gods and kings; it would be interesting to find a juxtaposition of such a plethora of

[12] The leaf shape did not disappear from Chinese mirror iconography after the Zhou period, but floral imagery in general was eclipsed by Daoist iconography.

powerful female images alongside the sacrifice of women as human property. Rubinson's (2007) interpretation is considerably different.

The position of the mirrors in the coffins can be determined because the position of metal appliqués has permitted reconstruction of the individuals' garments. In all cases, the majority of grave goods fall into the category of personal ornamentation (Sarianidi 1980: 126), which suggests that perhaps the mirrors were also regarded as an element of a personal-ornamentation material complex.

Tomb II. This burial contained the remains of a woman in her 30s or 40s, inhumed in an extended position on her back. She wore a high, conical headdress decorated with bands of gold appliqués. Two large pendant decorations hung on either side of the face (possibly suspended from the hair). The woman wore a necklace of gold and black beads, three finger rings, a pair of bracelets (one on each wrist), and a pair of anklets. In addition the tomb contained an iron axe (variously described by Rubinson [2007] as a "battle-ax" [p. 51] and a "pickaxe" [p. 56]) and two knives of Siberian type. Her dress was probably secured by a pair of clasps, and was ornamented with rows of appliqués. On her chest lay a mirror of Chinese manufacture, which may have been placed between an undertunic and her ornamented outer garment (Schiltz 2008: 241). Rubinson (2007: 61) points out that the woman in Tomb II may be viewed as having been singled out in some way, because of the presence of "weapons," which none of the other women's graves possessed, yet which are different from those in the male's grave: "It is possible that the weapons mark her as a warrior, since the military role is certainly a possibility within the sociohistorical steppe context, but perhaps these weapons designate her position as a senior female..."

Tomb III. The individual in Tomb III was identified as a woman on the basis of the grave goods therein, but her(?) age at death is unknown. The contents had been disturbed by rodent activity. She wore a tall headdress decorated with bands of appliqués and hairpins with dangling pendants attached. A pendant with horse motifs likely hung beside her head as well. Among her other ornaments were a gold neckring and scattered

pieces of a probable second necklace, a number of clasps and brooches, bracelets, anklets, and three finger rings. The buckles and soles of her shoes were cut from gold sheet, and a number of jewelry items were scattered about the burial, including four medallions, ear pendants, bracteates, and amulets. A silver Parthian coin may have been originally placed in the hand, while a Roman coin of Tiberius lay in the corner of the coffin. In all, the grave contained nearly 5,000 gold objects. Most importantly for this analysis, a Chinese mirror, described as being silver but most likely a high-tin bronze[13], lay on the woman's chest. In the southwest corner of the grave lay another mirror with an ivory handle (Schiltz 2008: 254).

Tomb V. This grave, the least wealthy of the six, contained the body of a young woman probably no older than 20, inhumed in a supine, extended position. She wore heart-shaped earrings inlaid with turquoise, a polychrome necklace or ornamented garment neckline, a gold bracelet, and anklets. Near the body, inside the coffin, were placed a lion-shaped pendant, two gems, and some objects identified as amulets. Near the right shoulder was a long tube of silver with remnants of wood inside (perhaps a scepter), and by her right hand was a "silver" (more likely bronze) mirror with a stand. Also near the right hand was a silver cosmetics box (ibid: 280).

Tomb VI. Like the occupant of Tomb V, the woman in Tomb VI was about 20 years old and interred in a supine, extended position. Her skull had been intentionally deformed, a practice seen in other elite burials of Inner Eurasia. She wore an elaborate gold collapsible crown covered in small pendant gold discs. The crown consists of a headband to which are attached five upright pieces in the shape of stylized trees. The trees are decorated with turquoise-inlaid flowers and four of the five feature a pair of birds on the upper branches. This crown has no parallels among the Greeks, Parthians, or

[13] Sarianidi described this mirror and the one in Tomb V as being silver; a fellow Russian archaeologist, Sergei Rudenko, described one of the mirrors from Pazyryk Barrow 2 as being silver, and in that case the mirror was actually made from a high-tin bronze. I believe a similar mistake was made in the case of the Tillya Tepe mirrors (or that Sarianidi was merely describing their color and not their composition), since I know of no silver mirrors manufactured in China, while the high-tin bronze favored for mirrors there does indeed have a silver color.

Kushans, but bird-and-tree decorations are known from contemporary "Sarmatian" (2nd century BC-AD 2nd century) burials in present-day Russia, as well as on Korean and Japanese crowns of the 5th-7th centuries AD (ibid: 284; see also Rubinson 2007: 60).

Hairpins with dangling pendants, two large gold pendant decorations hanging on either side of the face, and earrings completed her collection of head ornaments. On her forehead and cheekbones were small ornaments of black lacquered mica (Schiltz 2008: 63, note 24). In addition, she wore a necklace of gold beads inlaid with turquoise, a lion-headed bracelet on each wrist, gold anklets with turquoise inlay, and a finger ring, while her robe was decorated at the chest, shoulders, and sleeves with appliqués and bracteates. At about waist level, the famous "Aphrodite of Bactria"[14] was attached to her garment, and a pair of clasps depicting a man and woman riding a large felid were found at her neckline. In her right hand was placed a gold "scepter." Her left hand held a Parthian coin, while another had been placed in her mouth. A "silver" Chinese mirror was placed on her chest, and a mirror with an ivory handle at her feet. Outside the coffin, a basket contained a clay vessel, iron toilet articles, three glass bottles, two ivory boxes, two small silver pots, and a cosmetics plate (ibid). Rubinson (2007: 59) proposes that, given the "Hunnic" practice of cranial deformation and the Greek tradition of placing a coin in the mouth, Tomb VI "seems to most clearly document the process of transition, of construction of a new identity, at Tillya Tepe, of becoming more Inner Eurasian/Hellenized." However, Pugachenkova and Rempel (1991: 12) state that the coin in the mouth represented a local practice and not a Greek one, although they do not explain how one can tell the difference.

It is doubtless significant that only female graves at Tillya Tepe contain mirrors; however, the presence of "weapons" (an axe and knives, which might equally be seen as "tools") with the woman in Tomb II and the ring jewelry buried with the man in Tomb IV demonstrate that the representation of gender was different here than in Iron Age temperate Europe or contemporary China, but bears a resemblance to other nomad burials from the Inner Eurasian steppes, where jewelry and weapons can be found in burials of

[14] The Aphrodite of Bactria has attracted considerable attention because of the hybrid nature of the representation. The general manner of depicting the human form is Greek, but the figure's wings are distinctly Inner Eurasian, and she wears a *bindi/urna* mark, which is a South Asian custom. The Aphrodite is thus a microcosm of cultural influences influencing the creation of the Tillya Tepe burials themselves.

both biological sexes. Rubinson (2007) has explored the ways in which identity might have been expressed in the burials at Tillya Tepe; she emphasizes that times of social and political upheaval—such as might be expected in the region of former Bactria in the first century AD—allow the reconfiguration of identities. The presence of objects ranging from Chinese mirrors to Roman glass and Siberian daggers to Persian coins show how cosmopolitan and wealthy Silk Road oasis cities like Yemshi Tepe could become. Opportunities must have been abundant for the creation and expression of new kinds of persons at Tillya Tepe.

Two aspects of the Tillya Tepe mirror burials stand out: first, several of the mirrors are made of silver, an unusual material; and second, mirrors of Chinese manufacture were placed on the chest, while handled Inner Eurasian mirrors were placed by the feet. This suggests differential valuation or symbolism attached to the two types of mirrors:

> That these [Chinese] mirrors likely have symbolic meaning in these graves, given their placement, is reinforced by the fact that two of these women [Tombs III and VI] also have Inner Eurasian mirrors elsewhere in their graves ….The Chinese mirrors are the type known as cosmic mirrors and were widespread in China in the earlier part of the Eastern Han (25-220 CE). They were made beginning in 8 CE. In China such mirrors are not placed on the chest of the deceased. However, such a mirror placement can be found in women's graves in the Karasuk period in Southern Siberia, in the 14th through the 10th centuries BCE (Okladnikov and Sunchugashev 1969, 80). The practice continues in the Tagar period, which follows Karasuk, in burials that date to the 8th through the 6th centuries BCE (Bokovenko 2006, fig. 4). Therefore, the placement of this eastern mirror type also has a cultural significance that links the individuals at Tillya Tepe to burial practices with a long tradition in the regions to their north and east (Rubinson 2007: 59).

Perhaps it should come as no surprise that mirrors would play a major role in the signification of identities through burial, since mirrors reify the notion of self.

Although TLV mirrors were very popular around the time of the Tillya Tepe burials, but most mirrors were made of bronze—silver was an uncommon material. This suggests that the Yemshi Tepe community were quite particular about the sort of mirrors they wanted; moreover, the fact that the TLV mirrors were positioned differently from those made more locally indicates that at least some of their cosmological text may have been recognized and understood. After all, although the TLV design was very popular, other varieties of mirror were being made and traded from China. The deposition of

silver TLV mirrors in Burials II, III, V, and VI may have been an attempt to affirm connections with the east (whether historical or invented), but it equally may have carried ideological or religious meanings. In this sense, it is interesting that the man in Tomb IV has no mirror.

Wars in Afghanistan have made further archaeological research in the region difficult, not to say impossible, so it is not known how representative these graves may be of first century AD practices. The individuals may have belonged to a single lineage or family group (Schiltz [2008: 226] suggests the women were victims of suttee), and thus may not be representative of any particular culture; furthermore, with their burials so close to the city at Yemshi Tepe, they may not have been nomads at all. Indeed, the excavator, Viktor Sarianidi, proposed that they were the royalty of Yemshi Tepe; he was so surprised to find graves of such wealth without a typical nomad-style kurgan (a wooden burial chamber within a specially constructed burial mound) that he hypothesized the burials were conducted hastily under cover of night (Sarianidi 1980: 125). But it is equally, if not more, likely that these burials defy expectations because they belong to a cultural and historical context which is still poorly understood.

SUMMARY

Viewed as a whole, mirror burials in Inner Eurasia and the steppes are probably the most variable in Iron Age Temperate Eurasia, which is not surprising, considering the widespread practice of nomadic pastoralism and the borders of various empires—including the Han Chinese, Romans, and Persians—coming into contact, or near contact, with one another. In such a vast region, great cultural diversity is to be expected. Both the suspension loop mirrors favored in eastern Eurasia and the lateral-handled mirrors favored in the west can be found in this region.

Mirrors in this region do not seem to have had strong associations with either gender, being found in graves of both sexes and along with all sorts of other grave goods, ranging from spindle whorls to swords. Many scholars believe that mirrors were the

tools of shamans, although this assumption does require further examination. Mirrors were deposited in burials from the second millennium BC, but their frequency and elaboration increased during the Iron Age. During this period, mirrors are found far from their points of origin (e.g., Chinese mirrors in Afghanistan, maritime Russia, and Siberia). It is likely that the nomads of Inner Eurasia were responsible for the wide distribution of mirror burial practices across Eurasia.

As Inner Eurasia and the steppes are vast, smaller geographical subdivisions are utilized here, corresponding to the Black Sea, South Urals, and the Altai (Fig. 105). These seemingly discrete groups doubtless reflect recovery bias, as archaeologists have worked extensively in these areas and published the results in multiple languages. For

Table 5. Inner Eurasian/steppe sites categorized according to subregion and time period.

	Early (800-500 BC)	**Transitional (500-350 BC)**	**Late (400 BC-AD 300)**
Black Sea		Chertomlyk (340-320 BC)[15]	Aksai (200 BC-AD 100) Aksai 1-1 (AD 150-400) Bitak (10-0 BC) Ust'-Al'ma (AD 1-50)[12]
South Urals		Filippovka (450-300 BC) Ilekshar (500-450 BC) Lebedevka II (450 BC)[12] Mirny (500-400 BC) Nikolayevka II (500-400 BC) Pokrovka (400-100 BC)	Prokhorovka (400-300 BC) Shumaevo II (300-100 BC)
Altai	Arzhan 2 (700-600 BC) Bekteniz (800-600 BC)	Bike III (500-300 BC) Pazyryk (500-300 BC)	Ak-Alakha (400-200 BC) Ak-Alakha 3 (400-200 BC)
Southern Mountains		Issyk (500-300 BC)	Koktepe (100 BC-AD 200) Niyä (AD 1-400) Tillya Tepe (AD 100-150)

example, the Altai region has attracted researchers because of the potential for soft tissue preservation in the permafrost. However, these geographical units may have been meaningful in terms of prehistoric mobility and communication along waterways (the

[15] The Chertomlyk burial was described as "Scythian" in spite of its late date, and the mirror from the burial is decorated in the Scythian animal style, so it has here been assigned to the Transitional period. Similarly, the mirror from Lebedevka is decorated in animal style, and thus may be considered "Scythian." Finally, Ust'-Al'ma was described as a "Late Scythian" burial, but because it is so late, it cannot reasonably be classed with the Early or Transitional groups.

Volga-Don, Ural, and Katun-Ob river valleys, respectively). Water is relatively scarce on the steppes, so access to it would have been important.

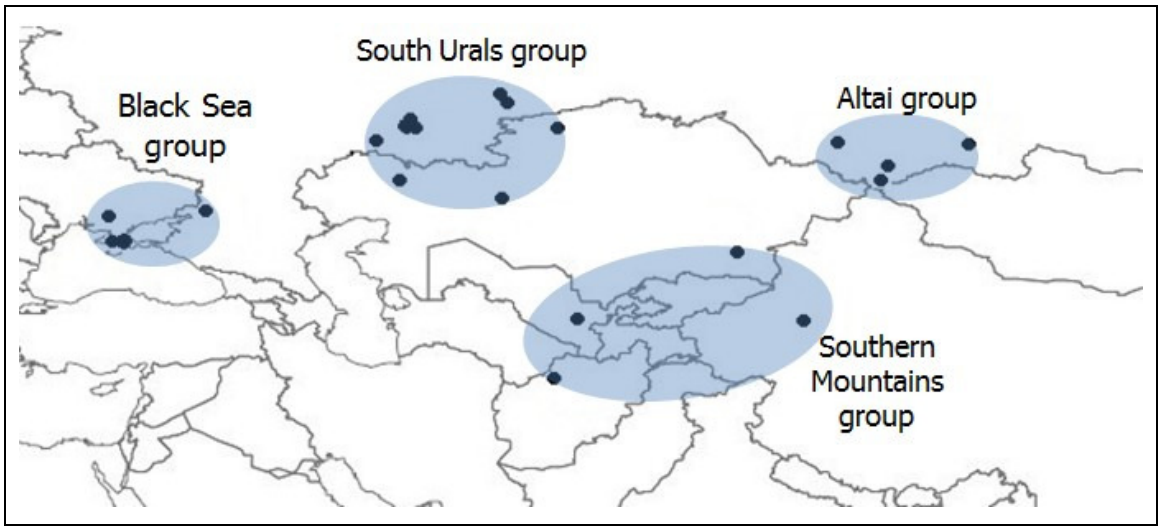

Figure 105. Map of Inner Eurasian subregions as defined in this analysis, showing location of sites within each subregion.

Iron Age burials from the Eurasian steppes can also be chronologically divided into an earlier group, roughly corresponding to the traditionally recognized "Scythian" (*ca*. 800-400 BC), "Sauromatian" (*ca*. 600-400 BC) and "Sarmatian" (*ca*. 400 BC-AD 300) periods. Because the present analysis considers graves in widely separated geographical regions, it is to be expected that they do not all belong to a single culture, even within each period; furthermore, different authors give slightly different dates for the beginning of the Sarmatian culture. Therefore, the burials are assigned here to "Early," "Transitional," and "Late" groups.

The last group, though not tightly clustered, are located in a region designated here as "Southern Mountains": Issyk (southeastern Kazakhstan), Koktepe (eastern Uzbekistan), Tillya Tepe (northern Afghanistan), and Niyä (western China). Although these sites are not in the mountains, they are all near the foot of major mountain ranges (the Pamirs in the first two cases, Hindu Kush, and Kunlun Shan, respectively). Table 5 illustrates the categorization of sites

Table 5 makes plain that the Black Sea group all belong to the Late period. The South Urals group belongs to the Transitional and Late periods, but particularly the former. The Altai group is most evenly distributed across all eras.

Table 6. List of Temperate East Asian mirrors discussed in Chapter 6.

Mirror/Site	Location	Context
Fujinoki	Nara Prefecture, Japan	inhumation
Hwangnam 98	Gyeongsangbukdo, Korea	inhumation
Kurozuka	Nara Prefecture, Japan	inhumation
Sara-ri 130	Gyeongsangbukdo, Korea	inhumation
Songsan-ri 7	Gyeonggido, Korea	inhumation

INTRODUCTION

Information in European languages about specific sites in East Asia is scarce, although general summaries of Korean and Japanese archaeologies do exist, in particular due to the efforts of G.L. Barnes and S.M. Nelson (e.g., Barnes 1988, 1993, 2001, 2004, 2007; Barnes and Okita 1999; Nelson 1993, 1996, 2008). To complicate the picture, the Korean and Japanese languages are rather distantly related to one another, and neither is related to Chinese, while all three countries use somewhat different writing systems, so the ability to access literature from one of these areas does not necessarily give access to the literature from neighboring regions, which is necessary to form an understanding of the broader regional context. Kuwayama (2004) discusses the role of linguistic and academic hegemony within the disciplines of anthropology and archaeology, arguing that Britain and America are the metaphorical center of the archaeological "world system," while within East Asia, Japan occupies this role. Cooperation among East Asian archaeologists, as well as publishing in English in order to reach a wider audience, is a relatively new phenomenon[17]. Finally, site reports frequently become a sort of "gray literature," housed in local government offices or museums, but not published as articles or books. It has therefore not always been possible to achieve the same level of detail in discussing East Asian sites as in European sites.

[17] Japanese archaeologists were the first to perform excavations in Korea during the colonial occupation (1910-1945), but with the sometimes quite explicit goal of finding evidence for Japanese domination in the past. Consequently, this cannot truly be termed intellectual cooperation.

Before proceeding to individual sites, a brief introduction to archaeological chronology in Korea and Japan is warranted. China, of course, has its own terminology, but is not a main focus of this analysis. *Iron Age* is not used in Japanese archaeology, and is sporadically used in Korea, although in prehistory both regions participated in the same trends as other parts of Eurasia during their various Iron Ages. In Korea, chronology is based on historical records, while in Japan, it is based on types of material culture. Application of *Iron Age* in Korea overlaps the late Bronze Age (*ca*. 300-1 BC) and the Proto-Three Kingdoms or *Samhan* 三韓 period[18] (*ca*. AD 1-300).

According to medieval histories, three kingdoms (*Samguk* in Korean)—Baekje, Goguryeo, and Silla—and a small confederation of polities, Gaya, came to dominate the Korean peninsula (Fig. 106), ostensibly between *ca*. AD 300-668, at which latter date Silla conquered Baekje and Gaya to form Unified Silla, and the Goguryeo kingdom evolved into the kingdom of Balhae. An earlier threefold political division of the peninsula, *ca*. AD 1-300, is referenced in Chinese histories, which refer to Jinhan, Byeonhan, and Mahan (thought to have been roughly in the territories of later Silla, Gaya, and Baekje, respectively—although the exact locations of the polities, or *han*, is still debated [Barnes 2001: 27]). This period is therefore referred to as Proto-Three Kingdoms, or *Samhan* ("Three Han").

On the Korean peninsula, mirrors are first found in Bronze Age burials (ca. 1000-300 BC), and continue to be included among grave goods in elite burials through the end of the Middle Goryeo period (late 13th century AD) (Nelson 1993, 1996; Horlyck 2002b). Throughout this period, peninsular burials are quite variable: containers for the corpse range from simple pits to ceramic jars, wooden coffins, and stone cists, while above ground monuments include cairns, pyramidal stone chambers, dolmens, and huge hemispherical earth mounds (Nelson 1993: 26). Moreover, different types of grave architecture may house any sort of container for the body (e.g., wooden coffin, jar coffin).

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[18] Korean *Han* 韓, 幹, or 刊 refers to a chief or leader, and is cognate with *khan* in Turkic languages (Choi 2005: 31). The Chinese characters were adopted based on their phonetic reading, but the ideograph actually bears no relation to the meaning of the word in Korean, and thus the three characters are interchangeable. *Samhan* could be translated the "three khanates" (or in anthropological terms, the "three complex chiefdoms"). In the following period, *guk* 國 refers to a country or kingdom, reflecting a different level of political organization. In modern times, however, *han* has come to be strongly associated with indigenous Korean national identity (e.g., Shim 2004: 216).

Nelson (1993) found that variability in burial practices—both in architecture and grave goods—could be attributed first to chronology and region/culture group, and secondarily to social status, while gender seemed to play a negligible role. The insignificance of gender as a determinant of burial type stands in marked contrast to contemporary burials in China, but is similar to prevailing practice in Japan at the time.

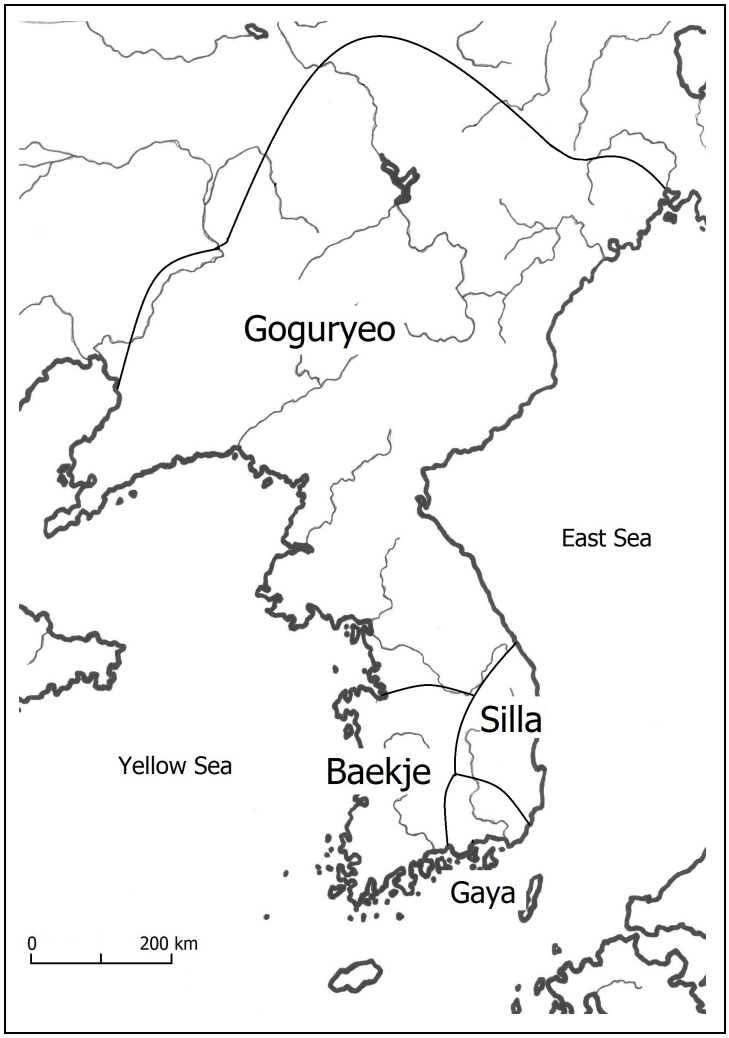

Figure 106. Map of the Korean Three Kingdoms and the Gaya Confederacy, *ca*. AD 300-668.

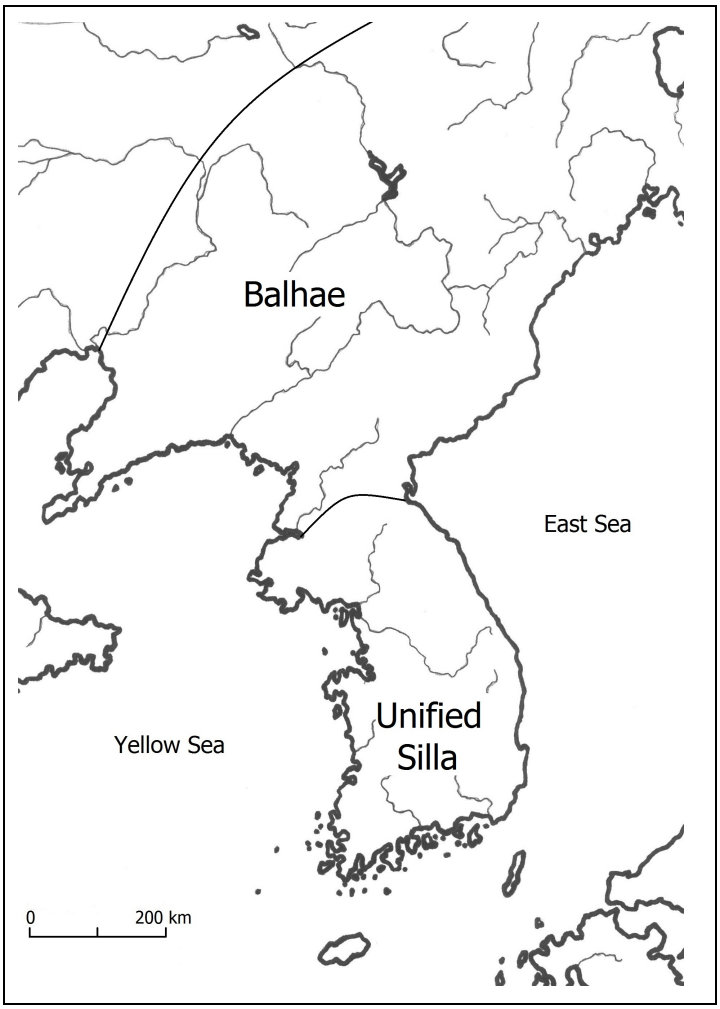

Figure 107. Map of the kingdoms of Balhae and Unified Silla, *ca*. AD 668-900.

Most Bronze and Iron Age elite burials (except for those of the Silla kingdom, discussed in greater detail below) were looted in antiquity because they were designed to be highly visible, and, in some cases (those most heavily influenced by Chinese custom), to be re-entered for ceremonies and secondary interments (Nelson 1996, 2003; Horlyck 2008 pers. comm.). Thus most of the evidence about grave goods and burial practices in pre- and proto-historic Korea comes from unlooted royal Silla and Goryeo burials, which are likely not representative of the cultural variability that once existed. Nevertheless, in general terms, Bronze and Iron Age elite burials of both males and females in the Korean peninsula are likely to contain some combination of weapons (spears, swords, battle axes, arrowheads, and daggers), gold or gilt-bronze personal ornaments (e.g., hairpins, crowns,

ornamental shoes, earrings, and girdles), ceramics, beads, Chinese coins, iron ingots, horse trappings (including horse armor), and mirrors (Nelson 1993, 1996; Horlyck 2002b; Kang 2008). Additionally, royal Silla burials sometimes include exotic goods from as far away as the Mediterranean. The enthusiasm for gold distinguishes peninsular, especially Silla, material culture from that of China, where gold was never accorded as much significance as jade and bronze, and from the Japanese archipelago, where very little gold is naturally available; but it links Korea with the nomadic cultures of northern Asia.

Peninsular Bronze Age mirrors are distinct from contemporary exemplars in most of eastern and Inner Eurasia, in that they have two or three suspension loops placed off-center in a row, rather than a pierced central boss or a protruding handle at one edge. These mirrors are also found in southern Manchuria (O'Donoghue 1990; Kim 1986). Mirrors with so-called "coarse line" geometric decoration are found at sites across the "Northern Zone" of eastern continental Asia, in present-day Inner Mongolia and Manchuria. These mirrors demonstrate the cultural connections between the Korean peninsula and the steppes of northeast Asia during the second and early first millennia BC.

The coarse lines cast on the mirrors of the 2nd millennium BC evolved into fine lines arranged in zigzags, triangles, and concentric circles. In some cases, traces of cord have been found in the loops, indicating these mirrors were suspended, much like the smaller mirrors of China. Ethnographies of Manchurian, Siberian, and Korean peoples describe and illustrate shamans wearing mirrors on their robes or coats, so it is possible that mirrors were worn in a similar manner in prehistory (Tedlock 2005: 47-48, 51-52; Wood 2003: 14-15).

Beginning around the early 3rd century BC, the Korean peninsula was increasingly in contact with northeast Asia and the Japanese archipelago. The contact with Han China in particular would cause major transformations in social organization on the peninsula—there is little evidence for hierarchization in burials or settlements prior to the 3rd century, after which time ample evidence for social stratification can be found.

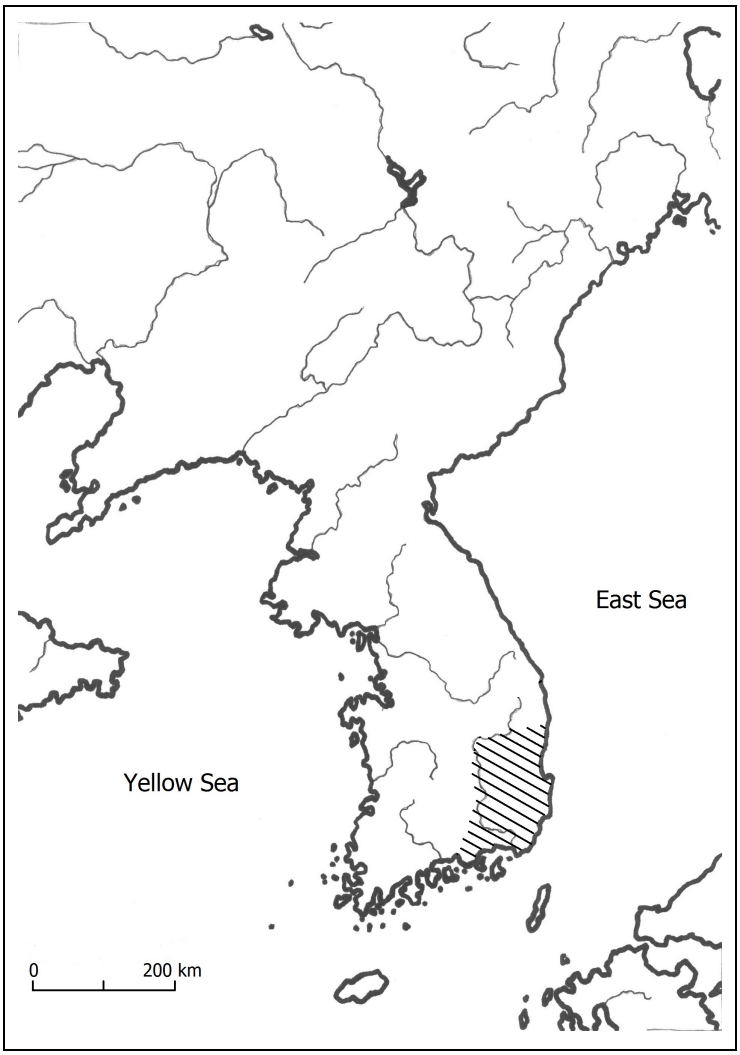

Figure 108. Map of Korea, showing the Yeongnam region.

In 108 BC, the Han Empire established the Lelang (Korean *Nangnang*) Commandery, a fortress with surrounding Han settlements and factories, near modern day Pyeongyang, North Korea, as well as a few smaller commanderies. The Lelang colony endured for more than four hundred years, until it was conquered in AD 313. Thus from the second century BC on, many Han goods, notably iron products, began to enter the Korean peninsula in large quantities, and Lelang acted as an entrepot through which such goods were distributed. Yi (2001: 251) has argued that goods received directly from Han through officially-recognized trade with the commanderies (e.g., mirrors) were deemed prestige goods, and appropriate for display; therefore, it seems that

trade with the Han commanderies facilitated the rapid development of social distinctions on many levels, or at least the expression of such distinctions in burials. Han mirrors began to be substituted for the native geometric mirrors; some burials even include clay imitations of Han mirrors (Nelson 1996: 27), suggesting that the form of the Han mirrors—perhaps their exoticness, inscriptions, or iconography—had become as important to their owners as (if not more so than) the reflective function of a true mirror.

From the first century BC, burials in the Yeongnam region (Fig. 107) are characterized by wooden coffins (*mokkan*) and later wooden coffins within wooden chambers (*mokkwak*)—the abandonment of stone construction for wood seems to have been due to Chinese influence (Barnes 2001: 206). However, beginning in the 4th century AD with the destruction of the Lelang Commandery, reaching the central Gyeongju basin around the mid-6th century AD, the wooden chamber tombs were superseded by tombs with a wooden chamber in a stone-filled pit, or covered with a mound of stones under a mound of earth (Barnes 2001: 206; Barnes 2004: 22). Some archaeologists (e.g., Shin 2000) have invoked migrations from the steppes or northeast Asia to explain changes in grave architecture and goods, but it is worth remembering that the Korean peninsula is in fact part of northeast Asia, and as such, it participated in trends that spanned all of Eurasia, such as the prestige of equestrianism and the burial of mirrors, while exotic elements were integrated into local practices and traditions. It may be more accurate to view the period of the Lelang colony as an interruption of longstanding connections with the steppes.

That the Silla kingdom in particular engaged in very long-distance exchange is evidenced by, among other things, Han mirrors and coins, tiger- and horse-shaped belt buckles from northern Asia (Kang 2008: 5-6), and glass objects from Egypt in burials (Gyeongju Munhwajae Yonguseo 1996; Nelson 1991, 1996, 2003). Furthermore, 9th century Arab traders knew of Silla, which they referred to as the "gold-glittering nation" (Nelson 1993). It is noteworthy that there is a paucity of objects from the Japanese archipelago, although peninsular artifacts are plentiful in Japan (Kang 2008: 7).

Mirror burials reached their zenith around the 13th century AD, during the Middle Goryeo period; during the Iron Age, mirror burials actually declined in number. Only a

few of the wealthiest burials contain mirrors, and since they were plentiful due to Han colonization and trade, it can be assumed that for a while they ceased to enjoy the same prestige they once did, or alternatively, were not deemed appropriate for use in mortuary contexts. Nevertheless, the fact that mirror burials continued, and eventually experienced a resurgence, demonstrates the tenacity of the beliefs associated with mirrors and of the connections between the Korean peninsula and the rest of Temperate Eurasia.

Japanese prehistory after the Palaeolithic is divided into the following periods: Jōmon 縄文 (referring to cord-marked pottery, *ca*. 11,000-300 BC), Yayoi 弥生 (named for a type site, *ca*. 300 BC-AD 300), and Kofun 古墳 ("Ancient Mounds," *ca*. AD 300-700). Recent radiocarbon dates suggest that the beginning of the Yayoi period actually lies closer to 800 BC than 300 BC (Shōda 2007, 2010). The Yayoi period marks the beginning of numerous innovations in the Japanese archipelago, most notably agriculture and bronze and iron metallurgy, and the adoption of material culture very similar to that of the Korean peninsula. Korean geometric mirrors first begin to appear in Japan during the Yayoi period, and after they went out of fashion, mirrors of Chinese style were imported. Yayoi burials are very variable, but, especially in southwestern Japan, often took the form of two gigantic ceramic jars placed mouth to mouth, with the deceased laid inside in a flexed position. Grave goods generally include some variation of shell bracelets, beads, occasional mirrors, daggers, and red pigment, usually cinnabar (Imamura 1996). From the Late Yayoi through the Early Kofun (1st-4th centuries AD), fragmentary bronze mirrors were polished and pierced in order to be hung or worn; this may have been due, at least in part, to a decrease in the number of mirrors exported by China and its colonies as a consequence of political instability (Tsujita 2007: 49). Sometimes mirrors were intentionally broken before burial, and Fujimaru (1993 cited in Tsujita 2007: 50) suggested that the drilled fragments may have proceeded from these broken mirrors. During the Yayoi period, human remains begin to manifest the first evidence for interpersonal violence (e.g., decapitation). This period is also known for votive deposits of bronze bells and spearheads of a type derived from the northern Korean peninsula.

The Kofun period is defined by monumental tumuli erected for the nobility and rulers of first state to emerge on the archipelago, Yamato 大和. Yamato was centered in the southwest, where the concentration of mounds is greatest. Although there are a small number of mounds of other shapes, the characteristic Kofun mounds are keyhole shaped and surrounded by moats. As in Korea, grave goods are not strongly gendered, but rather are differentiated principally according to status. Typical grave goods include thousands of beads, including many *magatama* 曲玉, 勾玉 ("curved jewels," Fig. 119), weapons (swords, bows and arrows, spearheads), armor, mirrors, ceramic vessels (including stoneware imported from Korea), gilt bronze crowns, belts, and ornamental shoes, horse gear, and agricultural and fishing implements (Mizoguchi 2002b). In early Kofun burials, the deceased is often laid within a coffin made from a hollowed-out cypress trunk, painted red with cinnabar. In later periods, stone coffins came to be used, though the color red remained important, and continues to be sacred within the practice of Shintō religion. Archaeologists have noted a shift after the 5th century AD, with a relative decrease in the quantity of "ritual" objects such as mirrors and magatama beads and an increase in weapons, armor, and horse gear, which corresponded to a period of increasing political centralization (Barnes 2007; Piggott 1997: 47). The mounds are often surrounded by ceramic figures depicting humans, animals, and even ships and houses. Some of the human figures wear red paint. In the 6th to 7th centuries, as Buddhism became popular with the upper classes, monumental tombs went out of favor and were replaced by smaller cremation burials and monumental Buddhist temples (cf. Matsunaga and Matsunaga 1974).

One of the most dramatic features of early Kofun burials is the redundancy of mirrors—up to three dozen in very wealthy burials. Purely functional explanations of mirrors in burials simply do not suffice to explain these quantities. Moreover, there appear to have been rules or customs for the layout of mirrors in burials (see Chapter 7).

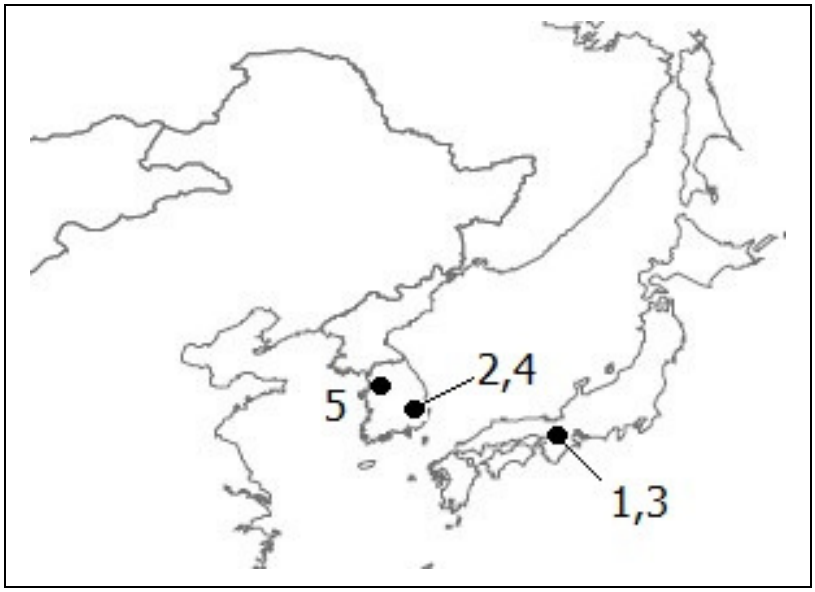

Figure 109. Map of Temperate East Asia, showing sites discussed in Chapter 6. 1. Fujinoki, 2. Hwangnam, 3. Kurozuka, 4. Sara-ri, 5. Songsan-ri.

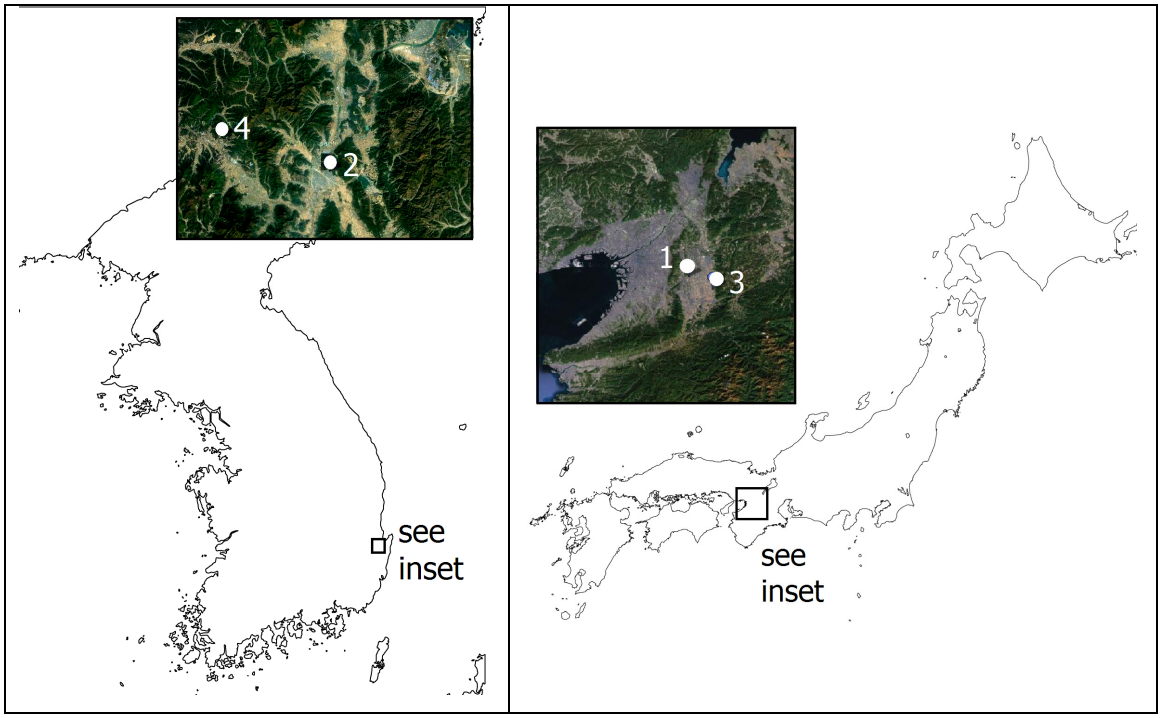

Figure 110. Detail of sites in southern Korea and Japan. 1. Fujinoki, 2. Hwangnam, 3. Kurozuka, 4. Sara-ri.

BURIALS

Sara-ri No. 130 (2nd century AD)

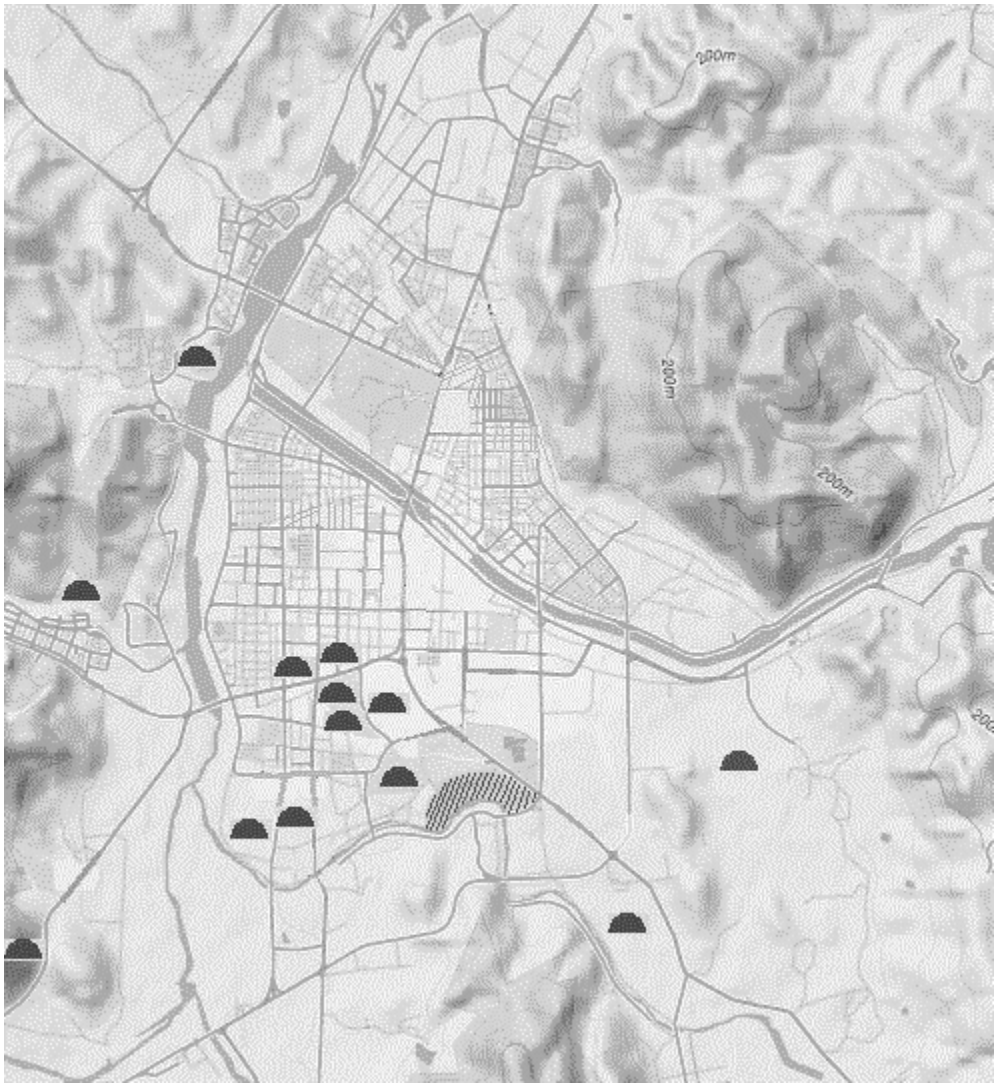

Figure 111. Map of the central Gyeongju region, showing the fortified royal residence of Banwolseong (diagonal hatching) and major groups of tumuli (modified from Google Maps).

Located in Seo-myeon township, a part of greater Gyeongju, South Korea, the grave goods in the Sara-ri No. 130 burial provide ample testimony of the broader links existing during the second century. The tomb contained a "pavement" of dozens of iron axes, iron and bronze swords, an iron pot from northeast China, horse bits, spearheads, four mirrors (one of them probably made in the Japanese archipelago), beads, ceramics,

and a 20 cm-long bronze tiger-shaped Chinese-style belt buckle (Yeongnam Institute of Cultural Properties 2001).

According to the traditional archaeological chronology of Korea, Sara-ri No. 130 belongs to the Proto-Three Kingdoms, or *Samhan*, period. It would have been located within Jinhan, the predecessor of the Silla kingdom. From the second century BC, Gyeongju burials become increasingly rich in iron (Barnes 2001: 204). At the same time, Chinese histories indicate that southern Korea was a major iron trading entrepot, having exchange relations with Han China and Japan, as well as other parts of Korea; it is thought that iron axe heads, such as those at Sara-ri, may have been used as currency bars or ingots (ibid). Increased specialization in iron production, as well as growing wealth resulting from trade, may have been instrumental in the development of political consolidation in Yeongnam, ultimately manifesting in the Silla kingdom.

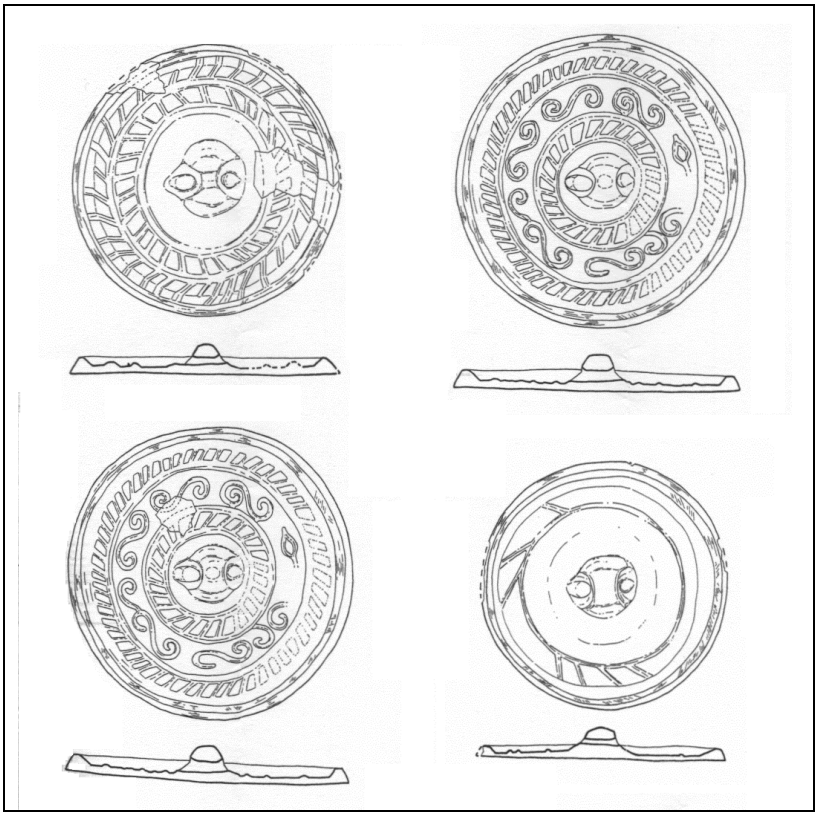

Figure 112. The Sara-ri mirrors (after Yeongnam Institute of Cultural Properties 2001: 83).

The mirrors are quite small, around 7 or 8 cm in diameter, and are decorated with geometric motifs, but instead of the zigzags of early Korean mirrors, those from Sara-ri have spiral and tendril shapes. Unfortunately, in spite of a very detailed plan of the burial, it is not clear exactly where the mirrors lay, relative to the deceased.

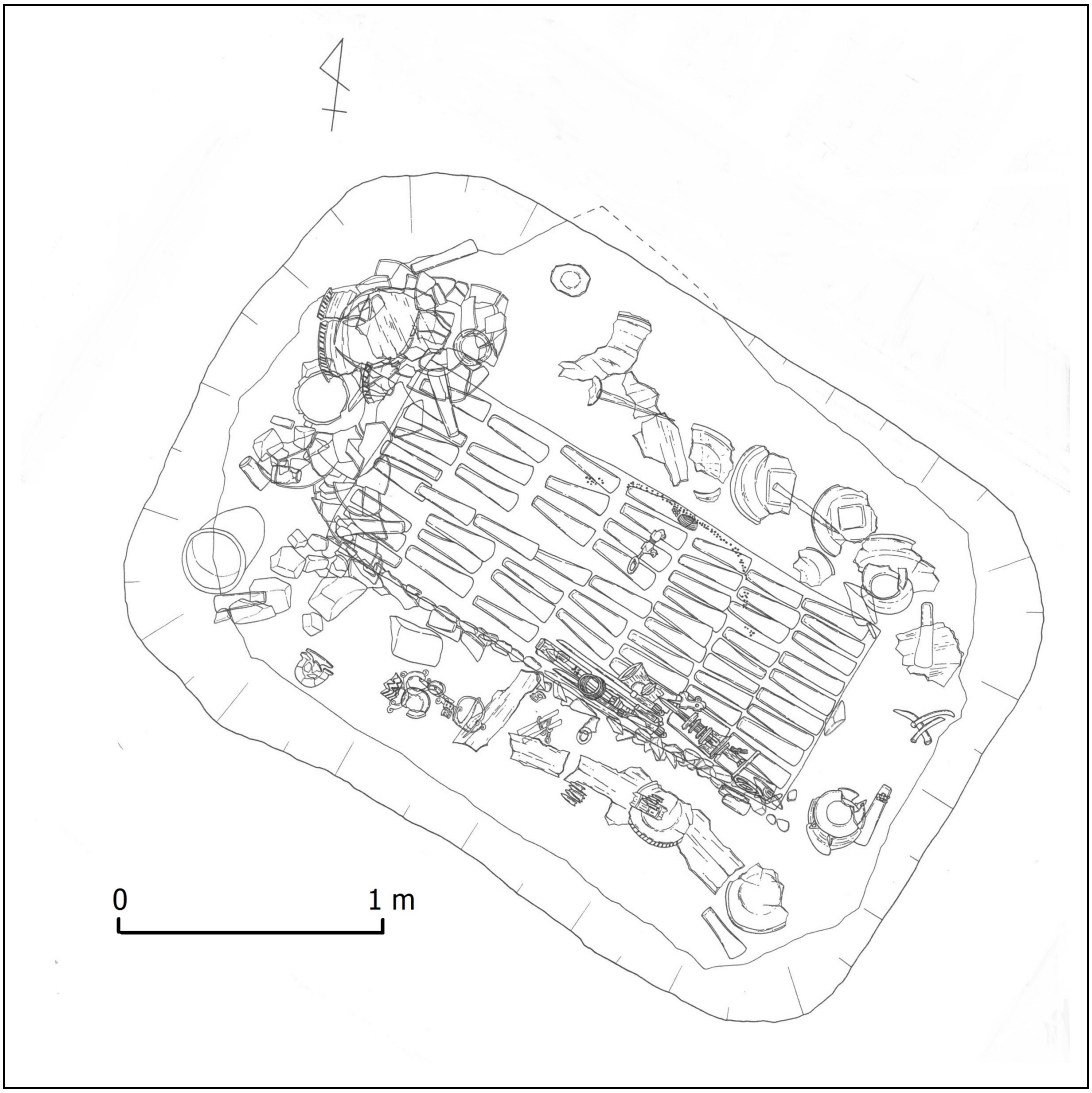

Figure 113. Plan of the Sara-ri No. 130 tomb (Yeongnam Institute of Cultural Properties 2006: 41).

Kurozuka 黒塚 (3rd century AD)

Archaeologists began excavating this 128-meter long tumulus in 1997 and the tomb's 34 mirrors drew immediate attention from both scholars and the media (Edwards

1999: 75-76). The excitement was due to the fact that all the mirrors belonged to a category called "triangular-rimmed deity-and-beast" (*sankakubuchi shinjūkyō* 三角縁神獣鏡) mirrors, and the tomb was located in Nara Prefecture, in the heart of the ancient Yamato state (ibid).

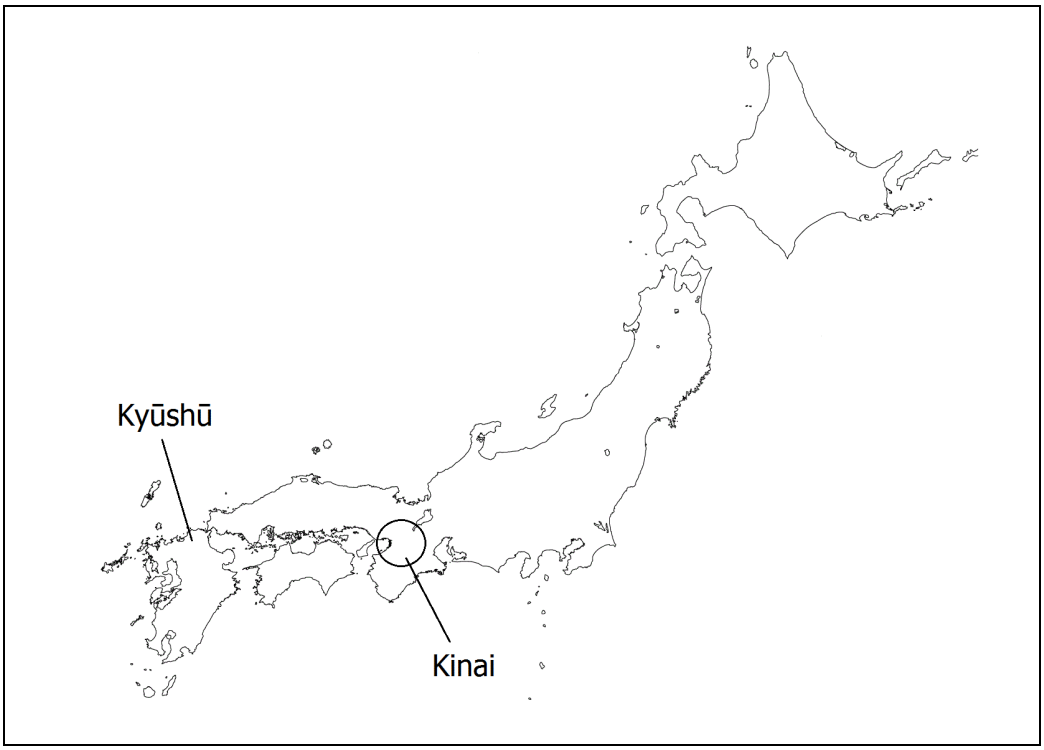

Figure 114. Map of southwestern Japan, showing the island of Kyūshū and the Kinai region, putative centers of the first state.

According to Chinese histories, Yamato was ruled by a shaman-queen called Himiko 卑弥呼, to whom the Wei Chinese court gifted 100 mirrors in AD 238. The 100 mirrors and the tomb of Himiko (if she ever existed) have never been found, and archaeologists have debated whether the Yamato state originated in the Kinai 畿内 region (that is, the region around present-day Osaka and Kyoto) or on the southwestern island of Kyūshū (ibid: 76) (Fig. 114); thus, a find of 100 3rd century mirrors would go a long way toward identifying the heartland of Yamato. The public was no less interested in the find: during a two-day event when the site was opened to public visitation, 21,000 visitors waited for hours to view the tomb, the line stretching for more than a kilometer through a

neighboring village (ibid: 77). In short, Kurozuka was hailed not only as a spectacular burial, but one with the potential to illuminate the very origins of the Japanese state.

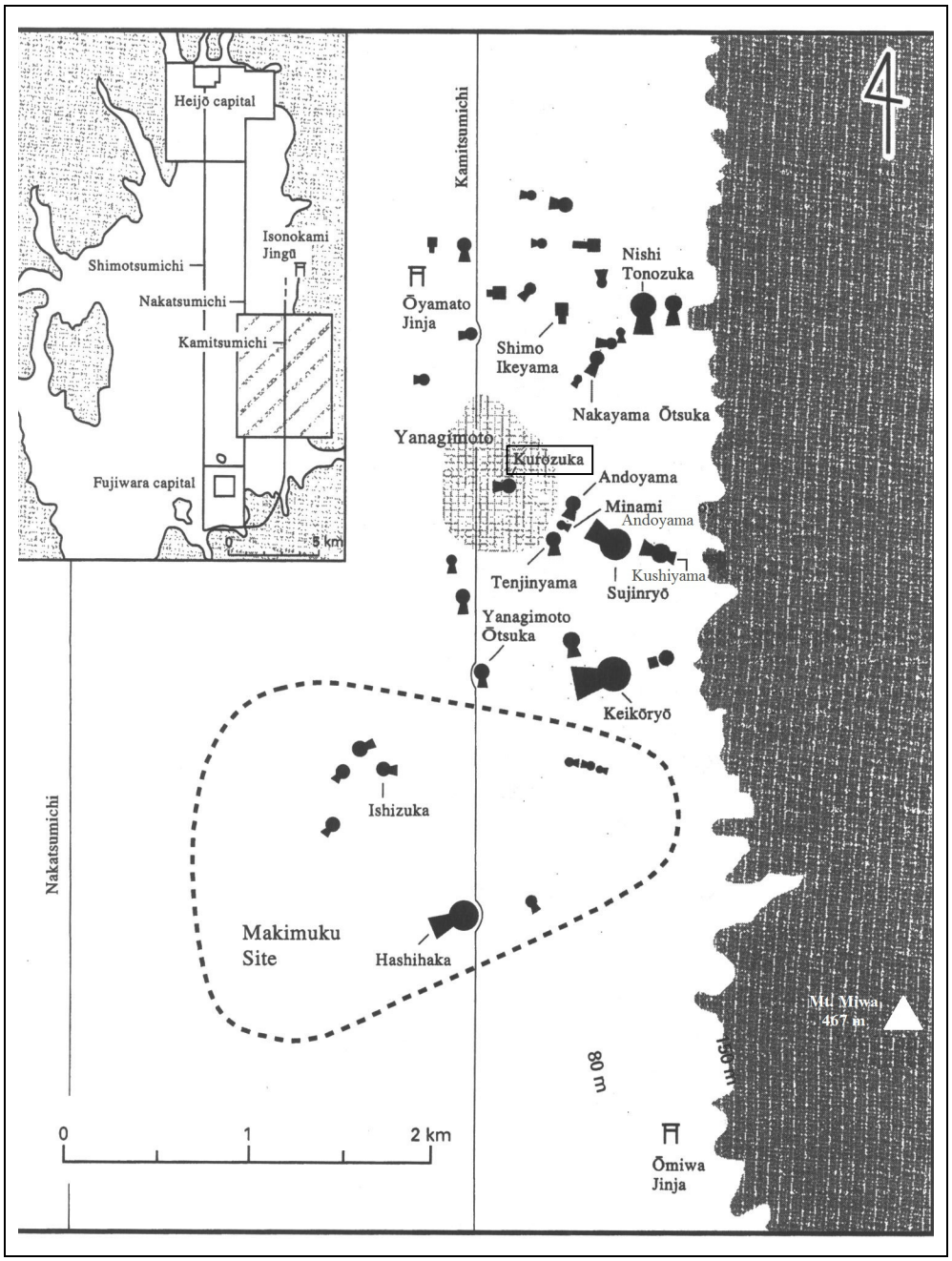

Figure 115. Ritual landscape surrounding the Kurozuka tumulus (after Edwards 1999).

Kurozuka is one of more than 40 keyhole-shaped tumuli—four over 200 m in length—arranged along the *Yamanobe no michi* 山辺の道, an ancient road that linked

two important Shintō shrines (ibid: 80) (Fig. 115). It is thus a part of an elaborate ritual landscape.

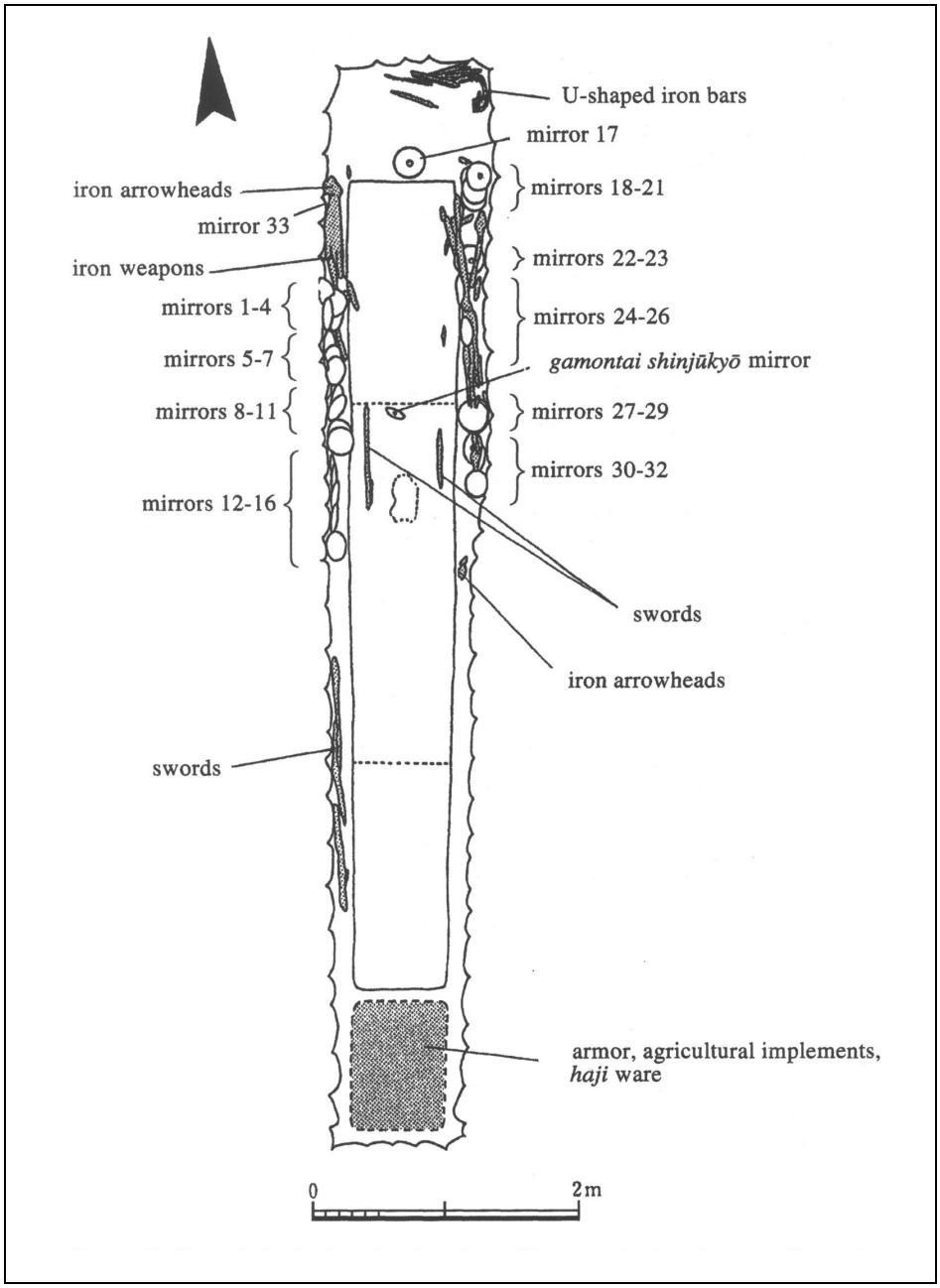

Figure 116. Plan of the Kurozuka burial (Edwards 1999).

The Kurozuka tomb consisted of a stone chamber 8 m long by 1 m wide, and 1.7 m high; the ceiling stones collapsed in antiquity, saving the tomb from looting (ibid: 95-96). Skeletal remains are rarely preserved in Japan, because of the acidity of the volcanic soils. The occupant of the Kurozuka tomb was identified as a man because of the presence of armor and weapons, and a lack of jewelry (ibid: 77, note 9). The individual was interred in a split mulberry log coffin just over 6 m long, with head oriented toward the north (Kawakami et al. 1999: 104; Kidder 2007: 166).

The mirrors were arranged vertically around the northern end of the wooden coffin, their reflective surfaces oriented toward the body; more than half had remains of silk, suggesting they had been wrapped in fabric (Edwards 1999: 96). The mirror at the northern end of the coffin (that is, above the head of the deceased) was unique, a sub-type of the triangular-rimmed deity-and-beast mirrors decorated only with dragons and tigers, and was surrounded by a large quantity of cinnabar—it had evidently been given special attention (ibid). That this mirror was placed by the head fits with Fujio's (1993) findings. Another singular mirror, one without a triangular rim, had been placed inside the coffin above the head of the deceased (Edwards 1999: 96). Seventeen of the mirrors were members of sets with duplicates in Kurozuka and other tombs (Kidder 2007: 166). The style of the mirrors, along with the tomb architecture, places it early in the Kofun period, probably the second half of the 3rd century AD (Edwards 1999: 100).

The coffin also contained two swords, one long and one short, at right and left sides of the torso respectively, and much red pigment on the floor of the chamber (cinnabar and iron oxide) (Edwards 1999: 96; Kidder 2007: 166). Iron arrowheads, spears, and more than 20 swords occupied the space between the coffin and the chamber walls, and iron armor, agricultural and woodworking tools, and pottery occupied the south end of the chamber (Edwards 1999: 96).

The significance of the triangular-rimmed deity-and-beast mirrors lies in the fact that, more than any other style, sets of duplicates were made from a single mold and recovered from different tombs, often far apart (ibid: 83). Furthermore, Barnes (2007) has argued that the most important of the deities represented on the mirror was the Daoist goddess Xi Wangmu ("the Queen Mother of the West"), whose cult began to spread from

the second century BC. The triangular-rimmed deity-and-beast mirrors are also unusually large for the time, averaging 22.3 cm in diameter (Edwards 1999: 83). Kobayashi (1961) traced the sets of duplicates then known, to conclude that their distribution was not random, but reflected socio-political relationships (Edwards 199: 85; Piggott 2006: 58-76). He began with the assumption that these mirrors entered the Japanese archipelago as the 100-mirror gift to Himiko from the Wei court, as well as subsequent diplomatic missions. The rulers of Yamato then redistributed the mirrors as political gifts to vassals. The largest number of triangular-rimmed deity-and-beast mirrors was found in the Kinai region, which therefore must have been the heart of Yamato (Edwards 1999: 87). Although the premise that these mirrors are connected to Himiko, or came from Wei China is problematic (indeed, no triangular-rimmed deity-and-beast mirrors have been found in China [Edwards 1999: 89]), the relationships among the mirror sets, with the center of distribution in Kinai, are robust. The large number found at Kurozuka seem to lend credence to Kobayashi's (1961) notion that the early state was centered in Kinai and that mirrors were instrumental in alliance building. However, following Barnes (2007), it may be that the exchange of these mirrors was part of a dissemination of the cult of the Queen Mother of the West; the unusually large size of the mirrors would then have enabled the display of cult iconography and/or ritual-symbolic uses of the mirrors.

About 0.5 km southeast of Kurozuka, another mound, Tenjinyama 天神山, contained the remains of a wooden box which held 41 kg of cinnabar, and 20 mirrors arranged around the perimeter of the box, with a further three mirrors just outside the perimeter (ibid: 81). Subsidiary cenotaphs—or grave good deposits—have been discovered elsewhere, causing the excavators to assign this purpose to Tenjinyama also (ibid). It is argued that Tenjinyama is a satellite of Sujinryō, the putative tomb of the tenth emperor, Sujin (ibid). It is noteworthy that the mirrors were arranged in the same way they normally would be placed around a human body.

Hwangnam No. 98 (Hwangnamdaechong) (5th century AD)

Excavated between 1973 and 1975, Hwangnam No. 98 (also known as Hwangnamdaechong, or "Hwangnam Great Tomb") is a double mound (two mounds

truncated and placed against one another to form a gourd-like shape) situated at the heart of present-day Gyeongju, South Korea (formerly the Silla capital). The conjoined tumulus consists of a northern and a southern mound.

A number of large tumuli are situated north of Banwolseong ("Half-moon Fortress"), a crescent-shaped citadel which once formed the royal residence. The tumuli are arranged for maximum visibility from this spot. Hwangnam No. 98 is both the largest (23 m high and 120 m long) and one of the earliest of the great Silla tumuli.

The north mound contained a Chinese jar of a type dated *ca*. AD 350, while the south mound should not be later than AD 502, when human sacrifice was outlawed, because the skeleton of an adolescent girl was found buried outside the main chamber but under the covering layer of stones (Nelson 1991: 103). This tomb is thought to most likely date to the 5th century AD. Although the skeletal remains have completely decomposed, a common problem due to Korea's acidic soils, based on later historical texts and comparison with other double mounds, it is believed that conjoined mounds were used for spousal pairs. Each constituent mound would contain the separate burial of a single individual. In the case of Hwangnam No. 98, archaeologists have identified the southern burial with the male, and the northern with the female, because a belt inscribed "belt for my lady" was found in a chest in the northern mound, and because the southern mound contains more weapons.

Royal Silla mounds are the most monumental in size and the richest in content of all burials on the Korean peninsula. All are located in and around the Silla capital at Gyeongju. The deceased was placed in an extended, supine position within a wooden coffin, which was in turn enclosed by a wooden chamber built at or below ground level. Grave goods were placed in and around the coffin, while the richest burials contain a separate chest placed near the individual's head and filled with more goods. Large numbers of ceramics are thought to be the remains of funeral feasts (Yi Hae-ryeon, pers. comm.). The wooden chamber was then covered by a several-meters-thick layer of cobbles, and then another equally deep layer of earth.

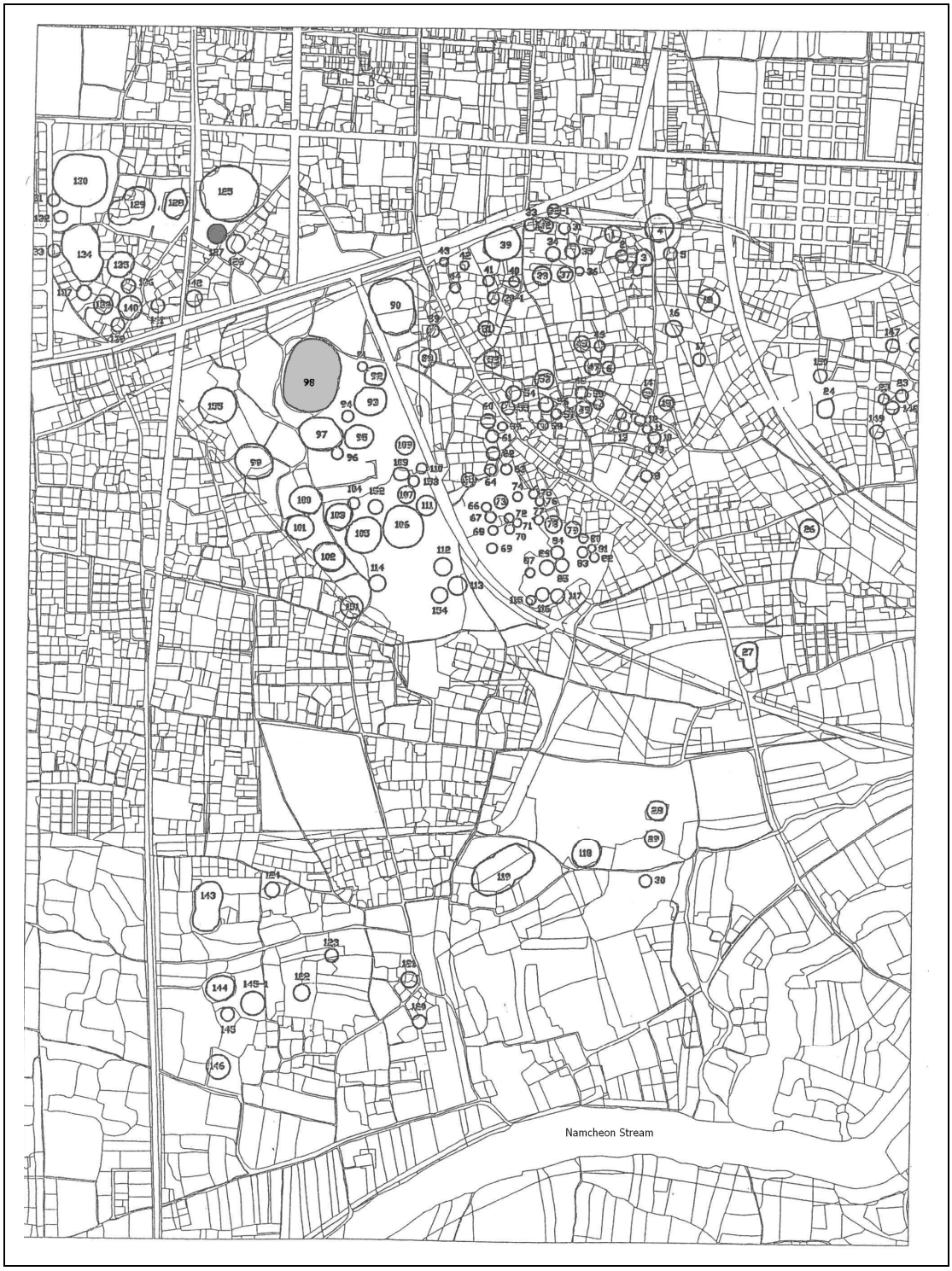

Figure 117. Map of central Gyeongju tumuli. Hwangnam No. 98 is shown in light gray. The Tomb of the Golden Bell (Geumnyeongchong) is shown in dark gray. The Banwolseong fortress/palace is in the lower right corner, just north of the Namcheon stream (Gyeongju Munhwajae Yonguseo2000).

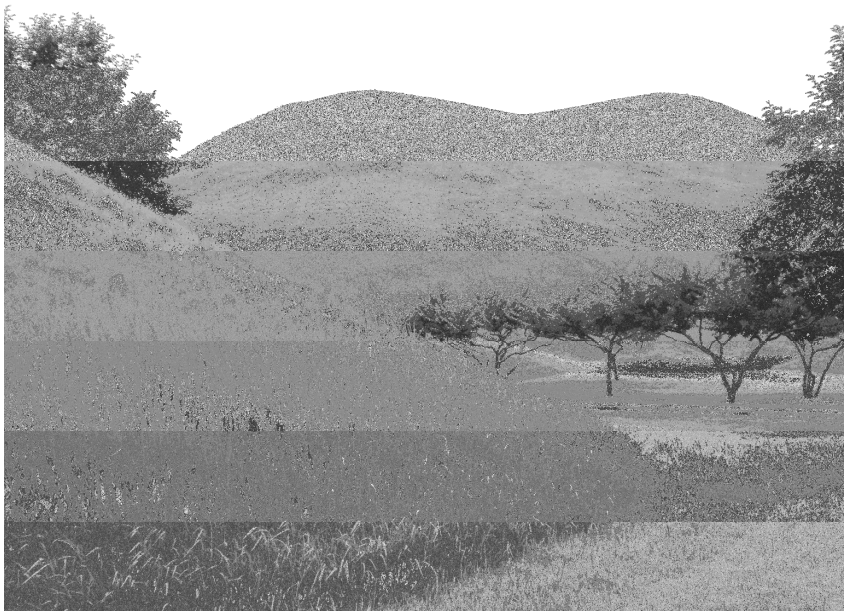

Figure 118. The Hwangnam No. 98 double mound (in background), viewed from the southeast. The South Mound is on the left, North on the right.

Grave goods from Hwangnam No. 98, like other elite Silla burials, include weapons, beads, ceramics, and horse trappings, as well as large quantities of ornaments made from gold, silver, and jade. All royal Silla burials, furthermore, include large gold crowns and gold belts with various pendants, as do both mounds at Hwangnam No. 98. Indeed, both burials are exceptionally wealthy:

> Within the earlier south tomb, in a chamber west of the main pit, were more than 2,500 iron weapons and pottery vessels….Stored in the chest were two gilt-bronze crowns and a silver crown, as well as nine swords. This king also had silver leggings [greaves] and a fine glass pitcher repaired with gold thread. But weapons make up the majority of the artifacts. Altogether, the deceased had 30 swords, 543 spears, 380 battle-axes, and more than 1,000 arrows.... Near the top of the mound, a horse harness was found, perhaps substituting for a sacrificed horse (Nelson 2003: 85).

In addition, the south mound contained a magnificent saddle of gilt bronze openwork inlaid with iridescent green beetle wings (Gyeongju National Institute of Cultural Heritage 1996).

In general, there is no clear differentiation of Silla grave goods by gender, although archaeologists have suggested that weapons are found in greater quantity in male graves, and swords exclusively so (Ito 1971, cited in Nelson 2003). However, since skeletal remains are seldom preserved, it is seldom possible to determine the sex of the interred *except* through grave goods. Silla graves are differentiated principally through the quantity of precious materials and restricted goods such as horse paraphernalia—in other words, on the basis of status, not gender. At Hwangnam No. 98, the north ("woman's") burial contained nearly five kilograms of gold, including a gold crown generally believed to denote a paramount ruler, a silver bowl from Inner Eurasia, and imported glass vessels from the Mediterranean (Gyeongju Munhwajae Yonguseo2000; Nelson 2003: 85-86).

Hwangnam No. 98 has presented archaeologists and historians with a conundrum, since both individuals were buried with the crown and belt restricted to royal burials, implying both individuals were "kings,"[19] and it would appear that the woman was the higher ranking of the two, based on the greater quantity of precious materials and especially the fact that her crown was made of gold. Yet historical records—which, it must be remembered, were written hundreds of years later—mention no female kings reigning around the time Hwangnam No. 98 is thought to have been constructed. It has been suggested that the man may have been King Naemul (r. AD 356-402), in which case the woman is likely his wife, Poban (Nelson 2003: 87). History records that Poban was the daughter of a king, and that Naemul's legitimization came through her, but she is described as a consort, not a female king (ibid). As Nelson (1991: 101) has remarked, the burial violates *at least* one of three common assumptions about Silla archaeology, viz. (1) that gold crowns and belts indicate kings; (2) that kings were preferentially men; and (3) that double mounds contain the burials of a husband and wife. The evidence from Hwangnam No. 98 forces us to conclude that Silla rank and gender were more complex than previously imagined. We must consider the possibility that swords did not always indicate masculine gender (since the north mound contains both swords and a "belt for my lady"); that the lady's belt was actually placed in a man's burial (perhaps as an

[19] Female Silla paramount rulers were called "female kings."

heirloom, a gift from a woman, or as captured booty); and/or that there were more female kings than historians cared to record, perhaps even co-reigning couples.

The goods from Hwangnam No. 98, like other Silla tombs, suggest that elite status was closely linked to ritual practice, perhaps something similar to north Eurasian shamanism, as it is known from ethnographic reports. Many scholars have noted the presence of "shamanistic" iconography in elite Silla burials—for example, the elaborate Silla crowns are decorated with stylized trees and deer antlers. Crowns, belts, earrings, necklaces, and "chestlaces" (like giant necklaces made to drape over the shoulders and chest) are often festooned with *gogok* ("curved jewel") beads. Gogok were usually made of jade, quartz, or other semi-precious stones, and later from glass. Gogok are found even earlier in Late Jōmon Japan (*ca*. 2500-1000 BC), where they are known as *magatama* ("curved jewels") (e.g., Pearson 2007: 368), indicating that they probably originated in the Japanese archipelago, although their origin has not been conclusively demonstrated. The exact significance of the beads is unknown, but they appear to have had profound symbolic meaning, since they persist in Korean burials through the mid-6th century AD, and they appear in origin myths in the earliest Japanese texts and make up part of modern Japan's imperial regalia[20]. Some Korean archaeologists believe they represent embryos (Gyeongju National Museum), though they may be stylized teeth or claws. Magatama can still be purchased today at Shintō shrines and souvenir shops all over Japan and even in other countries frequented by Japanese tourists (the present author obtained one in Banff, Canada).

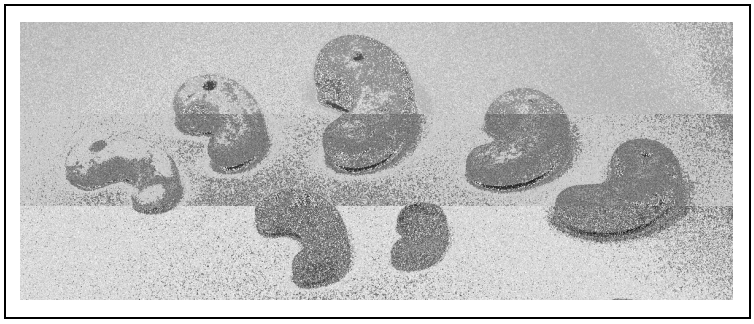

Figure 119. *Gogok* or *magatama*.

The funeral garb of deceased Silla rulers was fairly standardized. Silla crowns are large, about 30 cm in height, and visually impressive, generally with three trees and a pair

[20] The imperial regalia consists of (an unknown number of) magatama, a sword which is believed to have belonged to the god Susa no O, and a mirror believed to have belonged to the sun goddess and progenitrix of the imperial family, Amaterasu.

of antlers towering above the wearer's head, all ornamented with gogok and numerous small gold disks that would tremble with the wearer's movements. The crowns' circumferences are so large that, if worn during life, they must have been placed on top of large hairstyles or hats of organic material which have not survived. (Similarly, the large belts suggest the deceased may have been dressed in many layers of clothing.) Hanging beside the wearer's face were long pendants falling to the chest. These pendants, as well as elaborate gold earrings, often featured dangling gold shapes identified as birch leaves (see discussion of Tillya Tepe in Chapter 5). Some crowns contain a smaller inner crown or headdress of gold openwork in the shape of bird or butterfly wings or the silhouette of a deer's head.[21]

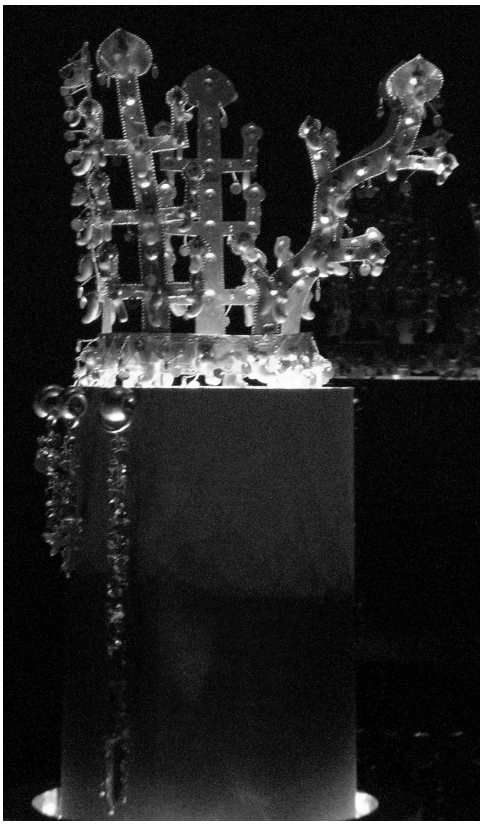

Figure 120. Silla gold crown from Hwangnam No. 98 north tomb, now in the National Museum of Korea, Seoul. At left, three trees can be seen above dangling pendants at the front of the crown, while antlers adorn the rear.

Ethnographers and archaeologists have observed that Siberian shamans' headgear often features antlers (Covell 1983: 33; Nelson 2003: 89; Wood 2003: 14; Yoon 2008: n.p.), while a tree is said to link parallel worlds or dimensions in northern Asian shamanic cosmology (e.g., Eliade 1964; Covell 1983: 36; Hageneder 2008: 9). Furthermore, elaborate gold headdresses (e.g., those from Tillya Tepe in Afghanistan) and similar belts (e.g., from Chaoyang, Manchuria and Jurt-Akbalyk, Siberia) are known from nomadic contexts more conventionally associated with shamanistic practices (Nelson 2003: 85; Rosén 2009: 4).

In addition to their application to personal ornaments, birch leaf shapes are also common on Silla horse trappings (Kidder 1987: 78), the horse itself being another symbol

[21] Authors differ as to their identification of the shape. I regard these shapes as most similar to a deer's head.

often associated with shamanism; Eliade (1964: 467) identifies the horse as "pre-eminently the funerary animal and psychopomp" of ethnographic north Asian shamanism. Horses were clearly important in elite Silla culture; they were ridden astride, by men and women of all ranks, rather than being used for chariots or carriages (Nelson 2007). Silla sumptuary laws, recorded centuries later than the burials at Hwangnam No. 98, are very specific about the types of horse trappings that could be used by different social ranks (ibid: 114-116). At Hwangnam No. 155, also known as the "Tomb of the Heavenly Horse" (Gyeongju, South Korea), a birchbark saddle mud flap decorated with a painting of a running or flying white horse was discovered. Flaring out behind each of the painted horse's legs is a swirling tendril. These tendrils may be intended to represent clouds or movement, but some (e.g., Covell 1983) have suggested that the horse has eight legs; Eliade (1964: 469) calls the eight-legged horse, even more than the four-legged type, "typically shamanic" because it occurs connected with magical flight in the mythology of the Buryat, Norse, and Japanese. Another Silla burial contained a birchbark hat painted with a white horse (Nelson 2007: 121), and a horse was buried in a circular pit lined with white stones in another Silla cemetery (ibid: 121, 124). Later historical records mention the appearance of a white horse at the founding of the Silla kingdom (ibid: 126). Taken together, this suggests that horses were esteemed both for their economic utility as well as their ritual, symbolic, and especially prestige connotations. Thus the presence of horse trappings and horse images (notably on the bark of a supposedly magical tree) in Silla burials not only designates rank but perhaps also references the ritual potency of the deceased.

Of course, another object associated archaeologically and ethnographically with both Old and New World shamanism is the mirror (Aldhouse-Green 2005; Eliade 1964; C. Fennell pers. comm.; Freidel 1993, and 2008 pers. comm.; Kirby 1973; Lewis 1998; Michel *et al*. 2006; Olivier 2003; Rice 1957; Rubinson 2002; Saunders 1988, 1990, 1999, 2001; Tedlock 2005; Van Deusen 1994, 2004; Wood 2003), and given the abundance of other purportedly shamanic paraphernalia in Silla graves, it should come as no surprise that mirrors are found there as well (Gyeongju National Institute of Cultural Heritage 1996; Kang 2008 and pers. comm.). The male and female burials at Hwangnam No. 98

each contained a single mirror—a bronze TLV mirror with an inscription in the south ("king's") mound, and an iron one in the north. Iron is a very unusual material for mirrors at this period and in this region. However, as noted in the discussion of Sara-ri No. 130, it was likely the basis for the wealth and ensuing hegemony of the Yeongnam region.

In the south mound, the bronze mirror was placed in the western end of the coffin, that is, somewhere near the individual's feet (the exact position is not indicated), with its reflective surface face up (Horlyck 2002a: 50-51). In the only other royal Silla tomb to contain a mirror[22] (the 6th-century Geumnyeongchong, or "Gold Bell Tomb," Nodong-ri district, Gyeongju), the mirror was also placed with the reflective surface up. This is in contrast to the positioning of the mirrors in King Muryeong's tomb (ibid: 51) (discussed below), and may represent a practice specific to Silla ritual. The overall design of the Hwangnam No. 98 South mirror—that is, the TLV motif with inscription (in this case, the Vs are missing, but that is not unknown in late Han TLV mirrors made in China)—is derived from Han China, but its decoration of eight stylized bird-like creatures has led scholars to conclude that it was made in the Korean peninsula (ibid: 51). Unfortunately, the inscription is illegible (ibid).

The iron mirror from the north mound has a central raised knob, but is undecorated. Its exact position is likewise not indicated, but from illustrations in the site report, the mirror was placed atop several small ceramic vessels inside a larger vessel (Fig. 123). This looks to be the one illustrated at the eastern end of the tomb (Fig. 122).

The practice of burying mirrors as grave goods appears to have declined over time in the Yeongnam region: Kang (2000b: 171) found that the number of mirrors in Silla tombs is inversely related to the amount of weaponry and horse gear; after the first century AD, mirrors decreased and weapons increased in frequency. (A similar shift was seen in Japan around the 5th century AD.) However, the mirrors that are known are modeled after Chinese exemplars; mirrors of distinct native Korean style would not reemerge until the succeeding Goryeo period (Horlyck 2002a: 51). Given that mirrors are not known to have been common in Silla burials, it may be significant that they were

[22] Most royal Silla tombs have yet to be excavated, so more mirror burials are likely to be found.

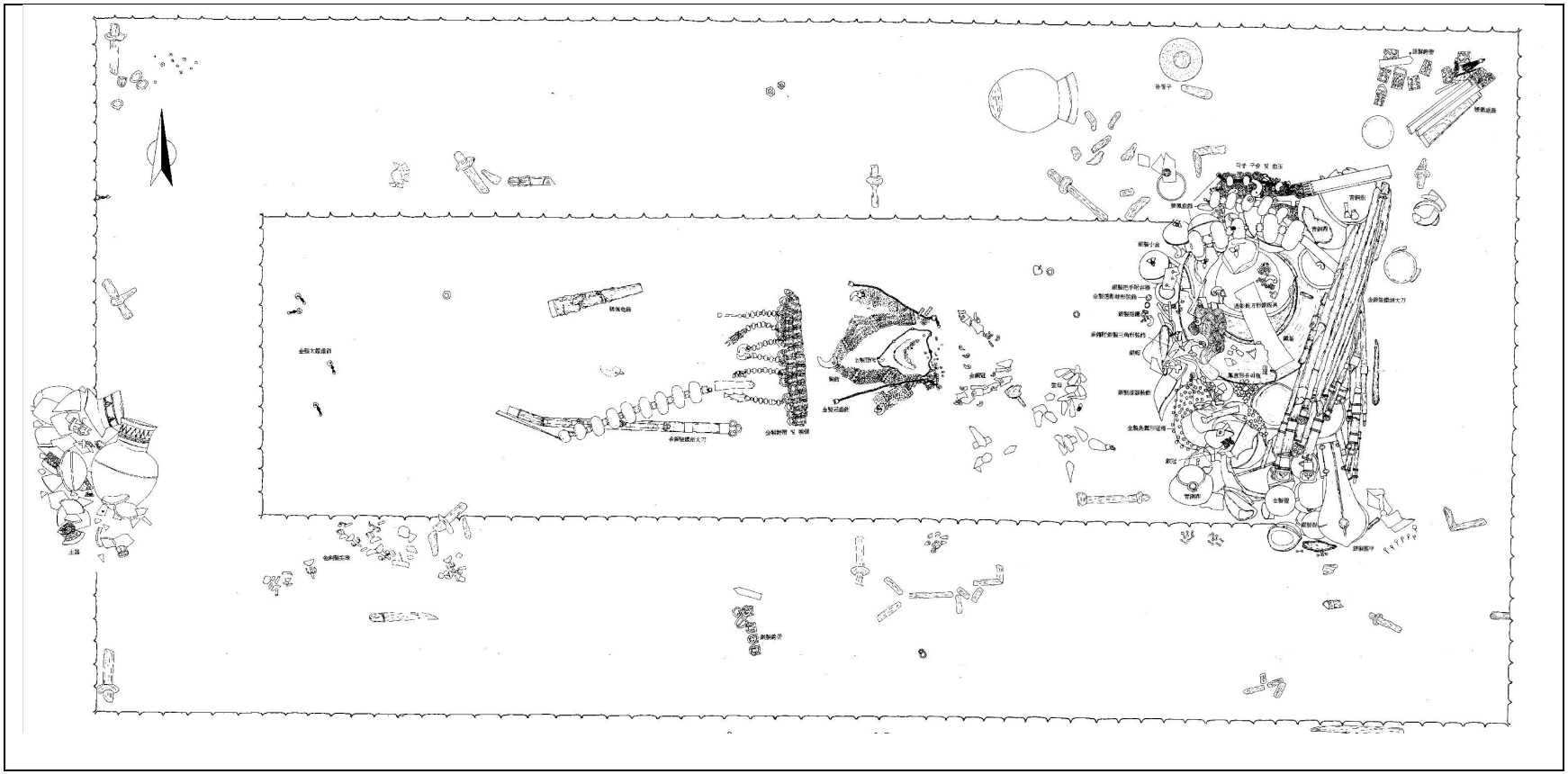

Figure 121. Plan of the South (king's?) tomb of Hwangnam No. 98 (Gyeongju Munhwajae Yonguseo 1996).

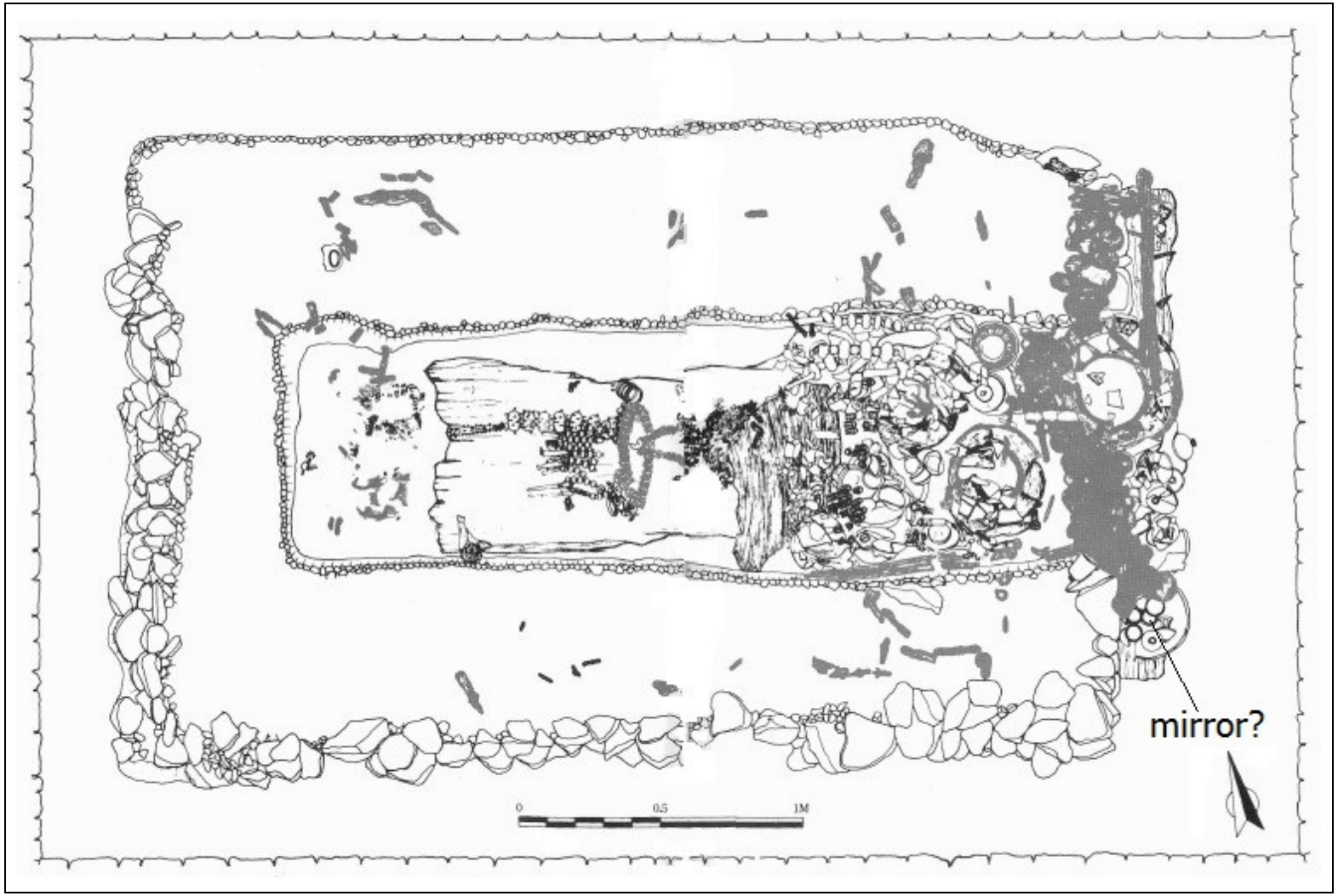

Figure 122. Plan of the North (female king's?) tomb of Hwangnam No. 98 (Munhwajae Yeonguso 1985).

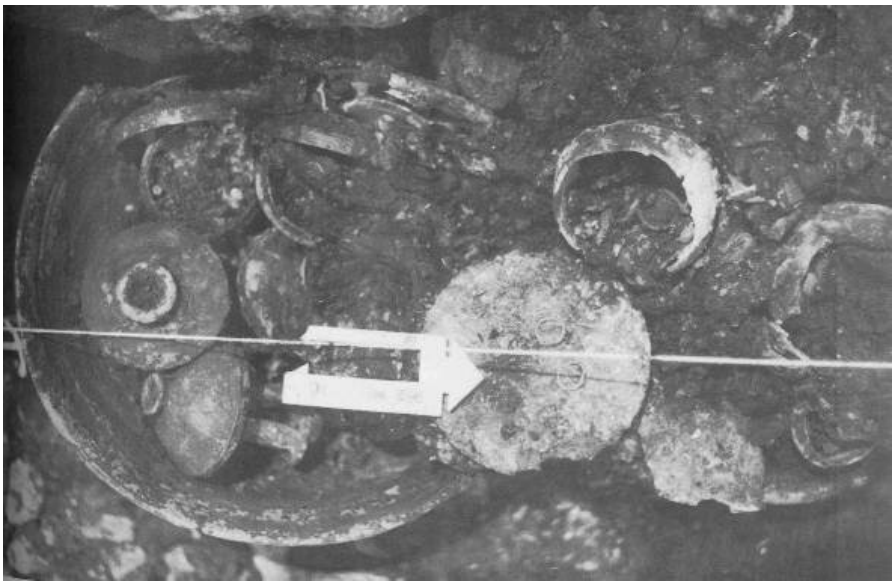

Figure 123. The Hwangnam No. 98 North mirror during excavation (ibid: Plate 82-1). The white arrow is pointing to, and partially lying on top of, the mirror.

found only in what are believed to be royal tombs. Evidently their possession was extremely restricted.

Fujinoki 藤ノ木 (6th century AD)

This tomb, dated to the late 6th century AD on the basis of ceramics and tomb architecture, is located 350 m from the Great Western Gate of Hōryūji Temple (Nara Prefecture, Japan) (Kidder 1987: 58)—the temple was founded not many years after the construction of the tumulus (in AD 607), but was preceded by an earlier one. The presence of these temples, albeit representatives of a relatively new religion, testifies to the ritual significance of the region. The tumulus is the only large one in the vicinity, but it is surrounded by a number of small mounds (ibid: 58-59).

The tumulus measures 40 m in diameter and 8 m high (ibid: 61). The burial chamber, 14.5 m long, runs southeast-northwest, and at its northwest end lies a stone coffin (ibid: 62). The walls and ceiling of the chamber are constructed from granite blocks and slabs, and the floor was paved with pebbles to facilitate drainage (ibid: 63). That the tomb was not looted may have been due to the nearness of the temple; lamps from later centuries demonstrate that the tomb was certainly entered more than once

(Kidder 1987: 64; Kidder 1989: 422). At several other tombs in the vicinity, pottery dating from the 8th-16th centuries was found inside, indicating that they were visited as shrines, and the same may have been true of Fujinoki (Kidder 1989: 422).

The sarcophagus is made of tufa painted inside and out with vermilion paint, and when opened, it was found to contain two individuals (Kidder 1987: 66-67; Kidder 1989: 417). Many of the ceramics also have traces of red paint, apparently applied strictly for the mortuary context (Kidder 1987: 67-68). Fragments of silk fabric in red, indigo, and gold were found, which had been draped over the contents of the coffin, and the bones of one of the skeletons—few of which were preserved—were completely covered with red pigment, indicating that this was a secondary burial (Kidder 1989: 418-419). This individual was determined to be a male 17-25 years old (based on incomplete fusion of clavicular epiphyses) and approximately 170 cm tall; the second person was identified as a female, although only portions of the lower leg bones were preserved (ibid: 419, 449). This individual was lower in the coffin than the male, so was the first to be interred (ibid: 419).

The second individual's bones were less well preserved than those of the young man, and is not possible to conclusively state that they belonged to a woman, only that they were adult and more gracile than those of the man (however, for convenience this person will be referred to herein as the supposed female) (ibid: 449). The leg and foot bones of this individual were in anatomical association, so he or she was likely interred "in the flesh," as it were (ibid). On the other hand, although the man's bones were laid out more-or-less anatomically, because it was impossible to dress the skeleton, the grave goods were instead stacked on and around the bones (ibid: 450).

The grave goods from inside the sarcophagus include four mirrors, a gilt-bronze crown, two pairs of gilt-bronze ceremonial shoes, 416 gold pendants, a folded bronze belt with two silver daggers stuck inside, and more than 15,000 beads (ibid: 419, 420, 423, 436-437). There were five swords, four on the "woman's" side of the coffin and one, as well as a dagger, on the man's (ibid: 424) (Fig. 123). Near the head of the more gracile individual was an hourglass-shaped gilt-bronze tubular object identified as a drum (ibid:

433). Leaf-shaped gold pendants were attached to the tube by twisted gold wires (ibid), just like the small pendants attached to Silla crowns, the Fujinoki crown (discussed below), and the famous collapsible crown from Tillya Tepe. Representations of such drums being played by women are known from China and Japan (ibid: 434-435).

The crown, which had been propped up in the corner of the coffin, takes the shape of two trees with curving branches, ornamented with pendants attached by twisted wires, which would have jiggled and glittered when the wearer moved (ibid: 438, 440). The crown measured 35 cm tall (ibid). The trees stand on little hills which may be intended to represent mountains.

There were a number of representations of fish in the burial (ibid: 431-433). The symbolism of fish is not known, but fish-shaped pendants hang from many of the royal Silla belts.

The bones of the male were laid upon a sheet of beads of alternating dark blue and yellow rows—possibly originally attached to a cloth—and the waist of the supposed female was surrounded by tiny scarlet beads (ibid: 446). "She" wore anklets of dark blue glass beads. Other beads in the burial were made of silver, gilt silver, and glass in dark and light blue, red, orange, yellow, and green (ibid). There were also 122 gilt-bronze magatama with glass embedded tips (ibid).

Kidder (1989: 428) writes: "As if the buriers did not want to play favorites, they put more mirrors on one side of the sarcophagus and more swords on the other. Proximity to the physical remains, therefore, does not identify the objects exclusively with the man or the woman." This statement sounds like an attempt to explain away the fact that the majority of the swords were laid on the "woman's" side of the tomb. However, since the putative female was lower in the coffin than the male, and the male was evidently a secondary burial, it stands to reason that deeper objects might be associated with the "woman." This of course may depend on how much time elapsed between the interments; for example, the man's bones may have been inhumed when the female died, or many years later. Therefore the grave goods might have all been introduced at the same time, perhaps with little regard for individual ownership, or years apart, and separately associated with one individual or the other. All of the mirrors were in the deepest layer

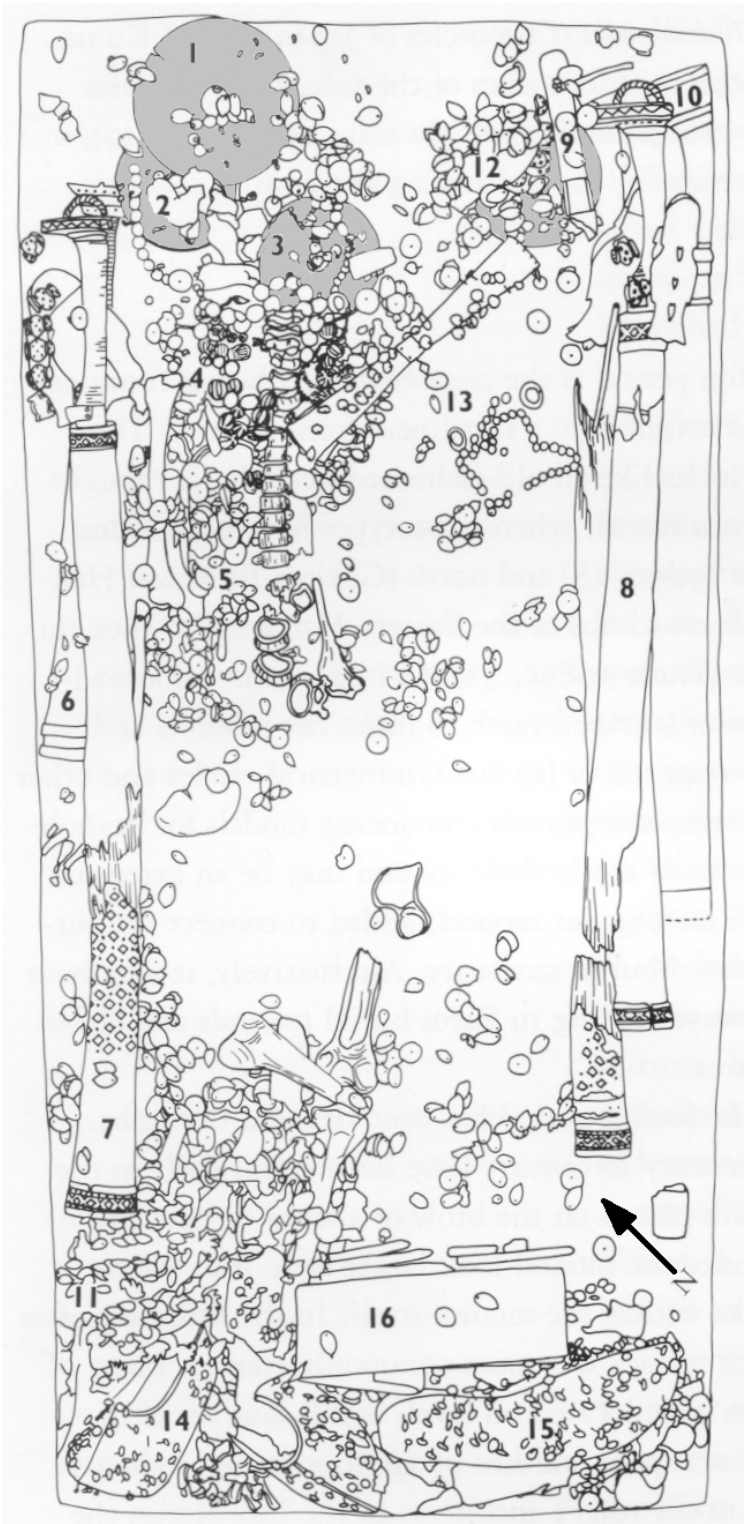

Figure 124. Plan of the interior of the Fujinoki sarcophagus (after Kidder 1989). The mirrors are numbered 1, 2, 3, and 12 and are shaded light gray.

of the coffin, suggesting that, if anything, they were associated with the more gracile individual.

The four mirrors were placed by the heads of the individuals, one with the reflecting side up (thought to have been specifically associated with the supposed female), while the other three had their reflecting sides down and were beneath the male (ibid: 423). They were found in a fragmentary state, no doubt partly due to the 10 cm of standing water[23] with which the coffin was filled when archaeologists opened it. The position of a bead necklace and gold earrings shows clearly that the male's head lay on top of the mirrors (ibid: 425). The mirror ostensibly associated with the female features an inscription reading "May the owner have an abundance of descendants" (ibid: 427).

Fujinoki is noted especially for its spectacular horse trappings, which dominate the grave good assemblage, although curiously, half of the bit and one stirrup, as well as a piece of a saddle flap are missing (ibid: 57, 69). The style of the horse trappings is very similar to Korean styles known archaeologically and from tomb paintings (ibid: 77-79). Also present were iron arrowheads and armor (ibid: 69). These goods had been placed in the chamber outside of the stone sarcophagus.

Many candidates have been proposed for the male occupant of the tomb (Kidder 1989: 450-453). Kidder (1987, 1989, 1990) believes the occupants were Emperor Sushun 崇峻 (d. 592) and his Empress-consort, Ōtomo no Koteko 大伴 小手子 because "it is inconceivable that a mere clan chieftain could command such a wealth of exotic goods" (Kidder 1989: 460). Although it is just possible, Sushun was probably *at least* in his 30s—and possibly in his 60s—when he ascended the throne (cf. Kidder 1989: 454-455), making him too old to be the young man in the Fujinoki sarcophagus. Additionally, the tomb has been dated to the second half of the 6th century based on the style of the grave goods, but Ōtomo no Koteko outlived Sushun (who was assassinated) by an unknown number of years—it is more likely that she would have been buried in the first half of the 7th century. Granted the time difference is not a major one, yet the

[23] In the water was found pollen from 18 species of plants, including safflower (*Carthamus tinctorius*), known to have been used for making red dye, indigo (*Polygonum tinctorium*) used for blue, and silvergrass (*Miscanthus tinctorius*), for yellow—all colors used in the textile that covered the bodies and goods in the coffin—and rice (Kidder 1989: 460; 1990: 76).

archaeologists seem confident in limiting the tomb to a 50-year timespan rather than a 75- or 100-year span.

Songsan-ri Tomb No. 7 (6th century AD)

In the northern and western peninsular kingdoms of Goguryeo and Baekje, pyramidal stone chambers, often painted with beautifully detailed murals inside, were built to house the dead elite. Sadly, all these tombs have been plundered except that of King Muryeong of Baekje (AD 462-523) and his wife (Nelson 1996: 28). This tomb was discovered while digging a ditch to drain water away from an adjacent tomb, Songsan-ri No. 6 (Kim 1971: 35). Muryeong's tomb, Songsan-ri No. 7, was constructed of Chinese-style stamped bricks, and had an arched ceiling and five niches along the walls, each holding an oil lamp (ibid: 36, 37). The chamber and entrance passage were oriented north-south, with the heads of the two deceased towards the south (ibid: 36, 38). The entrance was guarded by a stone sculpture of a mythical beast with antlers, before which two inscribed stone tablets were placed (ibid).

The first tablet read: "The Great General of Pacifying the East, King Sama[24]…of Paekche, age 62, passed away on the 7th day of May of the year of Kuei-mao (523). The king was placed in this mausoleum on the 12th day of August of the year I-szu (525)" (ibid: 37). The other read: "In November of the year Ping-we (526), the life of the Queen of Paekche ended, and was laid down at the Yu (West) place. She was placed in this tomb in February of the year Kuei-wei (529)" (ibid). On the back of this second tablet was another inscription: "Coins, 10,000. With this amount the Great General of Pacifying the East, King Sama of Paekche purchased the Shen (southwest) site for his tomb from the king of the earth and his subordinates. The purchase is hereby concluded and it shall not be affected by the secular laws and regulations" (ibid).

The goods found in Muryeong's tomb are broadly similar to those of unplundered contemporary Silla tombs, although not as elaborate, and with far less emphasis on beads. Of all the peninsular kingdoms, Baekje had the friendliest relations with Chinese states,

[24] Following Chinese tradition, it was customary for rulers to be granted honorific posthumous names. *Muryeong* was the king's posthumous name, by which is known historically, while he ruled as *Sama* during life.

and not surprisingly, Baekje burials tend to more closely resemble continental exemplars. This may help explain the paucity of beads, since Han sources remark on what they found an unexpected predilection for beads on the part of their peninsular trading partners (Yi 2001: 251)—Baekje elites may have come to devalue beads in accordance with Chinese tastes.

Historical evidence suggests that during Muryeong's reign, Baekje was being pressured by its neighbor state to the north, Goguryeo, and as a result the king strengthened diplomatic ties with the Liang state of southern China (Best 2003: 165), Silla, and the Japanese state of Yamato (Kim 1971). According to the *Liang shu*, the Chinese were much impressed with the Baekje envoys, and declared Muryeong to be "alarmingly handsome" and eight feet tall (ibid: 35)—although the skeletal remains were not preserved, the arrangement of grave goods worn by the deceased does not support the latter assessment, alas. Through its alliances, Baekje was able to repel Goguryeo's attacks, but most importantly for this analysis, Baekje's long-distance exchange relations were greatly increased.

The alliances between Baekje and Yamato Japan are still politically relevant. On the occasion of his 68th birthday and before the 2002 World Cup jointly hosted by Japan and South Korea, Emperor Akihito announced "I, on my part, feel a certain kinship with Korea, given the fact that it is recorded in the Chronicles of Japan that the mother of Emperor Kammu was of the line of King Muryong of Paekche" and "I believe it was fortunate to see…culture and skills transmitted from Korea to Japan" (Watts 2001). The highly controversial (at least to Japanese nationalists) statement was only published in one of Japan's major newspapers, the liberal *Asahi shimbun*, and ignored or glossed over by the others (ibid).

Following contemporary Chinese practice, Muryeong was buried alongside his wife in separate lacquered coffins (Nelson 1996: 30; Paik 1971: 51). The king wore gold earrings, one with a jade finial and one with a birch leaf-shaped pendant, thought to have been imports from Silla, a robe decorated with jade beads and gold, a gilt-silver belt with pendants, gold bracelets, and a sword at his left side (Kim 1971: 43; Nelson 1996: 30; Paik 1971: 51). His feet, dressed in outsized gilt-bronze shoes, rested on a wooden

footrest. A large mirror (23.2 cm in diameter) was placed underneath or just above his head, and another (17.8 cm in diameter) at his feet (Kim 1971: 37, 44; Nelson 1996: 30; Paik 1971: 51).

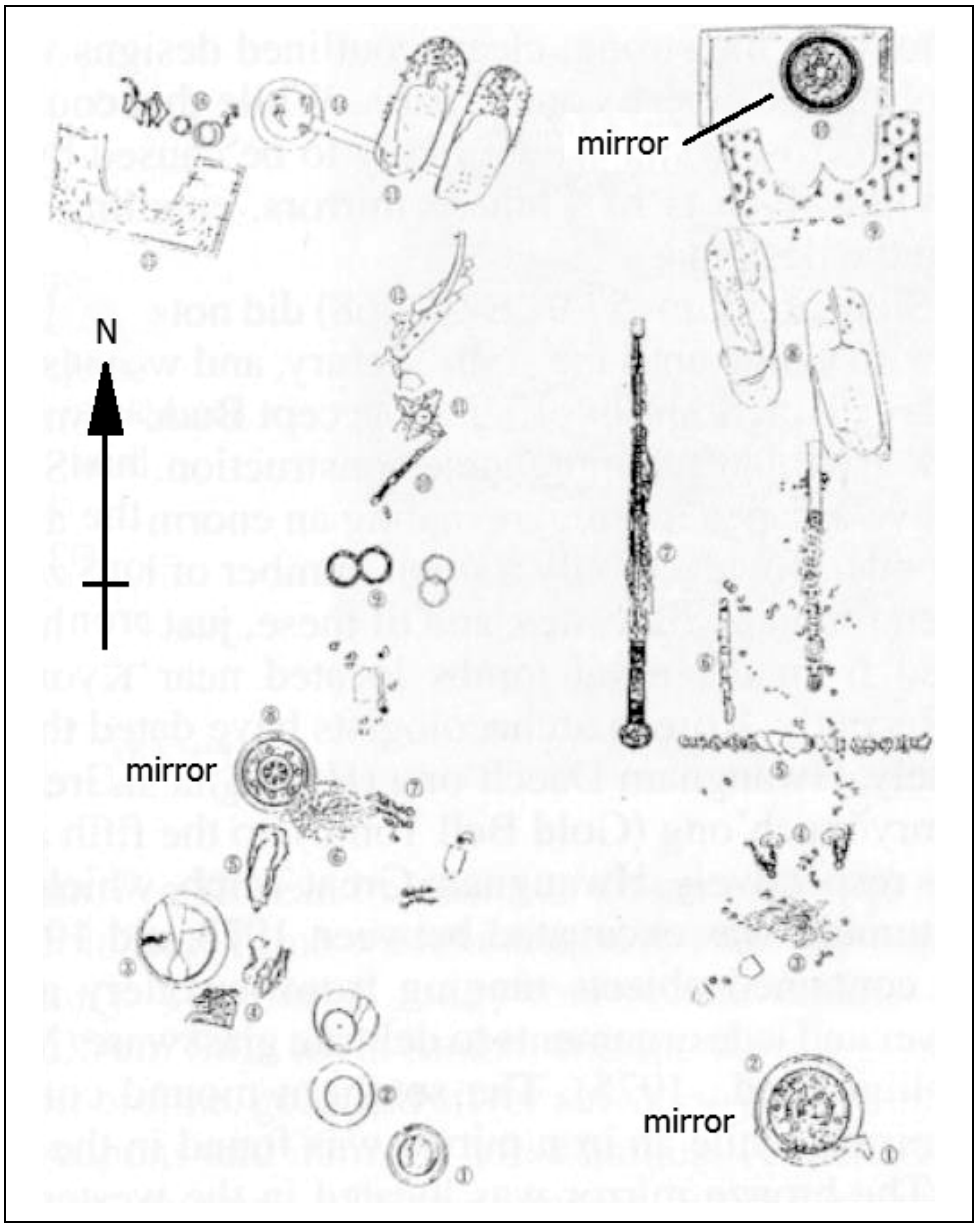

Figure 125. Plan of the Songsan-ri No. 7 burial (after Kim 1971). The queen is at left.

The queen, said to have been aged about 30 when she died (based on a single molar, which was all that survived of the human remains), was buried with beads, an

elaborate gold headdress, three bracelets on each wrist (made of gold, jade, silver, and gilt-silver, gold necklaces, and outsized gilt-bronze shoes (Kim 1971: 38; Nelson 1996: 30; Paik 1971: 51). She also had a footrest, a set of silver cups, a bronze incense burner, a gold plate, a small ornamental silver sword, and a mirror (18.1 cm diameter) was placed near her head (Nelson 1996: 30). The practice of leaving the bodies unburied for 27 months after death is only known from the burial tablets in the tomb, though it may have been widespread among Baekje people (Kim 1971: 38).

Additionally, the tomb contained ceramics, including six porcelain jars, and a chest which probably contained clothes. Altogether the grave goods numbered more than 5,000 (Paik 1971: 51). The relative paucity of ceramics and beads, as well as the heavy Chinese influence in grave architecture and goods, distinguish this burial from its Silla contemporaries. Altogether, it seems that Silla shows stronger connections with nomadic cultures of northeast Asia, while Baekje had stronger ties to China and Japan, the latter also being supported by historical documents.

Chinese *wushu* coins and the three mirrors—all Chinese in style, though probably made locally—are evidence of the strong Chinese influence on Baekje elite material culture (Horlyck 2002a: 49-50), as is the fact that the tomb structure was virtually identical to that of tombs in southern China (Kim 1971: 38). All three of the mirrors were placed reflective side down (Horlyck 2002a: 49-50), in contrast to the mirrors in Silla tombs. Their positions at head and feet parallel the placement of mirrors in contemporary Japanese tombs (cf. Fujita 1993). The mirror at Muryeong's head is decorated with a TLV motif, but in addition features five figures of indigenous origin (Horlyck 2002a: 49-50; however cf. Kim 1971: 44). These include two leaping tigers, a running deer, and what may be a dragon. The fifth figure is a man wearing a loincloth, who holds a spear aimed at one of the tigers (ibid). The second tiger appears to be chasing the deer, which is looking backwards towards the tiger. The mirror's inscription reads, in Chinese, "may the owner have an abundance of descendants" (Hong 1994), the same inscription on one of the mirrors from Fujinoki (Kidder 1989), and another mirror identical to one of the ones in Muryeong's tomb was discovered in Watanaki

Kannonyama tumulus in Eastern Japan (Rhee et al. 2007: 443). The remaining two mirrors appear to be recasts of later Han (AD 25-220) examples (ibid).

SUMMARY

The number of mirror burials in East Asia is enormous compared to other parts of Eurasia, but few have been published in European languages, or indeed, at all. Generally, burials are meticulously recorded, but the reports may simply be stored in local government offices.

The most notable pattern among East Asian mirror burials is the large number of mirrors per burial. Of course, not every tomb has dozens of mirrors like Kurozuka, but many have four or five. For the simple purpose of reflecting the face for grooming purposes, one might say there is a redundancy of mirrors. Therefore it seems likely that mirrors in burials carry some additional significance. Japanese archaeologists have proposed that mirrors were exchanged among elites on forming alliances or to recognize vassal/ruler relationships, and if accurate, this would seem to be a practice unique to Japan. It is also generally believed that the mirrors had religious significance, perhaps derived from shamanic practices, which was important in creating and maintaining rulers' prestige.

On the Korean peninsula, it seems that mirrors were a popular trade good exported by the Han Chinese commandery at Lelang, but few of those mirrors show up in burials. There are enough to conclude that they carried traces of prestige, but there are no burials with dozens of mirrors as in Japan. Perhaps mirrors were handed down to subsequent generations instead. After the Iron Age, during the Goryeo period, mirror burials became more common and mirrors began being manufactured in Korea and exported to China and Japan.

Nowhere in East Asia do mirrors seem to be strongly linked with gender. They are found in graves of both sexes, although in very high status graves, this is true of other types of goods as well. One of the things that set Korea and Japan apart from

contemporary China is that in the former, weapons and beads may be found in either male or female graves (also the abundance of beads in itself is particular to Korea and Japan).

Archaeological evidence about mirrors can be supplemented by other sources, including ancient representations (i.e., pictures) of mirrors in use, historical and protohistorical texts, folklore (oral literature), ethnographies of mirror-related practices, observation of mirrors' material properties and "affordances," and psychological studies of the effects mirrors have on human and animal minds. This evidence must be applied with caution, since local phenomena cannot be expected to apply to the whole of Eurasia, nor can we assume complete continuity from prehistory to modern times. But with the aid of these additional sources of information, it is possible to generate more and better hypotheses about mirrors in prehistory, which can be tested against the available archaeological data. Used judiciously, they can help shed light on the meaning of mirrors in prehistoric burials.

MATERIALITY

An analysis of the meaningfulness of mirrors must begin with the physical properties of the mirrors, their materiality[25]. During the Iron Age, most mirrors were made of bronze, though a minority were made of other metals; and some were composites of metals. The reflective possibilities of each mirror were determined by the nature of the metal and its treatment during manufacturing (e.g., hammering, polishing, smithing), as well as the size and shape of the mirror. In addition, size and shape will to some extent determine how a mirror could be transported, stored, displayed, and used. It is important to bear in mind that the metal composition, color, source, manufacturing process, and decoration (when present) of a mirror may have been as, or more, important to its users than its potential use as a reflector. It is important to remember that Iron Age people's engagement with mirrors may have happened along different perceptual lines from our own, for "The ways in which modern science analyzes ancient metallurgies adheres to Western conceptions of knowledge and 'control'" which were not necessarily

[25] Jody Joy has discussed in detail the physical properties and manufacture of Iron Age mirrors made in Britain and Ireland (Joy 2010: 14-23).

uppermost in the minds of Iron Age people (Saunders 2003: 15). Below, some of mirrors' "affordances" for sensory engagement will be discussed.

Color

It is now clear that color was a major factor guiding the choice of metal and its treatment during mirror manufacturing. Although color does have some effect on the properties of a mirror's reflection, the ultimate color(s) of the finished mirror most likely also held their own significance and aesthetic appeal, independent of the mirror's reflectiveness. As Wells (2008) and Saunders (2002) have noted, colorfulness is not a property to be taken for granted when considering prehistoric societies. In an era before inexpensive synthetic dyes, bright colors in manmade objects were relatively rare, and most of those found in nature ephemeral. Objects made from minerals and metals would have been some of the more colorful kinds of material culture.

Just as the color of the alloy depends on its composition, the color of the reflection is likewise dependent (Chase 1994: 95). Color of the reflection may have been an important factor in deciding on the composition of the alloy to be used. Copper alloys, the most common material from which prehistoric mirrors were made, vary in color depending on the ratio of copper to other metals: the more copper, the more reddish the final product will appear. However, the addition of other metals also affects the strength of the mirror and the fluidity of the molten alloy—for example, tin imparts a silvery color to the alloy, but makes it more brittle.

Bronze objects made in Britain during the Late Iron Age, including but not limited to mirrors, were made from an alloy of approximately 90% copper (Cu) to 10% tin (Sn), with very little lead (Pb), zinc (Zn), or arsenic (As), which resulted in a slightly reddish golden metal which was durable and resistant to scratching (Dungworth 1997; Joy 2010: 15, 39). Several facts may be inferred from this information: (1) High-tin "white" bronze, such as that used in Roman mirror manufacture (which typically contained 22-24%Sn and 7%Pb), is said to give a "better" reflection than the low-tin red-gold bronze favored by British bronzeworkers (Joy 2010: 16; Ravich 1991: 29); since sufficient tin was available in Britain to produce high-tin bronzes, the golden color was

presumably more important to British mirror makers or –users than was the crispness of the reflection. (2) The copper alloy used for making mirrors was not different from that used for other bronze objects; thus, whatever meaning was ascribed to the metal materiality of mirrors would also have been ascribed to other objects made from bronze. That is, we may surmise that in prehistory, mirrors could have been linked with other objects under the category of "bronze objects," however they may have been distinguished according to other aspects of their function or materiality. (3) Given the uniformity of copper alloy composition in Iron Age Britain, it is possible that mirror makers began their project not with "raw" materials (copper and tin ores), but with bronze objects which they then melted down and recycled, or perhaps with bronze ingots intended for the production of any kind of bronze object. Whether or not that was the case, the general agreement on the desirable properties of the copper alloy suggests shared valuations of bronze objects.

A small number of British mirrors have handles inset with red inlay made from coral, enamel, or copper cuprite (Nijmegen, Birdlip, Holcombe, Old Warden). No other color was used for inlaying mirrors. The choice of color therefore appears to be specific to the object or material to be ornamented; as noted by Fitzpatrick, red seems to have been the favored color for decorating bronze objects (including shields, swords, fibulae, and horse harness) in Iron Age Britain, as opposed to blue, which was used for the majority of glass beads (Fitzpatrick 2007: 344-345, 352). Fitzpatrick conjectures that red was associated with blood and thus aggression and martial objects, typically found in male burials, whereas blue glass bead necklaces are found in the graves of females (ibid: 345). However, the presence of red inlay on brooches and mirrors confounds an easy identification with gender or warfare. Instead it appears red was considered appropriate for inlaying bronze generally.

Berlin and Kay (1969) attempted to delineate universal color categories across human languages. They report that the two most basic categories are black and white; when a third is present, it is always red. Although the universality of Berlin and Kay's color categories has been hotly debated for the past forty years, the general fascination with red seems to be borne out by the discoveries of red ochre in burials dating as far

back as the Palaeolithic (Wreschner 1980) (and continued through the Iron Age). More recently, Kay and Regier (2006: 52), summarizing the results of a number of recent studies, state that while color naming differences across cultures do result in differences in color cognition, there are some universal "focal colors," corresponding to the colors "black," "white," "red," "yellow," "green," and "blue" in the English language. Red is thus one of the most primally recognizable colors. With regard to red specifically, Falchetti (2003: 350) notes that among the Desana and Uwa peoples of Colombia, red or copper color is associated with blood, menstrual blood, femaleness, the underworld (conceived as feminine), and rivers and lakes that represent the primordial waters associated with the birth of humanity. Copper is also called the "color of transformation" (ibid: 351). Similarly, the smell of copper—as opposed to the odorlessness of gold—was prized (ibid: 350, 351, 353). According to Falchetti, "This relation of reddish hues and 'female' metals is fairly common in many ancient and non-Western societies" (ibid). Although Colombia in the ethnographic present is far from late prehistoric Eurasia, this example serves to illustrate the fact that both metals and colors (separately or together) could be associated with genders, parts of the body, and cosmology.

Evidence from other sorts of metal objects indicates that Iron Age craftspeople were skilled in the manipulation of metal colors:

> The colour of torcs found in various hoards at the site [of Snettisham, Norfolk] was manipulated through surface enrichment of the metal…Torcs and other items from Snettisham vary greatly in colour from silver to deep gold and coppery-red. Some hoards at the site contained a mixture of different coloured torcs… (Joy 2010: 39).

The 90% Cu/10% Sn alloy used to produce reddish-gold bronzes was not a novelty at the time of mirror production, but had been used for hundreds of years (ibid). Its use in mirrors therefore represents the mirror makers' conscious choice to maintain a long-standing tradition in British metallurgy, tying mirrors to a corpus of other objects. In Temperate Europe, a general preference for golden-colored metals over silver-colored ones has been noted (Wells 2003: 210). Although the specific (and doubtless variable) symbolism attached to the color gold is not known, it is further evidence for a coherent system of color valuation which was applied to mirrors, among other metallic objects.

One group of British Late Iron Age mirrors stands out from the rest: In accordance with Roman methods of mirror manufacture, the King Harry Lane (KHL) mirrors were made of high-tin bronze which would have given a silvery surface and made them able to be brightly polished, but very brittle (Craddock et al. 1989: 271-272). The mirrors thus stand in marked contrast to the golden color of mirrors by British bronzeworkers active at roughly the same time. Indeed, the mirrors can be considered Roman, rather than British, in the method of their manufacture (although their deposition was characteristically British). In the Mediterranean world,

> It seems that in Hellenistic times a silvery reflection came to be preferred, which could be achieved by tinning the surface [of the mirror]. By Roman times three main types of mirror alloy were in use: the traditional 10% tin bronze, now usually tinned, and additionally alloys with much more tin and lead. These latter include an alloy with about 20%-23% of tin and a moderate lead content, normally in the region of about 5%-10%, and an alloy with about 20% of lead and either about 20% of tin or much less….Of the KHL mirrors…, those from Iron Age Burials 222 and 13…clearly belong to the second high tin, moderate lead group. The other three belong to the high lead, high tin group—although the lead contents at 13%, 14%, and 16% are rather low (ibid: 272).

Craddock notes that early Greek and Etruscan mirrors were characteristically 10%-tin bronzes, and the few mirrors from Iron Age temperate (Continental) Europe also appear to be similarly high in copper. Yet it seems unlikely that the golden color of 1st century BC-AD 1st century British mirrors was simply a result of mirror-makers continuing an ancient Mediterranean tradition of mirror manufacture, because *all* British bronzes were low-tin at that time.

In a study of mirrors from the Odessa Museum of Archaeology attributed to the Scythian culture[26], Ravich (1991: 21-22) found that as in Temperate Europe, a low tin content was favored, between 1-14%, but in the majority of cases, about 10%. Eighty-five percent of the Odessa mirrors, however, were made of an alloy containing 1-2% lead (ibid). In terms of the manufacturing process, both casting and forging were employed. The presence of lead in many mirrors means that these specimens could only be cold-forged; but when the alloy contained more than 7% tin, it was necessary to first heat the metal before hammering, in order to reduce its brittleness (ibid: 22). This technique is

[26] No date range is given for these mirrors, except to say that at least some mirrors may date from the 6th century BC and some from the 3rd-2nd centuries BC (Ravich 1991: 23).

very similar to that used in the production of Etruscan mirrors, and Ravich therefore speculates that the technique developed first in the Mediterranean basin, though it was more likely to have been transmitted by Greek colonies around the Black Sea (ibid: 22-23). Nevertheless, the eastern European mirror-making technique did differ somewhat from those of the Greeks and Etruscans, since Etruscan alloys customarily used 14-15% tin and no lead, which required annealing them for a much longer time (4 hours as opposed to 15 minutes), while Greek ones almost never contained less than 8% tin (ibid). Some ostensibly Sarmatian mirrors from the northern Caucasus employed the same techniques.

On the other hand, Ravich's sample of mirrors attributed to Sarmatians of the Ural and Volga Basins, Kazakhstan, and Uzbekistan (6th century BC-AD 7th century[27]) were hot-forged from a high-tin (circa 20-26% Sn) bronze (ibid: 25-26). Such alloys were being made in the region by the 6th century BC, and Ravich notes that the alloy was certainly not chosen for its convenience, since it is technologically demanding, though it was commonly used for other bronze implements as well as mirrors (ibid: 24, 27). She suggests that the high-tin hot-forging technique may have spread to Inner Eurasia from Thailand (a source of tin) via India (ibid: 27-28), and that its adoption may have been motivated by religious factors:

> It cannot be excluded that the combination of this religion [Zoroastrianism] with the cult of the Sun characteristic of the ancient nomads compelled them to turn their attention to bronze containing 20% of tin. Its golden color, high corrosion resistance, and specific musical sounds (the bronze was widely used in China and India to produce bells and gongs) perfectly corresponded to the role that was destined for religious objects (ibid: 25).

The possibility that alloys may have been chosen for sound, as well as color and brilliance, is intriguing given some present-day Siberian shamans' claim that mirrors transmit sounds which are used in healing (Van Deusen 2004: 125-126).

A third group—described as Sarmatian or Maeotian and proceeding from the northern Caucasus region—were made from an alloy of about 70% Cu and 28-30% Sn, sometimes with 2-4% Pb (ibid: 28). These mirrors are 3-4 cm in diameter with a small

[27] Note that, although Ravich refers to these mirrors with raised rims as "Sarmatian," they do not correspond to the dates traditionally ascribed to the Sarmatian culture (400 BC-AD 300).

loop handle projecting from one side, and described as having a silvery color or a lustrous black patina (ibid). They may have been inspired by Han Chinese mirrors, which have been found as far west as the Volga Basin (ibid). Ravich notes that both Roman and Chinese "white" bronzes were available in the region by the 1st century BC-AD 1st century, so either could have inspired the small mirrors of the northern Caucasus, but black patinas were highly favored by the Chinese and were produced through special treatment of the mirror's surface (this is discussed in greater detail in the next section), which seems to have been replicated in some of these northern Caucasian mirrors[28] (ibid: 28-29).

In Temperate East Asia, on the other hand, the higher proportion of tin in the alloy resulted in a white/silvery color. For example, the 8th century AD Japanese mirrors from the treasury of the Shoso-in temple were found to be approximately 80% Cu to 20% Sn (ibid: 24). Chinese mirrors from at least the 5th century BC typically contain 70% Cu, 25% Sn, and 5% Pb (ibid: 29), with up to 33% Sn (Chase 1994). This imparted a silver color to the new metal, and made it more resistant to corrosion. Nevertheless, as discussed in the next section, certain types of patina were considered aesthetically pleasing. Occasionally, other materials were used, such as silver. In addition, Chinese mirrors were sometimes decorated with other materials, such as lacquer (red and black), shell (iridescent), and feathers (various colors), though these additional elements are not present on any of the mirrors in the present sample.

Indigenous Korean bronze working was influenced by traditions from the Ordos region and Siberian steppes; geometric mirrors made on the Korean peninsula used very high-tin copper alloys, although the specific proportions were highly variable (Park and Gordon 2007: 1994-1995, 1999). An analysis of a 2nd-1st century BC fine-line geometric mirror from Wonboongni, Nonsan, Korea showed it to be 68% Cu/32% Sn (ibid: 1995). Another mirror from Gyeongju (site not specified) from the 1st century AD contained 27% Sn but no lead (ibid: 1993). Park and Gordon indicate that most mirrors analyzed to date contain 16-27% Sn and 2-15% Pb; one mirror contained a whopping 49.05% Sn,

[28] Perhaps due to issues of translation, grammatical subjects are often not present in Ravich's sentences, making it difficult to determine to what she is referring. Although it appears that on page 29 of her article she is referring to northern Caucasian mirrors which replicated the surface treatment of Chinese specimens, it is possible she is referring to the Chinese mirrors themselves.

while another contained 33% Pb (ibid: 1999). Portal (2000: 36) reports that Korean bronzes typically contain more zinc than those produced in Temperate Europe or elsewhere in East Asia (7%-13%), although no zinc was reported for the samples analyzed by Park and Gordon (2007). Replicas made for display at the National Museum of Korea indicate that when new, these mirrors would have had a bright yellow color, not as reddish as that of the Temperate European mirrors.

By contrast, gray metals, such as the iron used for the Arras mirrors in East Yorkshire, do not seem to have been decorated as often or with the consistency of the golden copper alloys. For example, some of the iron mirrors feature bronze additions on the handle, but none is enameled. Wells (2003) notes that silver was not favored as a decorative metal in Iron Age continental Europe until after considerable interaction with Romans, who frequently used silver decoratively (Wells 2003: 210); this may be further evidence that golden-colored metals were particularly valued in Temperate Europe. Nevertheless, the preferential deposition of Arras mirrors in burials demonstrates they were ritually significant, so future research on this subject may show that special meaning applied to other kinds and colors of metals and alloys, including iron. Across Eurasia, metals which could become heavily oxidized or tarnished, such as silver and iron, were generally not favored, although (as discussed below), the patina on copper alloys was sometimes valued in its own right for its chromatic properties.

Patina. Although the colors of new metals have been discussed by many authors, another important—and underanalyzed—component of a metal mirror's color is patina. Effectively caused by metal corrosion and oxidation, patinas can vary in color according to the mirror's metal composition and its surrounding environment. Bronze is particularly subject to patination, since iron rusts when exposed to oxygen, which happens even in the burial environment (Turgoose 1985; Neff et al. 2005), rather than developing a stable patina; this not only changes its color and reflectiveness, but also causes disintegration of the metal. Chinese mirror connoisseurs have left us texts in praise of certain patinas: while a "black lacquer" patina (a shiny, dark brown to black surface which could provide very crisp reflections) was considered ideal, a "green

lacquer" patina was still aesthetically pleasing (Wang et al. 1995), and so on; however, in other Eurasian contexts, the idea of desirable corrosion has yet to be considered in depth. Admittedly, this is difficult in the absence of textual explanations.

Very little is known about the formation of, and chemical and physical properties of, copper alloy patinas (Robbiola et al. 1998: 2084). When bronzes are exposed to air or water, the higher the copper content of a bronze, the faster it will tarnish[29]—in other words, a higher tin content will help to resist corrosion (Chase 1994: 96; Robbiola 1990). This means that bronzeworkers of the British Late Iron Age chose low-tin bronzes in spite of their tendency to corrode, whether for their color or their durability. By contrast, Chinese and Roman mirror-makers chose high-tin bronzes which were less subject to corrosion, but had a different (silvery) color and were more likely to break. No doubt color was not the only concern of the manufacturers, but it certainly must have played an important role.

Robbiola et al. (1998) divide patinas into two types; Type 1 are surface patinas, blue, green, brown, or gray in color, which adhere to the surface of an object but do not alter its overall size and shape, while Type 2 patinas, produced by a high rate of copper dissolution, are red, brown, or green, and leave the metal looking as though it has been "eaten away" (Robbiola et al. 1998: 2090, 2097). A single artifact may display both kinds of patina. The surface corrosion includes elements from the soil, atmosphere, water, or whatever the artifact's surrounding matrix or matrices (including decaying organic remains in the case of burials) from the time it was created, which replace some of the copper on the surface of the artifact; if the rate of copper dissolution ("decuprification") is low, a Type 1 patina forms, where the corrosion layers actually help to protect the underlying metal from further dissolution (cf. Wang et al. 1995). On the other hand, with a high rate of decuprification, a Type 2 patina forms where protective layers have not, resulting in significant damage to the metal (Robbiola et al. 1998: 2094, 2096-1097, 2104; Taube et al. 1996: n.p.).

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[29] Tarnish (Cu_2O, or cuprite) is one form of corrosion. Cuprite is a semiconductor, allowing transport of ions across to the original metal surface; that is, it appears to facilitate the dissolution of copper and its substitution by other elements, such as oxygen and chloride, transported across the semiconductive cuprite "membrane" (Chase 1994: 97-98, 101).

A black patina, so esteemed by the Chinese, (a Type 1 patina) can be observed on bronzes made by other cultures as well, including Egypt, Mycenae, and Rome. In some instances, the black patina was deliberately created, as may have been the case with some Chinese mirrors (Cockrell 2009: 86, 88). The patina may have been manipulated for purely aesthetic reasons, to make the mirror look like it was very old, because the patina protected the surface from further corrosion (ibid: 88), or perhaps to produce a particular type of reflection. Craddock and Giumlia-Mair (1993) propose that the technique of producing black-patinated bronze diffused from the Near East, but it is not yet clear when the patina is the product of natural processes and when it was artificially induced, and in the latter case, whether the same technique was always employed across different periods and regions (Cockrell 2009).

The topic of patina brings to the fore questions of process and transformation. Rather than conceptualizing a mirror as it may have looked and acted at a single point in time, patina encourages us to imagine the mirror as it looked and acted *through* time. The environment acting upon mirrors obviously varied according to culturally-specific practices. In some Late Iron Age British burials, mirrors were encased in boxes or wrapped in bags or cloths before being buried. This might have protected them, for a time, from chemicals in the soil; but eventually, they were subject to corrosion and now their decoration is obscured and their plain surfaces no longer give a reflection. Before burial, they may have been kept in boxes or bags, or possibly suspended from their terminal rings. In China, mirrors were sometimes kept inside cosmetic boxes along with pigments, brushes, and combs, while others were prominently displayed within the home on elaborate wooden stands. In the case of nomadic cultures, mirror storage would presumably have reflected a concern with portability. We should not assume, however, that burial was the end of a mirror's life or that this was conceived as the mirror's death, nor that it constituted the social "death" of a mirror in real terms (however conceived at the time)—rather, mirrors may have been expected to continue functioning as they had before burial, just as their colors continued to transform in the ground.

Brilliance

A mirror's "brilliance," or shininess, is its ability to reflect light. In a perfect state of reflectiveness, an incident beam of light shining upon a mirror and the beam of light the mirror reflects will both form the same angle perpendicular to the mirror's surface (Chase 1994: 94). Brilliance depends on the material from which the mirror is made, and techniques used to finish it (e.g., polishing).

Even today, mirrors are one of the most brilliant objects with which humans interact. They can be used to manipulate light, and this may have been essential to their use in certain times and places (Joy 2010: 50). Flashing light is eye-catching and therefore appropriate for items intended to for display, such as personal adornments made of metal (Wells 2008). Of course, the "lightscape" (Bille and Sørenson 2007) of the Iron Age was different from that of today, insofar as the only indoor lighting came from fire, which flickers. Saunders (2002) has criticized archaeologists' "neurological determinism," which denies the cultural specificity of ways in which humans view light and colors; in other words, it is commonly accepted that seeing is and always has been the same for all people, whereas in fact, "experiences and linkages between senses may vary tremendously between cultures" (Bille and Sørenson 2007: 265-266). Objects capable of reflecting light—shiny things—have in some cultures been perceived through an "aesthetic of spiritual power" (Keates 2002: 111).

Saunders (1999, 2001, 2002, 2003) demonstrates that such an aesthetic was prevalent among cultures throughout the pre-Columbian Americas, who attributed value to material culture according to a very different system from that of Europeans:

> For indigenous peoples of the Americas on the eve of European contact, ideas concerning the spiritual and creative power of light were inextricably bound up with its embodiment in physical forms. For millennia, this appears to have bestowed cultural significance on the production, display, and exchange of brilliant objects….All, in their own way, and according to differing cultural conditions, partook of an inner sacredness displayed as surface gleaming (Saunders 1999: 243, 245).

In the case of the Americas, archaeology can be supplemented by European and indigenous texts (e.g., Maya codices), which are lacking for most of Iron Age Temperate Eurasia. Although it is impossible to fully reconstruct the aesthetics and metaphysics of Eurasian mirrors, it is likely that the exchange of mirrors was accompanied by an

exchange of ideas about their powers and properties, and brilliance is certainly one of the most dramatic. Moreover, a variety of anthropological studies have indicated that an "aesthetic of brilliance" exists, or existed, in Africa, Asia, the Pacific, and Medieval Europe.

Indeed, Saunders (2003) even suggests that the quintessential archaeological evidence for the existence of an aesthetic of brilliance among metal-users lies in the use of that metal to make mirrors (Saunders 2003: 17, 25). Thus, textually-attested pre-Columbian valuations of light and brilliant substances can be (cautiously) comparatively applied to Iron Age Eurasian contexts as well.

It is clear from the Japanese texts that mirrors were thought to embody light. It therefore stands to reason that they did not need to be exposed to any outside source of light to perform their perceived functions. Neurophysiologically, light is necessary for vision and for reflection, yet we must imagine mirrors having a role, an effect, even in the absence of anything to reflect or indeed of the very medium that makes reflection possible. In modern Shintō practice, when a mirror acts as a god-body, it is kept within the innermost sanctum of a shrine and is never looked at (Ono 1962: 23). The putative *yata no kagami* mirror—the original and therefore holiest god-body—is kept wrapped in silk at the shrine of Ise and has not been seen in centuries (Dumpert 1998: 29). When Princess Takuhata committed suicide, the mirror she had buried projected a rainbow from underground in the dead of night (Aston 1972[1924] vol. 1: 151-152). Thus Dumpert (1998) has argued that if the power of a mirror does not depend on its being visible, "A buried mirror continues to be effective" (Dumpert 1998: 30).

Shape and size

Eurasian mirrors can be broadly divided into eastern and western types, where the eastern type is characterized by one or more loops on the non-reflective side of the mirror, while the western type is characterized by a handle projecting from one edge of the mirror (Rubinson 2002). The distribution of the two mirror types overlaps in Inner Eurasia; both typically have round plates. Other types of mirrors do exist, such as the hinged *Klappspiegel*, made in the Mediterranean area, which opened much like a modern

compact, but among the non-literate peoples of temperate Eurasia, the former two types predominated.

Most of the mirrors of eastern type were manufactured in China, where from the Han period (206 BC-AD 220), metallurgy was industrialized to the point that many goods, including mirrors, were produced on a truly massive scale (Bronson 1999). These mirrors were thus plentiful and widely available via China's far-flung trade relations. Western mirrors, on the other hand, were usually made singly and locally, with a greater variety of shapes and styles of decoration, and did not enjoy such a wide distribution.

Reflections, in prehistory, were not that easy to come by. In our world, reflections are ubiquitous, and entire rooms or even city skylines may be visible in a single reflective surface, but Iron Age mirrors are generally quite small—most are less than 10 cm in diameter—so they only cast intimate reflections. Looking into a typical Iron Age mirror, the viewer would see his or her own face, but not much of its surroundings. Visually, the reflection is a context-independent representation of the individual.

Plates. Although some square mirrors were produced in China, most mirror plates throughout history have been round or oval in shape, both in the Old World and the Americas. Plates can be convex, concave, or flat; convex mirrors will shrink the reflected image, making it possible to reflect a larger area.

Handles. Handle shape is an issue more pertinent to mirrors made in western Eurasia, where projecting handles are common. Some of the knobs on eastern Eurasian mirrors were modeled as figural representations, e.g., of lions, but this is typical of later time periods. Western Eurasian mirror handles have been subject to various sorts of elaboration.

Although each is unique in its particulars, the Arras mirrors are generally similar, having a round, flat plate for a reflecting surface and a projecting, bar-like handle with a distal terminal ring. The mirrors are made of iron but some have bronze decoration on the handle, and the iron was forged rather than cast as Iron Age furnaces were not

capable of reaching temperatures hot enough to melt iron (Joy 2010: 1). The handle's terminal ring is a consistent feature of British mirrors throughout the Iron Age, and distinguishes them from most mirrors made in other parts of Eurasia, including the rest of Europe. The ring would have allowed these mirrors to be suspended, as it were, "upside down," as suggested by Fox and Pollard (1973). The position of some mirrors in burials suggests that they may have been suspended from a belt along with a chatelaine or set of grooming tools. Although it is possible that the terminal loops were purely decorative, it is worthwhile to consider how mirrors were transported, stored, and displayed—who might have seen them, and in what contexts? Finally, the terminal rings are important in balancing the weight of the plate when the mirror is held in the hand.

Sir Cyril Fox (1958) classified the Yorkshire mirrors as Type I ("bar"-handled), and postulated that the type was of Gaulish origin, and ultimately derived from Greek mirrors. For Fox, the link between Greek and insular mirrors seems to have been the Chotín and La Motte Saint Valentin mirrors (Fox 1958: 98-99); that is, "The idea of a reflective metal plate and handle was transmitted from Greece via Europe to East Yorkshire" (Joy 2010: 6), a view which still accords well with the evidence. However, it would appear that the distal terminal loop on the mirror handle was a British innovation, as none of their Continental Iron Age (so-called "Celtic") or Greek forerunners has the loop.

At first glance the Late Iron Age mirrors, mostly from southern Britain and made of bronze, and the middle Iron Age mirrors from Yorkshire, made of iron, seem to be two distinct groups, but there are in fact some mirrors which seem to bridge the gap, and the kinship is manifested most clearly in the shape of the mirrors' handles. The presence of the terminal loop may suggest a difference in practice between British mirror users and their European counterparts. That is, if the loop was used to suspend the mirror, perhaps from a belt, the mirror was rendered portable, and its potential for display outside is increased. Meanwhile, the three burials datable by radiocarbon analysis suggest that the mirrors were buried during the late 4th-beginning of the 3rd century BC, a span of perhaps only 15 to 30 years. It is possible that all of the mirrors were made at roughly the same time, or that it was a very short-lived fashion. On the other hand, the Wetwang Village

burial may have taken place as late as the beginning of the second century BC, which is very near the time of the earliest Late Iron Age mirrors (e.g., St. Keverne and Bryher). This date supports the continuity evidenced in the form of mirror handles throughout the Iron Age.

Decoration

Most mirrors made in Eurasia featured some degree of decoration on one surface. The other side of the mirror was usually left blank to serve as the reflective surface. In Europe, it is customary to refer to the reflective surface as the "front" of the mirror, while the "back" is decorated; however, Chinese scholars refer to the decorated surface as the "front," since their interest traditionally has been of an art-historical nature which generally ignores the reflective aspect of the mirror.

Eurasian bronze mirrors can be divided into those made from cast bronze and those made from a combination of cast and sheet bronze. The decoration of cast bronze mirrors was created with durable molds, which meant that multiple copies could be made. This method was preferred by Chinese, Korean, and Japanese mirror manufacturers. A new mold could be made from an existing mirror in order to make further mirrors which duplicated the decoration on the first. The decoration on sheet bronze mirror plates, on the other hand, was done by engraving or tracing with a graver. The different methods of decoration understandably establish different kinds of relationships between the metal and the person working with it.

British Late Iron Age mirrors. The decoration of the Late Iron Age mirrors from Britain has received extensive attention (Fox 1958, Jope 2000, Joy 2010). Joy (2010) has demonstrated that the designs were composed of a limited number of motifs, none of which were unique to mirrors (Joy 2010: 25). Following naming conventions established by Fox (1958), Jope (2000), and Joy (2010), these motifs include the "fin," "cusp" or "pelta," "trumpet," "armadillo," "circled tricorne," "kidney," "crescent," "adjoined double cusp," "keeled roundel," and the circle (see Fig. 126). These shapes can appear on a mirror in either "positive" (that is, infilled with engraved hatching) or "negative"

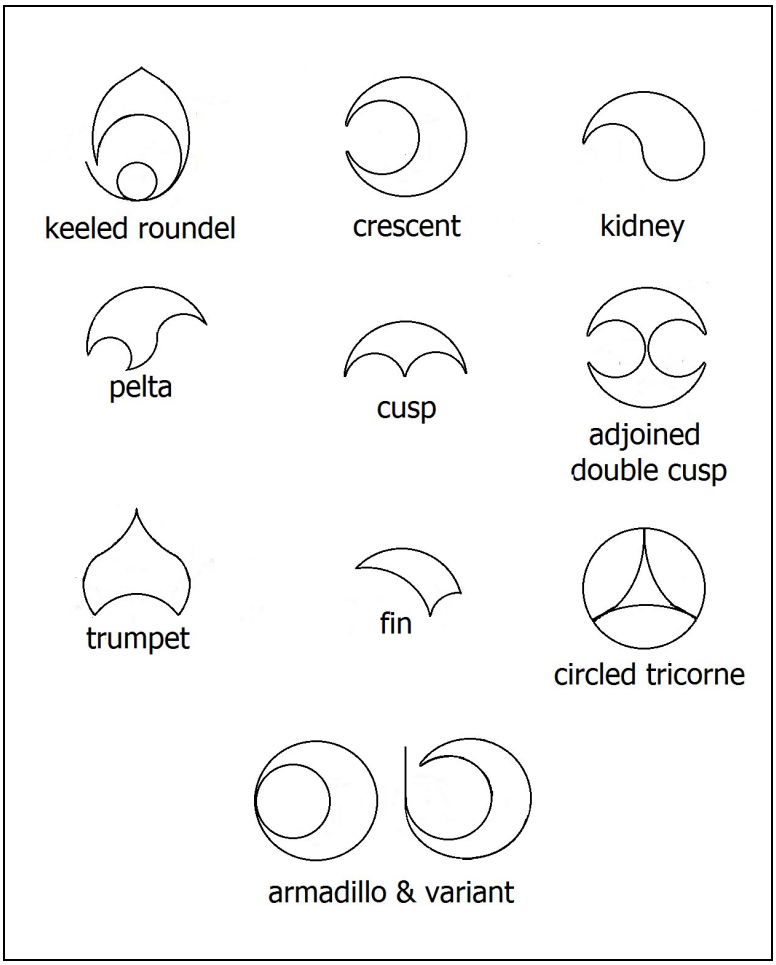

Figure 126. Motifs appearing in British Late Iron Age mirror decoration. Terminology from Joy (2010).

(left unengraved) form within a design; the overall design is a complex interplay of positive and negative shapes (Fox 1958: 83; Joy 2010: 27). By breaking designs down into their constituent shapes, Joy (2010: 28) found that "an initial framework could be created which divided the design-field [i.e., the mirror plate] into more readily comprehensible areas. These were then sub-divided until a series of round areas…had been defined." As each positive shape was created, a corresponding void or negative shape emerged, which then determined the subsequent positive form, and so forth; the more shapes used, the more complex the overall design. On the most skillfully decorated mirrors, there are no positive or negative forms which do not match one of the shapes enumerated above, while on less skillfully—or less canonically—designed examples,

such as Nijmegen, there are negative voids which do not conform to any regular shape (ibid: 35).

Rectilinear shapes were never used. As a result the designs appear flowing and "organic." In fact, all of the shapes employed in mirror design are circles or segments of circles; by interrupting or filling the circle, the various shapes are created. For example, in Figure 92, each motif was created using the same circle as a template. The overall design on each mirror can therefore be viewed as interlocking circles coming into and out of sight. Although any individual shape can be found on other types of Late Iron Age artifacts, the way in which these motifs were combined to create the total design is virtually unique to mirrors (ibid: 48). It therefore seems that the complex interlocking of positive and negative shapes into a coherent whole is a *sine qua non* of what Joy (2010) has termed "mirrorness." Most importantly, it must be understood that:

> …decoration is intimately related to the efficacy of the object and directly affects the social performance of human actors [using or viewing the mirror]….We could therefore see mirror decoration not as the passive, decorative back to the reflective side of a mirror, but intimately involved in capturing and manipulating reflected light (ibid: 38, 40).

The decoration of mirrors was not simply aesthetically-pleasing ornamentation, but rather was integral to the function of mirrors—which begs the question, what was that function?

It is of course impossible to know exactly how the mirrors were conceptualized in functional terms, and each individual mirror may have been used in different ways, but it is possible to recognize their effects in general. In an analysis of Germanic animal-style decoration on early Medieval brooches, Lindstrøm and Kristoffersen (2001) argued that the characteristic ambiguity of animal-style figures stimulates psychological processes such as Gestalt formation (finding patterns in or "making sense" of ostensibly random shapes) and altered states of consciousness (Lindstrøm and Kristoffersen 2001: 65). Moreover, embedded within the ambiguous designs was condensed information—references to mythic events or characters, for example—rendering these designs cryptic "hyper-texts" (ibid).

The Germanic animal style is characterized by symmetry and "split" representations of animals and, occasionally, humans—in split representations, parts of the body may be widely separated or twisted around in impossible configurations.

Animal-style designs often feature multiple animals interlinked with one another and are notable for images which can be read in different ways depending on the viewer's angle. In addition to the more explicit animal and human representations in Germanic animal-style art, there are what Lindstrøm and Kristoffersen call "latent figures," because "From a perceptual-psychological view,....People are perhaps particularly prone to 'see' faces in ambiguous stimuli" (ibid: 68). In other words, viewers are likely to perceive faces where none are overtly represented, or where they are only hinted at.

Germanic animal style art shares some characteristics with British mirror-style design: particularly, "broken symmetry" (ibid: 73), curvilinear lines, and alternating or reversible images. In broken symmetry, while the overall compositions are symmetrical, there exist slight discrepancies only visible on close examination; with alternating images, it is possible to view the same image as representative of different things.

A famous example of an alternating image is the Jastrow duck/rabbit head illusion. Such images alternate in the visual field, that is, it is difficult if not impossible to have both images within visual perception simultaneously, even if the viewer is aware of the existence of both.

> The switching between different objects perceived in ambiguous figures probably takes place in the frontoparietal cortex, and interhemispheric switching mediates the perceptual rivalry between the two objects seen. The right frontoparietal cortex is responsible for the visual selection process, and each cortical hemisphere represents one of the two alternating/rivalling objects seen....The more complex the reversible figures are, the more time they require to be perceived….*Curvilinear shapes are more difficult to reflect in the brain and require more time to be manipulated mentally*….[T]hese perceptive processes, with their neurological concomitants, played a role in catching and focusing the observers' attention, which, in turn, could influence their state of consciousness (ibid: 75-76, emphasis added).

Some authors have argued that mirror reflections work in the same way: the viewer cannot be aware of the surface of the mirror *qua* mirror at the same time as he or she is aware of the scene reflected within the mirror (Miller 1998: 78); in contrast, Chinese philosophers acknowledged the possibility of perceiving both the surface and the reflection, or at least of alternating between them, and used this phenomenon as a metaphor for the multiple layers of meaning underlying religious symbols:

> One is 'visually aware of the surface' one looks at, *and* one discerns something standing in front of oneself and receding behind the [mirror] surface....Huiyuan speaks of the Buddha's image as a mirror reflection: its luminous interiority where myriad images are born, yet a space unattainable by the 'ear and the eye' (Wang 2005: 247, emphasis added).

British mirror-style designs involve a similar alternation when the viewer switches his/her attention between positive and negative shapes, as well as between the mirror's surface and the reflection seemingly contained within it.

Iron Age and early medieval craftspeople were clearly aware of the potential of their designs to produce such perceptual-psychological effects, which has important social correlations. First, both Iron Age mirrors and Migration Period brooches were uncommon objects with very restricted distribution—both have been found primarily in the burials of adult females (Stoodley 1999; Flowers 2005). Most people would not have had the opportunity to view these objects, and we do not know what sorts of social contexts would have brought them into their presence. Second, both animal-style and mirror-style designs contain tiny details which cannot be perceived except from very close, creating a distinction between those with immediate, close-up access to the objects and those who could only see them at some remove.

What information might these putative texts have contained? It is possible that mirror decoration was entirely abstract and not intended to be "read," even if it was integral to the functions of mirrorness; Joy (2010) is adamant that mirror art is not representational (Joy 2010: 51). Indeed, whereas representations on animal-style brooches reference mythology of the god Odin (Dickinson 2002: 178), few overt figural representations can be found on British Iron Age mirrors. However, the majority of the putative figural representations on mirrors are highly ambiguous—e.g., the owl or cat on the Holcombe handle mount, the bird's heads on the Old Warden handle mount, and the duck's head on the Ballymoney handle. The only instance of unambiguous figures is the cattle heads on the Ingleton handle. So the possibility remains that mirror-style compositions contain representations, meaningful "texts," and they certainly are replete with "affordances" (Knappet 2004) for psychological-perceptual actions such as Gestalt formation.

Only persons with access could have learned to interpret whatever information may have been encoded within mirror decoration, or within the actions making up mirror use, and even fewer would have been really skillful at it. According to Lindstrøm and Kristoffersen (2001), in modern times, skill at first detecting and then interpreting ambiguous imagery is correlated with certain psychological-perceptual talents, including vivid imagination, hypnotic talent[30], creative problem-solving, and intuition (i.e., unconscious processing of stimuli) (Lindstrøm and Kristoffersen 2001: 77-78). The authors conclude that such qualities were enhanced through enskillment (Ingold 2000) in techniques of animal-style art interpretation, endorsed through their repetition and reification, while knowledge of restricted content was gained, all of which further enhanced the success and status of the women who had access to brooches. In short, "the art of this period seems both to activate and refer to psychological processes known to be related to problem-solving, intuition, creativity, ego strength, etc., abilities that were greatly needed and highly rewarded during the turmoils of the Migration Period" (Lindstrøm and Kristoffersen 2001: 81). A similar hypothesis may be suggested for the interpretation and use of mirrors during the Late Iron Age.

All mirror technology is effectively a technology of enchantment (Gell 1992), a fact which is amply illustrated by their folklore and the decoration on British Iron Age mirrors added to the effect of magic and mystery. According to Gell, observers attribute magic to technology that seems to surpass the capabilities of a non-magical human manufacturer. British Iron Age mirrors were designed to capture attention and dazzle their audience, insofar as they utilize three visual components to which humans are particularly sensitive, *viz.* eye-spots (circles, keeled roundels), bold tonal contrasts (positive and negative spaces, light reflections and dark shadows), and the color red (ibid: 44-45). Following Gell's argument, the psychological-perceptual effects produced by the mirrors might have been attributed by observers to magic, which would likely have been associated in turn with the owner or maker of the mirror, enhancing his or her status and producing very real social effects—to paraphrase Gell (1992: 52), asymmetries in the relations between people are created by placing them in an essentially asymmetrical

[30] For the notion of hypnotic talent, see Tellegen and Atkinson 1974.

relation to things. However, a technology's ability to enchant is dependent on a pre-existing belief in the magical potentials of humans and their creations, something lacking in modern archaeological circles (although the mystifying notion of technical "genius" is widespread in the West); but where such a belief exists, the artist may be as much in awe of enchantment as the audience. The artist is then a magic practitioner, or "occult technician" in Gell's terms, and the owner or user of the object is also a magic practitioner because he/she wields the magical object. Whether mirrors' decoration was a hyper-text or simply an abstract pattern designed to enhance their powers of reflection, it becomes clear that it enhanced their supernatural impact.

Korean geometric mirrors. The earliest mirrors (6th-4th centuries BC) made in the Korean peninsula were decorated with straight lines in zigzag patterns (Kim 1986: 108-110; Nelson 1993: 137) (Fig. 126). These designs are similar to those on mirrors found in Bronze Age burials at the Shi-er-tai yingzi site in Liaoning, present-day China, and Kim (1986) hypothesized that the mirrors were fastened to shamans' garments (Kim 1963; Kim 1986: 115; Portal 2000: 35). Ethnographies and illustrations depict Siberian shamans wearing mirrors in this way in modern times (e.g., Tedlock 2005). If suspended by a cord through its off-center loops, the mirror would hang perpendicular to the ground, making the Korean mirrors well-suited to be worn as pendants or fastened to garments. Later mirrors (4th-late 2nd centuries BC) were cast in molds, and have finer lines. In addition to zigzags, hatched triangles and concentric circles are common (Barnes 1993; Portal 2000: 35).

Geometric mirror decoration link Korean mirrors with examples from the steppes to the north and, probably, west; for example, four mirrors were found in the Shang burial of Fu Hao at Anyang (ca. 1200 BC), some of which are decorated with hatched triangle motifs (Nelson 1993: 137).

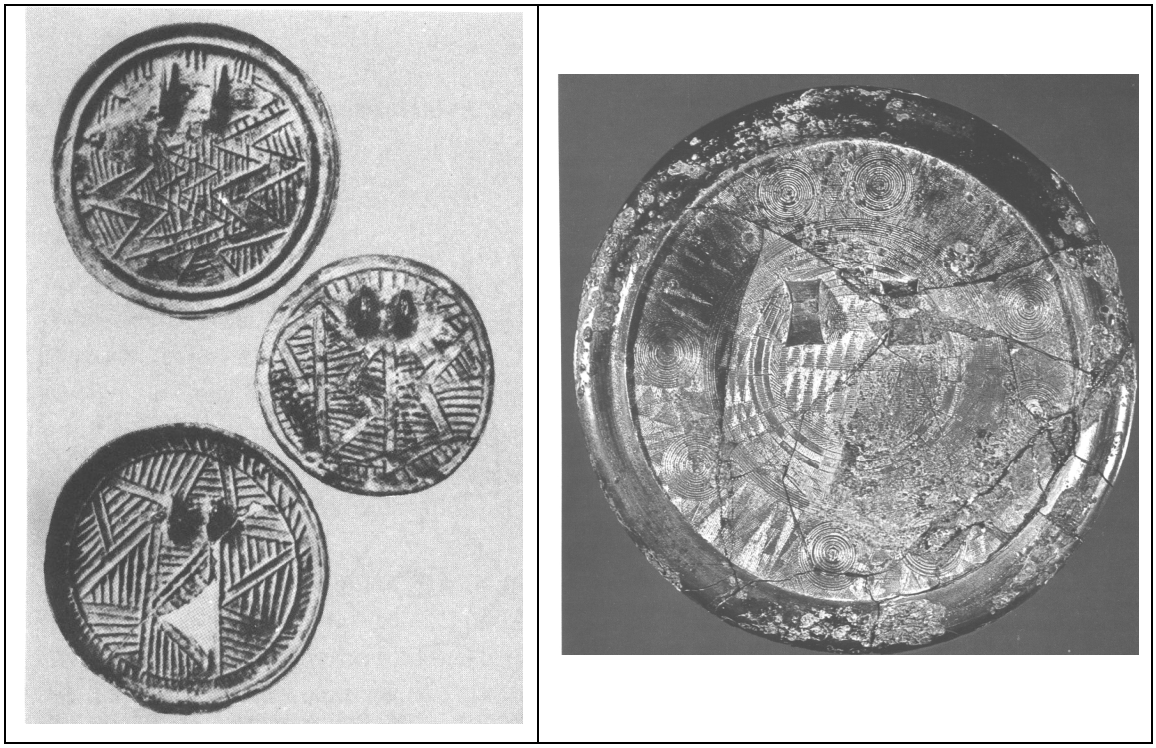

Figure 127. Korean geometric mirrors (Kim 1986: 114). *Left:* Coarse-line mirrors. *Right:* Fine-line mirror.

Chinese mirrors of the Zhou and Han periods. Most mirrors found in eastern Eurasia after the second century BC were produced in China. Chinese mirrors were decorated with a plethora of different designs and styles, but only the patterns on mirrors detailed with specific sites in this analysis will be discussed in depth.

During the Zhou and early Han periods (first millennium BC), mirrors were decorated with geometric designs or with intertwined beaked and clawed creatures. Around 0 BC/AD, however, "The highly regulated patterns and abstract design of the earlier [Zhou to Former Han] mirrors now gave way to more mimetically representational images" and written inscriptions became more common (Wang 1994: 512, note 11). Bulling (1955) argued that mirror decoration echoed decoration in non-metallic media and on other types of artifacts (Bulling 1955: 20; cf. Cammann 1955 who disagrees). Although one may disagree with Bulling on the nature of mirrors' prototypes, it is worth heeding his advice that mirrors must be understood as part of a larger corpus of objects with religious or ritual significance—objects which might reference each other in their

designs. However, as with the Late Iron Age mirrors from Britain, even though the Chinese mirrors shared motifs with other contemporary artifact types, the overall composition of mirror decoration was unique to mirrors. With regard to the possible prototypes of Chinese mirror decoration, a parallel can be drawn between the complex designs of intertwined creatures on Chinese mirrors and the animal-style art of the Eurasian steppes (often termed "Scythian animal style" and not to be confused with the Germanic animal style). The creatures on the Chinese mirrors have claws and beaks like birds of prey, while their bodies are twisted like those of serpents; birds of prey and monsters combining features of different real animals, often contorted into impossible configurations, are characteristic of the steppe animal style.

Inscriptions provide important clues to the ways the Chinese viewed mirrors, but would not have been legible to many of the people who actually used the mirrors outside the realm of Chinese literacy. (Inscriptions are discussed in greater detail in Chapter 7.)

During the Han period (202 BC-AD 220), one especially popular type of Chinese mirror decoration is the so-called "cosmic" or "TLV" design, which includes shapes identical to the Roman letters T, L, and V[31] (Fig. 128). TLV mirrors were made in great numbers and widely distributed during the Han period, especially after the first decade AD (Wang 1994: 512, note 11). The Chinese silver mirrors found at Tillya Tepe, Afghanistan were TLV mirrors. In the TLV design, the circular boss at the center of the mirror is surrounded by a square (itself surrounded by the circular outline of the mirror). From each side of the square projects a T; facing these and projecting from the outer circle are the Ls, and opposite the four corners of the square are the Vs; the intervening decoration varies (Cammann 1955: 159).

The meaning of the Ts, Ls, and Vs has been lost, despite the voluminous writing of the period. It now appears that the TLV design shares cosmographical symbolism with other objects, including sundials and a boardgame called *liubo,* popular during the first and second centuries AD, the same time as the zenith of the TLV design (Yang 1952: 138; Hayashi 1989 in Lai 2006: 38). The layout of the *liubo* board is said to have represented the Daoist cosmos, but it is not known exactly how the game was played,

[31] In the Chinese literature, these are referred to as *guiju* mirrors, that is, compass-and-square, because it was thought the "V" and "L" resembled these carpenter's tools (Lai 2006: 38).

which imposes serious limitations on interpretation of the TLV design (Cammann 1948, 1955; Yang 1952). Cammann (1948: 161) suggests that *liubo* was not merely a game but a form of divination, which could suggest mirrors were used for the same purpose.

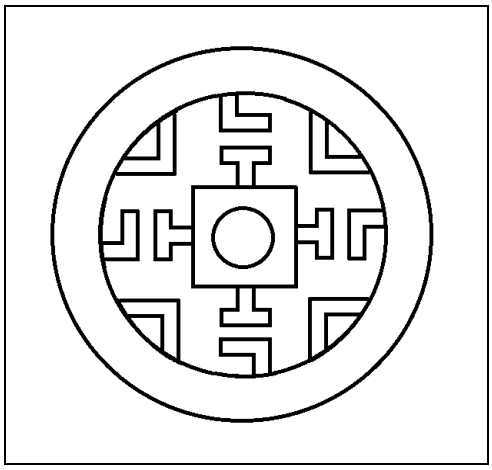

Figure 128. Han TLV or cosmic mirror.

What is generally agreed is that the TLV design represents the Han conception of the organization of the cosmos: "As an object of ritual [the mirror] was required to represent a complete symbol of the universe in microcosm, including the sky. And significantly, the circular outer rim of most of these mirrors has a continuous pattern of conventionalized clouds" (ibid: 161). The circular shape of the mirror symbolized Heaven while the square in the center was the Earth; the central boss may have been equated with a sacred mountain at the center of the world (Bulling 1955). On a more mundane level, the square represented China, the civilized "Central Kingdom," with the Imperial Palace as the central boss, and surrounded by four metaphorical "seas" inhabited by barbarians and wild animals (Cammann 1948: 161, 163). It has been proposed that the Ts, Ls, and Vs represent "time-space nexus signs" such as the four cardinal directions and/or the four seasons (Bulling 1955: 41), or that the Vs demarcate the non-existent, beyond the four "seas," while the Ts are gates at the cardinal points, and the Ls borders that set off swamps at the ends of the earth (Cammann 1948: 161, 164).

Other figures common on TLV mirrors include four animals symbolic of the four directions: the white tiger (west), green/blue dragon (east), red bird (south), and the "dark warrior," a combination turtle/snake (north); quails, symbolic of spiritual transformation; various immortals such as the Queen Mother of the West and King Father of the East; various realistic wild animals such as bears and mountain goats; and sometimes, the sun and moon (ibid: 165). What therefore seems clear about this complicated symbolism is that the TLV design represents a microcosm of the universe, a

"cosmograph" (Major 1994: 125), perhaps not only spatial aspects thereof but also temporal ones, and references powers of spiritual significance like gods/goddesses.

As Joy (2010) has argued for British mirrors, the decoration of Chinese mirrors must be understood as integral to their "mirrorness." Even if the decoration encoded "text" about the shape of the cosmos, that meaning of that text is not independent of mirrorness, but must in some way be constituted by it. When the mirror is thought of as an integrated whole, rather than two separate sides, the reflection of the viewer's face would be placed in the center of the mirror, and thus, in the center of the (representation of) the cosmos (cf. Schulten 2005: 77). According to Cammann (1948):

> …by the tenets of Han philosophy…when an army (or an individual) was situated at the center of the Earth, on the Universal axis between the Earth and the apex of the sky in the Northern heavens, that position provided metaphysical strength….a person who occupied the center of his own universe, possessing complete adjustment to it…, would automatically possess the natural strength and self-confidence that came with that harmony (ibid: 166).

Thus, the TLV mirror would allow the viewer to see him- or herself in an idealized position, even though the reflected face and the representation of the cosmos could not both be viewed at the same time. The viewer can thus enter into a sort of mandala, a focus for meditation. Indeed, the cosmographic TLV design may have been inspired to some extent by the shape of the mirror, since the customary shape for mirrors in East Asia was circular even before the advent of the TLV design (Brashier 1995: 213). Since by the Han period writing was pervasive among Chinese elites, a viewer might also have been aware of the use of the mirror as a symbol for one's *xin*, roughly translated as "heart" or "mind" (discussed in Chapter 7). One of the uses of mirrors during the Han period was as grave goods (Brashier 1995), where the TLV's references to the numinous and the immortal may have been deemed especially a propos, although mirrors with other types of decoration were also placed in burials.

Inscriptions. During the Iron Age, mirrors with written inscriptions were produced only in East Asia. However, elsewhere, inscribed words or pictures were sometimes added to a mirror later by one of its users. The text of the Chinese inscriptions is usually poetic and symbolic, and certain themes recur again and again: among these

are references to the mirror's brightness, compared to the sun and moon; and to the virtue of the mirror and, by extension, its user. This moral virtue is construed in terms of the mirror's reflection of things as they are, without bias or distortion; it is, in other words, "honest." Other mirrors, given as wedding presents, especially after the Tang period (AD 618-907) feature wishes for a couple's longevity and fecundity (Cammann 1955: 51).

ARCHAEOLOGICAL CONTEXTS

The distinction between ritual activity and the rest of human life, so often employed by archaeologists, is an artificial one (Mauss 2001 [1902]; Brück 1999; Warnier 2009). Nevertheless it is noteworthy that archaeological mirrors, even broken ones, are seldom found in domestic contexts such as midden heaps or housefloors, and instead the vast majority come from graves and, to a less extent, votive deposits. To be sure, the bias toward graves is to some extent a matter of favorable conditions for preservation. But preservation bias is unlikely to entirely explain away the vast majority of mirrors' link with sites of obvious ritual/religious importance.

Most of the mirrors in this analysis (see Chapter 3) come from burials; however, a significant minority come from depositions in earth or water, and textual references to votive deposition (and recycling) of mirrors in Asia abound. The two types of context will be considered independently, but first the concept of "ritual contexts" must be briefly outlined.

What is a ritual context, and how can archaeologists recognize one long after the ritual activity has ceased?

Burials

That mirrors were deemed appropriate items for burial in graves was a pan-Eurasian phenomenon in the Iron Age. In addition, oral literature, ethnographies, and texts indicate that across Eurasia, mirrors were thought to be endowed with magical properties (see Chapter 7). How to understand the actions and functions of grave goods,

and how burials relate to the larger cultural contexts of which they are a feature, are matters of much debate in archaeology; and burials will always be an interpretive focus in archaeology because they tend to preserve artifacts better than other contexts. The relationship between grave goods and the personal identity of the deceased is particularly interesting, given the intimate connection between mirrors and self-identity, mediated through the reflection. In the actual use of mirrors, the association between them and the self arguably transcends the mirror's links to other aspects of social identity such as gender, age, and so forth, although of course the individual self can never entirely be disentangled from social identities.

It is still common for archaeologists to assume that weapons indicate a warrior, cosmetics a woman, and so on. Traditionally, American and western European archaeological literature has treated mirrors from burials as utilitarian grooming tools, indicators of the deceased's high socioeconomic status (because most Eurasian mirrors were made of bronze, for which the raw materials, copper and tin, were not cheaply obtained) (e.g., Déchelette 1913; Fox 1958; Finlay 1973; Cunliffe 2004; among many others). In other words, and particularly during the boom of processualist theory, grave goods—including mirrors—were interpreted semiotically as indices of the deceased's social status (e.g., Binford 1971). Moreover, mirrors were regarded as quintessentially feminine accoutrements, even to the point of definitively demonstrating the sex of the deceased when found in a burial; Déchelette (1913) describes the mirror from La Motte St. Valentin as "very delicate, as befits an object destined for feminine hands." The association of women with a major investment in personal grooming, to the point of vanity, is well-established in western European tradition (La Belle 1988; Melchior-Bonnet 2001; Pendergrast 2003; Miller 1998).

In Inner Eurasia, eastern Europe, and parts of East Asia, burials often contain both mirrors and weapons, confounding a simplistic equation of mirrors with femininity and weapons with masculinity. Ancient Greek texts refer to women warriors living east of the Black Sea (Herodotus 2009 [5th century BC]), while 19th-, 20th-, and 21st century ethnographies refer to the use of mirrors by Inner Eurasian shamans of both sexes; so in these regions, it has been accepted that neither mirrors nor weapons are singly-gendered.

Indeed, both the Greek histories and the ethnographies suggest that some of the cultures resident in central Eurasia recognized more than two genders (Davis-Kimball 2000), further complicating mortuary analyses. In central Eurasia a burial with a mirror is likely to be attributed to a shaman or "priest," of either (or possibly a third) gender, rather than simply a wealthy person (Davis-Kimball 1998; cf. Hanks 2007: 25). Furthermore, the mirrors are assumed to have been used in ways similar to those recorded in recent ethnographies, that is, for shamanistic practices such as divination and curing.

It is usually only when the object and the individual seem extremely mismatched—say, full-sized weapons in the burial of a small child—that their correspondence is questioned. Yet there is ample evidence showing how problematic it is to assume a direct correlation between the function of a given object (assuming we even know what that function truly was) and the identity of the buried individual. For one thing, as McHugh (1999: 14) notes, there is no reason to suppose that the function of an object during life is the same when it is buried; although by the same token, neither can it be assumed *a priori* that an object ceases to act when buried. In short, not only is it difficult to reconstruct the ways in which a society may have expressed personhood generally and individual identities specifically, but we must acknowledge that we do not necessarily know the uses to which objects were put, much less their possible symbolic connotations. To some extent inaccuracy is unavoidable, but awareness of the potential pitfalls of mortuary analysis can permit more sophisticated considerations.

Underlying all these interpretations of mirrors, West and East, have been the notions that grave goods were: (1) the personal possessions of the deceased; (2) representative of the social identity of the deceased; (3) at the end of their use-life when buried. However, greater communication among archaeologists has led to increasingly sophisticated perspectives: for example, as archaeological discoveries from Mesoamerica, Russia, and the former Soviet republics of Inner Eurasia have become more widely known to Anglophone anthropologists, some British archaeologists have begun to adopt the idea that mirrors may reference magico-religious status instead of, or in addition to, economic status; and the putative link between mirrors and exclusively feminine gender has been called into question (Fitzpatrick 1996; Wells 1998; Hill 2002-3; Rubinson 2007;

Joy 2010). This of course still leaves the problem of how exactly grave goods are related to the identity of the deceased, and what they were supposed to *do* once buried.

In recent years there has been an increasing focus on the role (or perceived role) of the ancestors in structuring the lives of the living (Rakita and Buikstra 2005: 8-9) and on the construction of social memory (e.g., Williams 2003, 2007). The present analysis focuses primarily on the rule of mirrors in the construction of individual identities and notions of self, while questioning the essentialism and naturalization of such categories.

Votive deposits

In addition to burials, mirrors have been found in earth and water deposits. In temperate Europe, the preferred environment for votive deposition was water; in East Asia, both earth and water deposits are known. There are also written references to the recycling of mirrors to create sanctified objects for religious use in temples, especially in Japan (e.g., Hearn 1971[1903]: 53-54; Kidder 1987: 66, note 12), which could be regarded as a form of votive deposit or sacrifice. Unfortunately, there is no general synthesis of votive activity in Temperate Eurasia, so comparisons are difficult (however, see Kuwabara [2000] for a comparison of Japan and Bronze Age Europe).

With regard to mirrors in Iron Age Europe, deposition of mirrors in watery places (principally bogs) seems to have been most common in Scotland and Ireland. There are no clear-cut cases of dry deposits, although Holcombe and Bulbury are candidates—these mirrors may have been buried in pits near settlements. In Kofun Japan, "earth-pacifying deposits" (*jichingu* 地鎮具) were buried around Buddhist temples and tombs at the time of groundbreaking in order to appease spirits that might otherwise cause natural disasters (Kidder 1987: 64). According to a 13th century description, one of the votive deposits at the Horyūji temple (Nara, Japan) contained 30,000 gilt bronze mirrors (ibid: 66, note 12). The earth-pacifying deposits in Japan contain some of the same objects as wealthy burials. However, deposits in Korea (*jijingu,* equivalent to Japanese *jichingu*) from the same period most often consist of large ceramic vessels, thought to have contained grain (B.W. Kang, pers. comm.). Nonetheless, mirrors were among the artifacts excavated at the 6th century AD Hwangnyongsa temple in Gyeongju, Korea (Nelson 1993: 259). Mirrors

were also found deposited at a Zoroastrian temple at Koi Krylgan Kala (Uzbekistan), dated to the 4th century BC (Ravich 1991: 24), suggesting that votive deposition of mirrors also took place in Inner Eurasia, at least in some religious contexts.

REPRESENTATIONS OF MIRROR USE

Ancient representations of mirrors have been found both in archaeological (monuments) and historical (texts) contexts. Although it is sometimes difficult to tell exactly what the mirrors were being used for, these images can help shed light on mirrors' roles in social life at the time the representations were made.

Hales (2010) examined representations of women with mirrors on Roman-era funerary monuments in Noricum (modern-day Austria). The province of Noricum was conquered and annexed in 16/15 BC (Hales 2010: 227-228). The grave markers analyzed by Hales date from the mid-first to mid-second centuries AD (ibid: 229). There are at least 24 stelae depicting women with mirrors, seven of which also have inscriptions (ibid: 230-231). Although the practice of erecting funerary stelae came from the Mediterranean area with the Romans, the women depicted on the monuments are dressed in a non-Roman, local style, and often have "Celtic" given names (ibid: 229, 233); this indicates that the stelae were integrated into local Iron Age society with certain modifications. Stelae from the neighboring region of Pannonia depict women with different dress and accoutrements, which further demonstrates that specifically Norican identities were represented on the monuments under examination (ibid: 231-232):

> These grave altars demonstrate how provincial practices were caught up in local networks that refused to follow the borders of empire or provinces. These practices were as much about expressing difference from other 'Roman' groups as apparent 'integration' with Romanness (a Romanness that itself was learned from other neighbours, themselves 'Romanized/hybridized') (ibid: 234).

The mirrors depicted all belong to two types, both common in the Roman world, viz. a disk with lateral handle, or a *Klappspiegel*, which folds like a compact (ibid: 231). The representations are decidedly gendered, since men are not depicted with mirrors.

The Norican women shown on the grave monuments thus became "embroiled in an integrated myth of womanhood that spans the geographical and chronological range of antiquity" (ibid: 236). According to Hales, many if not all of these representations were erected during the life of the individuals represented, so we may assume that those individuals had some say in the way they were depicted. The mirror must thus be seen as a conscious and individual choice for the representation of personal identity in perpetuity. At the same time, it is possible that, through the medium of grave stelae, or alternatively through access to Roman material culture, mirrors became accessible to people who would not otherwise have possessed them.

A number of Pictish (5th-9th centuries AD), standing stones in Scotland depict mirrors, often in association with combs (Cessford 1997: 99). These images of mirrors feature a variety of handle shapes, some of which evoke those of Iron Age mirrors (ibid: 105-106), yet there are no archaeological examples of such mirrors from the 5th-9th centuries. The mirror appears alongside symbol pairs that are thought to represent personal names, but traditionally it has been regarded as an indicator of femininity (ibid: 99, 110-111). Cessford instead argues that the mirror was a status symbol meant to be applied to individuals (rather than to qualify other symbols) and that it may even have indicated royalty (ibid: 99). Cessford's hypothesis is based on the fact that images of mirrors with combs appear alongside images of enthroned people or individuals wearing large brooches (i.e., presumably very wealthy people) (ibid: 104). In addition, there appear to be representations of women without accompanying mirrors; and indeed, since they are obviously female, there is no need for a further symbolic modifier expressing their femaleness (ibid: 111). Unlike other representations, mirrors only appear on standing stones and not on other artifacts, leading Cessford to conclude that they were appropriate only to mortuary contexts (ibid: 105). It is difficult to assess the original context of standing stones, as they were often reused, but certainly they were not portable items that could be carried about one's person. Therefore it does seem likely that their symbols were attached either to a place in the landscape, or to an individual fixed there (e.g., through burial).

During the Kofun period in Japan (*ca*. AD 300-700), monumental tombs were surrounded by ceramic figurines (*haniwa* 埴輪) representing everything from livestock to ships and houses to humans in various costumes and attitudes. These statues have proven invaluable for reconstructing architecture and dress from pre- and proto-historic Japan. A few haniwa (identified as shamanesses) hold or wear mirrors (Nelson 2008: 214-215). These shamanesses wear large earrings and necklaces and sometimes swords, and often traces of red face paint are preserved (ibid).

The examples discussed here vary widely in their contexts and contents, but one thing that is obvious from their mere existence is that mirrors were significant enough, either as objects or as symbols, to warrant representation. The representations provide details not evident in the archaeological record, and in the case of the Pictish standing stones, they suggest that the mirror symbol was still relevant even when the mirrors themselves were far from abundant.

TEXTS

Broadly speaking, pre-modern texts that discuss mirrors can be divided into two groups: historical chronicles and philosophical treatises. Mythological texts are included with histories here, since the events they describe purportedly took place in the past, and these texts usually are not metaphysical or moralistic in tone. Philosophical texts employ mirrors primarily as metaphors in the exegesis of important abstract concepts. There are also texts on the mirrors themselves: ancient mirrors produced in what is today China were often inscribed with poetic phrases which can shed light on the ways mirrors were perceived when they were made and used. More recently (medieval and later), some literary (fictional) texts feature mirrors, and thus reveal popular, usually implicit, ideas about mirrors which were in circulation at the time of writing. Finally, 19th and 20th century ethnographic texts describe ways mirrors were used in specific cultural contexts.

Most textual evidence about mirrors in Iron Age Asia comes from China, where writing was in use from at least the Shang period. Chinese historical accounts reference

mirrors mostly briefly and peripherally (e.g., as political gifts), but they play an important role in philosophical and religious tracts. In modern times, mirrors and mirror symbolism are prevalent in northeast Asian Buddhism, Daoism, Shintō, and shamanism, which is perhaps not surprising given that mirrors in northern and eastern Asia date back to at least the second millennium BC.

Chinese writing was probably introduced to the Korean peninsula by at least the second century BC; prior to this writing was not used. The earliest extant Korean texts, however, are medieval—the *Samguk sagi* (*Chronicle of the Three Kingdoms*[32]), completed in AD 1145, and *Samguk yusa* (*Memorabilia of the Three Kingdoms*) composed in the late 13th century (Lee 2004: 43-44). Chinese was also the first writing used in Japan,[33] having been brought by scholars from the Korean kingdom of Baekje sometime before the 5th century AD (ibid). The oldest extant texts date to the early 8th century. While Korean and Japanese are related languages, neither belongs to the same language group as Chinese; the Chinese writing system is thus not capable of representing the grammar of either Korean or Japanese, and both countries later invented indigenous writing systems.

Historical and protohistorical texts

Chinese texts. China[34] is the only region included in this analysis that can be considered "historical" by the Iron Age, insofar as writing was well-established at this time. Although China was instrumental in the transmission of mirror technology and iconography to both east and west, mirrors as objects do not receive much attention in

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[32] This work is not to be confused with the Chinese *Chronicle of the Three Kingdoms*.

[33] *Japan* is used here to denote the territory encompassed by the modern Japanese state, but should not be mistaken for political equivalence. During the Iron Age, the Proto-Japanese state included the islands Kyūshū and Shikoku and the southern half of the island of Honshū (see map). It is not contiguous with the borders of the modern Japanese nation. In Japanese, it is standard practice to refer to Proto-Japan by the names found in Chinese historical chronicles: Yamatai/Yamato or Wa. Most Japanese believe this early state to have been ancestral to modern Japan and its inhabitants to the modern Japanese ethnos. The earliest extant Japanese texts use many names for the region, such as *Mizuho no kuni* 瑞穂の国, "Land of Abundant Rice," or *Ashihara no Nakatsukuni* 葦原中国, "Central Land of Reed-Plains."

[34] *China* refers to the states using Chinese language and writing, which existed within the boundaries of what is today China. None of the kingdoms of the Iron Age used the name *China*, while there were other, competing polities which also spoke and wrote Chinese language.

ancient texts. Instead, they appear primarily as metaphors for explaining abstract metaphysical concepts, but in this context, mirror references are ubiquitous (see below). Examination of the application of mirror metaphors may reveal something of the ways in which the Chinese related to mirrors as objects.

While the peoples of the Korean peninsula and Japanese archipelago did not adopt writing until much later, Chinese chronicles often contain descriptions of these "eastern barbarians;" these accounts provide social information that can help archaeologists interpret the cultural context in which mirrors were used.

Because the Chinese regarded the inhabitants of the Japanese archipelago as "barbarians," their descriptions are rife with pejorative language ("dwarves," "dogs," "slaves"). The earliest records simply refer to a region of mountainous islands east of the Korean peninsula called *Wa* 倭[35], a term that may mean "dwarves" or "submissive," or which may be derived from a Japanese pronoun meaning "we, us" (Tsunoda 1951: 4, note 2). In some cases, mention is made of the Wa people paying tribute to whichever state was currently supreme in eastern continental Asia, which indicates contact between these cultures, perhaps much earlier than archaeological evidence has so far indicated; for example, the *Lun Heng* (*Discourses Weighed in the Balance*), ca. AD 70-80, claims the Wa were already paying tribute by the Zhou period (1122-256 BC) (Forke 1907).

The *Weizhi* (*Wei Chronicle*) chapter of the *Sanguozhi* (*Chronicle of the Three Kingdoms*, AD 297) directly refers to a political exchange of mirrors. It records that there were more than one hundred kingdoms in Proto-Japan, thirty of which independently maintained relations with the Wei state. Among the Proto-Japanese kingdoms was Yamato or Yamatai 邪馬台[36], ruled by a queen named Himiko 卑弥呼[37]. In AD 238, Himiko sent an envoy to the Wei capital, to which the emperor responded:

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[35] This word was probably pronounced *Wo* in Chinese, but in Japanese it is pronounced *Wa*, and has entered the Anglophone archaeological literature in the latter form.

[36] Linguists are agreed that *Yamatai* is equivalent to modern Japanese *Yamato* (e.g., Kidder 2007). Yamato is the name of a region in Japan which is ostensibly the center of the original Yamatai/Yamato kingdom.

[37] Probably *Pimiko* in Chinese, but Himiko in the Japanese and Anglophone literature. Some scholars believe that the name Himiko was a title, derived from the words *hi* 日 ("sun") + *miko* 巫女 ("shamaness") (Kidder 2007).

> "Herein we address Pimiko, Queen of Wa, whom we now officially call a friend of Wei. [… Your envoys] have arrived here with your tribute, consisting of four male slaves and six female slaves, together with two pieces of cloth with designs, each twenty feet in length. You live very far away across the sea; yet you have sent an embassy with tribute. Your loyalty and filial piety we appreciate exceedingly. We confer upon you, therefore, the title 'Queen of Wa Friendly to Wei', together with the decoration of the gold seal with purple ribbon. … As a special gift, we bestow upon you three pieces of blue brocade with interwoven characters, five pieces of tapestry with delicate floral designs, fifty lengths of white silk, eight taels of gold, two swords five feet long, *one hundred bronze mirrors*, and fifty catties each of jade and of red beads" (Tsunoda 1951:14-15, emphasis added).

Mirrors older than the Wei period have been unearthed in Japan, so by the time of Himiko's envoy, some Proto-Japanese would have been familiar with these objects; their prominence among the gifts bestowed by the Wei ruler suggests that the inhabitants of Yamatai were very enthusiastic about obtaining them.

The *Sanguozhi* goes on to describe the political organization of Yamatai, some aspects of which may be supported by archaeological evidence and the later Japanese texts, such as rulership by a (frequently female) shaman or ritual practitioner and at least occasional co-rulership by a man and woman:

> [Himiko] occupied herself with magic and sorcery, bewitching the people. Though mature in age, she remained unmarried. She had a younger brother who assisted her in ruling the country. After she became the ruler, there were few who saw her. She had one thousand women as attendants, but only one man. He served her food and drink and acted as a medium of communication. She resided in a palace surrounded by towers and stockades, with armed guards in a state of constant vigilance (Tsunoda 1951:13).

> When Himiko passed away,….a king was placed on the throne, but the people would not obey him. Assassination and murder followed; more than one thousand were thus slain. A relative of Himiko named Iyo, a girl of thirteen, was [then] made queen and order was restored (ibid:16).

Although there are some discrepancies between the text of the *Sanguozhi* and the archaeological record, the location of Yamatai and the burial mound of Himiko (described in detail in the *Sanguozhi*) have proven to be a subject of perennial discussion among Japanese archaeologists, and the 100 mirrors are regarded as key in solving the mystery. It is not impossible that the *Sanguozhi* text will be borne out, because the *Houhanshu* (*Book of the Later Han*, AD 432) records that in AD 57 the Chinese emperor gave a golden seal to the king of Na 奴 ("slaves") in Wa; this seal was discovered on a small island in Fukuoka Bay in 1784 (Oksbjerg 2007: 31). It is inscribed with the

characters 漢委奴國王 *Han Wa Na guo wang*, that is, "Han Ruler of the Na Kingdom of Wa." Na is believed to have been the area around modern Fukuoka on the island of Kyūshū (Oksbjerg 2007: 31), and was possibly one of the thirty-odd kingdoms that had been independently interacting with the Wei according to the *Sanguozhi*. The bestowal of the seal conferred membership in the Han polity and vassal status for the Na king, hence his designation as a "Han ruler." Since many hundreds of Chinese mirrors have been found in Japan, it is clear that Himiko was not the only ruler paying tribute to Chinese states in return for mirrors.

The *Songshu* (*Book of Song*, AD 488) records the history of the Liu Song dynasty (AD 420-479), and claims that in 451, the Song emperor designated the king of Wa "General Who Maintains Peace in the East Commanding with Battle-Ax All Military Affairs in the Six Countries of Wa, Silla, Imna, Kala, Chin-han and Moku-han," giving him nominal authority not only over Proto-Japan but also the Korean kingdoms Silla, Imna, Gara (= Gaya), Jinhan, and Mokuhan (= Mahan) (Tsunoda 1951: 22-23). Although there is no evidence that the Proto-Japanese ruled any part of Korea at this time, the passage does show that rulers in Wa looked to China for legitimization of their rule (or at any rate, that is how the Han and Song empires saw it) and had extensive relations with the Asian continent.

The *Suishu* (*Book of Sui*, AD 636) states that "King Tarishihoko" (thought to be a mistake for Empress[38] Suiko 推古, putative r. AD 592-628) sent a message to the Sui court in AD 607 which opened with the lines, "The Child of Heaven in the land where the sun rises addresses a letter to the Child of Heaven in the land where the sun sets. We hope you are in good health." This suggests that the Japanese sovereign had come to perceive herself as the equal of the Chinese emperor, and had borrowed the moniker "Child of Heaven" (Chinese *tianzi* 天子[39]), a move which the Sui emperor declared intolerably discourteous (Tsunoda 1951: 32). Furthermore, in the letter, the Japanese sovereign describes Japan as "the place where the sun rises," which is both a reference to

[38] By the 7th century AD, Yamato had conquered the other kingdoms of Proto-Japan and ruled as an empire.

[39] This title is usually translated "Son of Heaven," but the character 子 is gender-neutral, and unlike the more patriarchal Chinese monarchy, Proto-Japan was ruled by empresses as well as emperors.

its being east of Sui, as well as its putative solar origins, which are discussed at length in the 8th century Proto-Japanese myth-histories (see below). In fact, according to both the *Suishu* and Japanese texts, the Yamato embassy objected to the pejorative Wa 倭 ("dwarves") and insisted on writing it with the more laudatory character 和 ("harmony"); they also requested that the Chinese acknowledge their preferred name, *Nippon* or *Nihon* 日本, meaning "sun source" (Aston 1972[1924] vol. 2: 137-138). However, it would seem the name change was slow to catch on—although probably used in Japan from at least the latter half of the 7th century AD, the earliest Chinese text to call Japan *Riben* (日本) was the *Tangshu* (*Book of Tang*), written AD 945 (Tsunoda 1951: 43, note 2). The *Suishu* lends important politico-historical corroboration to the Proto-Japanese myth-histories, which attribute the foundation of the Proto-Japanese state to the sun goddess Amaterasu 天照, from whom the imperial family claims descent.

Japanese texts. From around the 3rd century to the 8th century AD, Japan can be considered "protohistoric" in that the Chinese wrote about Japanese archipelago and its inhabitants, but not in great detail. During this period, the Proto-Japanese left no records about themselves, and the oldest extant texts are exclusively dedicated to origin myths and elites and their doings.

The earliest extant texts are the *Kojiki* 古事記 (*Record of Ancient Matters*, AD 712) and the *Nihon shoki* 日本書紀 (*Chronicle of Japan*, AD 720). The *Nihon shoki* was written in classical Chinese, and the *Kojiki* primarily in Chinese but with the inclusion of indigenous names and songs written in Old Japanese phonetically, which is to say, homophonically, transcribed using Chinese characters. Both texts claim to have been based in part upon earlier documents, dating as early as the 6th century, none of which are extant; some of these texts reportedly came from, or were written by scholars from, the Korean kingdom of Baekje (Philippi 1968: 26). Other contemporary sources are the *Fudoki* 風土記 (*Records of Wind and Earth*), "gazetteers" of cultural and geographical information for each of at least 48 provinces, compiled between AD 713-733; only five of the ancient *fudoki* remain (Aoki 1997: ix-xi).

The texts imply numerous clans competing for ideological and political control. It is said that history is written by the winners; although we do not know the losers' stories, the *Kojiki* and *Nihon shoki* at least suggest that there were other contemporary versions of events (Allen 2003; Ellwood 1990; Grayson 2002). At the time the texts were completed the work of ideological unification was far from complete. Although the Yamato eventually emerged as emperors, during the 6th-7th centuries AD, they were rivaled by clans who claimed descent from gods, clans claiming descent from the first (quasi-mythical) emperor Jinmu, and aristocratic clans descended from continental emigrants (Matsunaga and Matsunaga 1974: 9-10). The *Kojiki, Nihon shoki*, and *Fudoki* thus provide a wealth of detail about the ideological and political context of the late Iron Age in Proto-Japan, and unlike the Chinese texts, they mention mirrors frequently.

The *Kojiki* consists of mythical-historical accounts of the creation of the Japanese islands and the various deities presiding over them and the peoples therein. But it is also a work of political history and propaganda, an attempt to assert the Yamato clan's imperial hegemony while still appeasing the most powerful of the vassal clans (Grayson 2002: 467; Philippi 1968: 3). The *Kojiki* was compiled during the reign of the Emperor[40] Tenmu 天武 (r. AD 673-686) (whose mind it describes as "bright as a mirror" [Philippi 1968: 41]), but although his version is the earliest extant, he was not the first ruler to attempt such a work (ibid: 5; also note 3, pp. 5-6). Many of the earlier written sources upon which the *Kojiki* was based were destroyed by fire during a coup d'etat and subsequent political reforms in AD 645-646 (ibid: 5).

In brief, the *Kojiki* relates that the sun goddess Amaterasu Ōmikami 天照大御神 ("Heaven-shining Great August Deity"), upset by the destructive tantrums of her younger brother Susa no O no Mikoto 須佐之男命, sealed herself in a cave, depriving the world

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[40] The modern Japanese word translated as "emperor" in English is *tennō* 天皇, literally "heavenly sovereign." The term is only used to designate the Japanese sovereign (not other emperors, e.g., Roman or Chinese) and emphasizes his divine origins as the descendant of the sun goddess. In the ancient texts, the ruler (whether male or female) is usually called *sumera mikoto* 皇命 or 皇尊, "sovereign lord/lady." Therefore, the use of the term emperor should not be taken to indicate the existence of a supranational, or even necessarily a multiethnic, political body according to modern standards. Such a dominion would not appear until much later in Japanese history. Rather, it represents the way in which the early Japanese texts represent the ruler, and remains customary in Japanese and Anglophone literature.

of light. In desperation, the other gods made offerings, including the first mirror, called the *yata no kagami* 八手の鏡 ("eight hands mirror")[41], and performed dances to tempt her out. When Amaterasu pushed aside the stone sealing the cave entrance, she caught sight of her reflection in the mirror. According to one version, it was fascination with her own reflection that induced her to emerge (Chamberlain 1981 [1882]), but all versions agree that seeing her reflection distracted Amaterasu long enough that the other gods and goddesses were able to pull her out of the cave. Although various items were presented as offerings, the mirror is the only one that continues to make appearances in subsequent stories.

Mirrors are repeatedly associated with liminality, light, and the eyes throughout the *Kojiki*. The celestial luminaries, the sun—Amaterasu—and the moon god—Tsukiyomi 月読 no Mikoto—were born when the creator god washed his left and right eyes, respectively; this cleansing was necessitated by a visit to the world of the dead, which had left the creator polluted (Philippi 1968: 70). Amaterasu's birth thus took place during a liminal time between impurity and purity. She first saw her reflection in the *yata no kagami* mirror when she was half in and half out of a cave, when the world was in a state which was in a half-light status, neither day nor night. Amaterasu retreated to the cave after Susa no O performed various ritually polluting actions, such as defiling her chambers with a dead horse and fecal material, so the mirror was created during a tension between social order and disorder, purity and impurity.

When Amaterasu sent her grandson Ninigi 瓊瓊杵 no Mikoto to rule the "Fertile Reed Plain Land of Lovely Rice Ears," a scout returned to him reporting an encounter with a god named Sarutahiko 猿田毘 ("Prince Monkey Rice-paddy") at "the eight cross-road of Heaven." Sarutahiko's "eyeballs glow like an eight-handed mirror" (Ohnuki-Tierney 1987: 42)[42]. Crossroads are well known as liminal places in cultures around the world (Johnston 1991), and as Ohnuki-Tierney (1987) has demonstrated, monkeys are powerfully associated with liminality in modern Japan. Finally, just as Amaterasu and

[41] This mirror, a sword, and curved jewel form the Japanese imperial regalia. However, now that the emperor's role has been secularized, their importance is increasingly symbolic.

[42] The number eight is traditionally used in Japanese as a generic number meaning "many."

her brother the moon were born from the eyes of the creator deity, once again, the eyes of Sarutahiko are metaphorically associated with mirrors and light.

The Yamato family trace their origins to Amaterasu, via her grandson Ninigi. The *Kojiki* asserts Ninigi's right to rule the Fertile Reed Plain, and therefore that of his descendants. However, the extensive portions of text devoted to the mythology of the Izumo region suggests that Izumo rulers were significant competitors and/or relatives of the Yamato. The recording of Amaterasu-cult mythology no doubt owes much to this competition, as does the *Kojiki*'s defamation of Susa no O's character, as he by contrast appears as a heroic tutelary deity in the *Fudoki* (Grayson 2002). Emperor Tenmu's project was to "compile a correct genealogy, acceptable to the imperial family.…The state's needs in terms of internal politics and social order are evident throughout the *Kojiki*" (ibid: 16)—as a consequence, political exigencies of the 8th century, such as the Yamato hegemony, were retrojected centuries into the past.

On a more mundane level, the *Kojiki* records the exchange of mirrors as political gifts. For example, during the reign of Emperor Ōjin (putative r. AD 270-310), "King Shō-ko, the Chieftain of the land of Kudara [Baekje], sent as tribute by Achi-kishi one stallion and one mare…Again he sent as tribute a cross-sword, and likewise a large mirror" (Chamberlain 1981 [1882]: 252). This event is corroborated in the *Nihon shoki*, which dates it AD 285 (in which case King Shō-ko would be the one known as Goi in Korean). But whatever the political uses of mirrors brought to Japan through such exchange, they could also be imbued with sacred qualities: According to one legend, a prince from the Korean kingdom of Silla, Ama no Hihoko 天の日戟 ("the sun-spear of heaven"), brought eight (or many?) treasures from the Korean peninsula, including the "mirror of the offing" and the "mirror of the shore," and the writers of the *Kojiki* refer to these treasures as the "deities of Izushi" (Philippi 1968: 293). The *Nihon shoki* states that Ama no Hihoko brought several "divine treasures" as tribute to the Yamato emperor, among them a "sun-mirror," in AD 27. Here and in the name Sun-spear we see again the theme of the sun connected with a mirror. The place where Ama no Hihoko settled in Japan was called *Kagami no hazama* 鏡の狭間 ("mirror valley") (Aston 1972[1924] vol. 1: 169-170). In AD 252 the king of Baekje sent the Yamato empress a seven-branched

sword and a mirror, which are still preserved at Suda Hachiman 隅田八幡 shrine in Wagayama (ibid: 251; Hong 1994: 254)[43]. In *ca*. AD 82, the Kumaso, a people living in southern Kyūshū, rebelled against the emperor. When their leader, Kamunashihime, finally surrendered to the Yamato, she approached the imperial messengers with tree branches hung with "an eight-span sword…, an eight-hand mirror, and…a jewel [*magatama?*]" (ibid: 193). Similarly, around AD 199, the ruler of the region of Ito offered the Yamato emperor sacred *sakaki* 榊 (*Cleyera japonica*) trees hung with "jewels…white-copper mirrors, and…ten-span swords[44]," saying,

> "As to these things which thy servant dares to offer, mayst thou govern the universe with subtlety tortuous as the curvings of the Yasaka jewels [i.e., *magatama*]; may thy glance survey mountain, stream and sea-plain bright as the mirror of white copper; mayst thou, wielding this ten-span sword, maintain peace in the Empire" (ibid: 221).

The sword-mirror-jewel combination must have been symbolically very potent, since the same objects make up the imperial regalia.

The *Nihon shoki* does not contain as many correspondences between mirrors and liminality, or mirrors and eyes, but it states numerous times that the *yata no kagami* mirror embodies the goddess Amaterasu. Planning to send her son Ame no Oshihomimi no Mikoto from the "Plain of High Heaven" to the "Central Land of Reed-Plains," Amaterasu gave her mirror to him with the instructions, "My child, when thou lookest upon this mirror, let it be as if thou wert looking on me. Let it be with thee on thy couch and in thy hall, and let it be to thee a holy mirror" (ibid vol. 1: 83). This is how the mirror came to earth and how it entered into the possession of the Yamato clan. However, in spite of this divine command, not all the emperors were comfortable in the intimate presence of the goddess: Sūjin 崇神 (putative r. 97-30 BC) became so anxious about it that he had the mirror removed from court. The *Kojiki* (Philippi 1968: 199) and *Nihon shoki* (Aston 1972[1924] vol. 1: 151-152) both record his removal of Amaterasu/the

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[43] Hong (1994: 253) argues that the sword and mirror were presented by King Muryeong to Emperor Ōjin 応神 sometime around AD 503. It is certainly possible (many scholars believe incontrovertible) that the dates in the *Nihon shoki* are spurious, and indeed it is Ōjin's spirit that is enshrined, as the war god Hachiman 八幡, at Suda Hachiman shrine.

[44] When Amaterasu was lured from the cave, the gifts presented by the other gods were similarly hung on a tree. Sakaki branches are frequently used in modern Shintō ritual.

mirror from court[45]. One cannot but wonder at the political ramifications of such a gesture.

Amaterasu's mirror is not the only one described as "divine." Clearly, other mirrors were held sacred and were believed to have supernatural powers. The *Nihon shoki* records that two unnamed gods were created by Izanagi, the creator god, using "white-copper" mirrors (ibid: 20). In AD 459, during the reign of Emperor Yūryaku 雄略, a Princess Takuhata 栲幡 was falsely accused of conducting an illicit affair with a court official. Upon learning of the accusation, Takuhata took a "divine mirror" to Ise (the site of Amaterasu's principal shrine), buried it, and hanged herself. The Emperor, discovering her absence in the middle of the night, sent out search parties. They came to Ise, where they saw a rainbow projecting out of the earth; "When they dug the place from which the rainbow sprang they found the divine mirror," and near there, Takuhata's body (ibid: 341).

However, from the 6th century AD, one import from the Korean peninsula would significantly alter the social context in which mirrors were used. The *Nihon shoki* records the introduction of Buddhism from the Baekje kingdom in AD 552 (ibid vol. 2: 65-67). Seong, the king of Baekje, menaced by the allied Silla and Goguryeo kingdoms, hoped to cement his own alliance with the Yamato Emperor Kinmei 欽明 (r. 531-571); to that end he sent gifts and hostages as well as an image of the Buddha and sutras (texts of the Buddha's teachings). However,

> As the leader of what had now become a loosely federated native cult [of Amaterasu]…the Emperor had to be extremely careful in accepting a new religion. The

[45] Kitabatake Chikafusa elaborates on the story: "By the time of Sujin, ten generations and more than six hundred years had elapsed since the age of the gods, and people had come increasingly to stand in fear and awe of divine authority. Therefore, in the sixth year of his reign [ca. 91 BC]…Emperor Sūjin summoned the descendant of Ishikoridome-no-kami, the mirror maker in the age of the gods, and had him forge a new mirror. He also called for the descendant of Ame-no-Mahitotsu-no-kami and had him make a new sword. After these objects were made in the district of Uda in Yamato, Sujin exchanged them for the original mirror and sword of the regalia and installed them in his hall as emblems of divine protection. The original mirror and sword from the age of the gods were given to princess Toyosukiiri-hime-no-mikoto, who built a sacred enclosure (*himorogi*) at the village of Kasanui in Yamato and worshipped them there. Later, Toyosukiiri-hime, having received instructions from Amaterasu, took the mirror and sword (*shintai*) and journeyed about the provinces with them" (Kitabatake 1980 [1339]: 94). The replica mirror is still used today in rituals such as the imperial enthronement ceremony, during which "the emperor looks into the mirror and becomes one with the sun goddess, his ultimate ancestor" (Dumpert 1998: 34). Thus even the replica of the original mirror partakes of at least some of its holiness.

> early Yamato state was a theocracy….For the emperor to consider conversion to an alien faith at that period could pose a threat to the very basis of his power, which as yet was far from being solidified (Matsunaga and Matsunaga 1974: 9-10).

Accordingly, Kinmei's advisors were divided on the wisdom of adopting the new religion. Buddhism received its major support from the Soga 蘇我 clan, who had no claims to divine descent and were eager to establish direct access to prestige goods from the continent[46]. Kinmei compromised by allowing the Soga to adopt the new religion, but anti-Buddhist ritual specialists at court convinced him that this was the cause of an epidemic, and Seong's Buddha was unceremoniously dumped in a canal (Aston 1924[1972] vol. 2: 67-68). However, the next emperor, Bidatsu 敏達 (r. 572-585), allowed the Soga to recover and restore the statue (Matsunaga and Matsunaga 1974: 11).

At this point Buddhism, to the Proto-Japanese, was merely "a possible superior form of magic long practiced by the civilizations they respected and sought to emulate" (ibid: 10). But after the ambivalence of Kinmei and Bidatsu, the next emperor, Yōmei 用明 (r. 585-587), whose mother was a Soga, wholeheartedly supported the new religion. Upon Yōmei's death war erupted between the pro-Buddhist Soga and anti-Buddhist clans. The former emerged victorious, and the next three rulers, all siblings of Yōmei[47], would be Soga Buddhist sympathizers (ibid: 11). Thus, through the influence of the Soga, it took only 40 to 50 years for Yamato rulers to adopt Buddhism and begin to disseminate it and use it to form closer political ties to continental and peninsular states and as an arena for competitive display, in the form of monumental temple architecture.

From this point on, according to official history, the emperors and empresses were active proponents of the new religion. It might therefore seem that mirrors would begin to lose their religious and symbolic importance. Indeed, archaeology indicates that mirrors in burials began to decline in popularity during the 6th century, roughly the period when Buddhism was on the rise (Higuchi 1986: 124). However, from the late 7th century,

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[46] Aoki (1974) has argued that the Soga were actually descended from continental immigrants (cited in Hong 1994: 148).

[47] Kinmei, Bidatsu, Yōmei, Sushun, and Suiko were all siblings, but the last three had Soga mothers; Suiko was the half-sister and wife of Bidatsu and full sister of Yōmei, and is quoted as saying, "We are sprung from the Soga family….Therefore, the words of [the head of the Soga clan], if spoken at night, [are carried into effect by us] before the night has given way to morning…" (Aston 1924[1972] vol. 2: 154).

interest in mirrors seems to have been rekindled, as they began to be imported from Tang China (ibid). In the end, Buddhism was made to harmonize with, rather than replace, native religion. While its arrival did precipitate the slow demise of mirrors in burials, this was not because mirrors lost their significance, but rather because competitive display among elites shifted from elaborate burials to the construction of monumental temples. The earlier animistic tradition was by no means abandoned, however; it is probably no coincidence that the massive 8th century Tōdaiji temple was sited adjacent to the 3rd-4th century Kurozuka tumulus. Similarly, in AD 607, Hōryūji Temple was erected only 350 m away from the Fujinoki tomb, perhaps as few as fifteen years after the death of the individual buried there (Kidder 1987: 58-59, 83-84). It appears that important sites for the new religion were located next to important sites and/or personages in the old one. In contemporary Japan, Buddhism and Shintō (the evolution of earlier animistic/shamanistic Japanese religion) are often inextricably enmeshed, and mirrors continue to have sacred associations (see below).

The builder of the Hōryūji temple was Prince Shōtoku 聖徳 (AD 573-621), nephew and regent of the Buddhist nun-empress Suiko and himself a great champion of Buddhism, yet he is ascribed magical powers by the *Nihon shoki*, such as a painless birth beside a horse stable (horses are strongly associated with Proto-Japanese elites and with northeast Asian shamanism) along with the ability to speak immediately upon his birth and foreknowledge of events (Aston 1924[1972] vol. 2: 122). The medieval historian Kitabatake Chikafusa 北畠親房 states that Shōtoku was an "avatar" of a Shintō deity (Kitabatake 1980 [1339]: 78), representing a combination of the Indo-Buddhist concept of avatars with Shintō godhood. In his possession of such magical/shamanistic characteristics, Shōtoku is linked to earlier non-Buddhist members of the Yamato lineage[48]; furthermore, it was Shōtoku who initiated the use of the name *Nihon* 日本

[48] These include Yamato-totohi-momoso-hime no Mikoto 倭迹迹日百襲姫命, sister of Emperor Kaika 開化 (putative r. 157-98 BC), who could foresee the future, experienced spirit possession, and was married to the god Ōmononushi no Kami 大物主神 (Aston 1924[1972] vol. 1: 152, 156); Yamato-hime no Mikoto 倭姫命, the daughter of Emperor Sujin (putative r. 97-30 BC) and sister of Emperor Suinin 垂仁 (putative r. 29 BC-AD 70), who was instructed by Amaterasu to build her shrine at Ise, and who served as high priestess there (ibid: 176); Emperor Chūai 仲哀 (putative r. AD 192-200) and his wife and successor Empress Jingū 神功 (putative r. *ca*. 209-269) who were possessed by various deities including Amaterasu

("sun source") for the Yamato state, thereby formalizing and publicizing its divine solar origins.

The Buddhist monk Gyogi (AD 670-749) argued that the Shintō gods and goddesses were avatars or emanations of the Buddha, a notion known as *honji suijaku* 本地垂迹 (lit. "earth is original, the footprints dependent") or *ryobu Shintō* 両部神道 ("dual Shintō") (Teeuwen and Rambelli 2003; Morton and Olenik 2005: 32). As a religion, Buddhism is a remarkably flexible, and the gender of important figures such as avatars and bodhisattvas can change according to social need. Thus, "Amaterasu, the Sun Goddess, was worshipped as Vairocana, the great cosmic Buddhist deity who ruled over a world of light" (ibid). It is Vairocana Buddha who is enshrined at the Tōdaiji temple, and it is instructive to consider the role of mirrors in the casting of its 15-meter-high Buddha image. Gyogi, the proponent of Shintō-Buddhist syncretism, devoted years to collecting alms for the construction of this statue (ibid). It seems, then, that (1) the nearly 4000 Kofun-period mirrors recovered (Edwards 1999: 82) from archaeological contexts may be just a tiny portion of the vast numbers that were once in circulation; because (2) after the introduction of Buddhism, mirrors that might have been placed in burials prior to the 6th century may instead have been chosen as raw material for recasting. Thus, an object whose primary significance had been found in a (Proto-)Shintō context was integrated into Buddhism, into a new form of competitive status display. Rather than simply assuming that the mirrors were everyday grooming equipment that any reasonably wealthy woman might own, we must recall that mirrors were probably still important status goods, imbued with ritual and/or symbolic power. It is also noteworthy that the donations of mirrors allegedly were made by women, since women (viz. the Soga wives of emperors and the Empresses Suiko, Genmei 元明 (r. AD 707-715), Genshō 元正 (r. 715-724), and Kōken 孝謙 (r. 749-758)) were instrumental in the adoption and dissemination of Buddhism. Objects made from mirror metal might have been endowed with some of the symbolism or power of those mirrors.

(ibid: 225); and their son Emperor Ōjin ("Answering God") who, according to Chikafusa, was an avatar like Shōtoku (Kitabatake 1980 [1339]: 78), and who is now worshipped all over Japan as the war god Hachiman 八幡.

On the other hand, can it be coincidence that the construction of the Tōdaiji Buddha was accomplished through the destruction of mirrors, leaving the Yamato in possession of what they claimed to be *the* true, primordial mirror? After all, the Yamato drew much of their legitimacy from links to mythical-historical personages (e.g., descent from Amaterasu and custodianship of her mirror-body). However, they were under constant threat from competing clans, who practiced alternative, non-orthodox versions of Shintō and foreign religions such as Buddhism, and who had their own alliances with various kingdoms on the Asian continent (e.g., Grayson 2002). On one hand, an old religious icon was literally—and perhaps also metaphorically—*integrated* in the creation of a new one; on the other, the Yamato were able to eliminate competing icons, perhaps the last tangible signs of competing claims to divine solar ancestry. Furthermore, although some of the most powerful early proponents of Buddhism were female, women became increasingly disenfranchised as religious and ritual practitioners as the power of Buddhism grew.

In short, the "donation" of the mirrors coincided with (1) a coalescence of religious hegemony around the Yamato clan, (2) the elimination of competing claims to sacred power, and (3) the increasing disenfranchisement of women as ritual practitioners with direct access to Amaterasu, and perhaps other deities, through mirror-bodies and as rulers. Whereas in the 3rd century AD, the Empress Jingū acted as a direct channel for communications from Amaterasu, embodying the goddess through trance, by the 6th century the primary religious role of female rulers was as temple patrons. This is not to say that women had no power at all—quite the contrary—but over succeeding centuries they were increasingly distanced from the divine as well as from the exercise of secular authority. Today, the primary role of *miko* ("shamanesses") is to staff gift shops and assist in rituals at Shintō shrines. An ideology of the Yamato emperor and the sacred mirror as twin *but exclusive* embodiments of the sun and of divine power was successfully established.

Philosophical texts

Mirrors appear as metaphors in premodern texts from Classical Greek, Jewish, Hindu, Buddhist, Muslim, and Christian philosophical traditions in Eurasia. The application of these metaphors is astonishingly similar across Eurasia. While Eurasian mirror metaphors are revealing of concepts of knowledge and cognition, conversely they can be used to shed light on the way mirrors as objects were conceptualized. In all these traditions, there are basically three types of mirror metaphors: (1) reflections as distorted representations of reality; (2) reflections as faithful likenesses of reality, even to the point of sharing qualities with the original, via metonymy; and (3) the mirror itself, *qua* reflector, is a model for correct human behavior. The Type 3 metaphor normally follows from Type 2, insofar as, in the traditions reviewed here, deceptiveness in one's behavior is never endorsed. However, as will be seen in the discussion of folklore below, some deceptive tricksters are equated with mirrors.

The first extant use of a mirror metaphor is Indian—it can be found in a verse from the 5th-3rd century BC Sanskrit *Svetasvetara-upanishad*:

> Just as a dust-covered mirror
> Glitters like fire when it is cleaned
> So does one who has recognized the *ātman*'s[49] essence
> Attain the goal, deliverance from anxiety
> (Demiéville 1987[1947]: 22, emphasis removed).

The passage implies that only under the right circumstances—that is, being free of obscuring dust—can the mirror achieve its true potential (i.e., to reflect light). As with a mirror, brilliance is a natural property of the human ineffable, the mind/soul; inability to reflect is simply due to an unfortunate accrual of environmental debris. To recognize and reveal the mind/soul is to achieve one's true nature or potential.

A similar view can be seen in Sufi literature, where the heart (*qalb*) "perceives divine realities by a pure hierophantic knowledge (*idrak wadih jali*)" (Hume 2007: 19). The 12th century (AD) Andalusian Sufi Ibn 'Arabī describes the heart as "the mirror in which the Divine Being manifests His form" (ibid). This can only happen, however, when the subject connects with God on a gnostic or mystical level, rather than a purely

[49] *Ātman* has no direct English equivalent, but can be roughly translated as "soul" or "mind."

intellectual one; in the latter case, God remains "veiled" (Hume 2007: 19). The mirror that is the heart not only reflects, but projects ("essentiates") the Divine Being externally through *himma*, or intention/desire (ibid).

Siddhartha Gautama, the historical Buddha, is thought to have lived in what is now Nepal and northern India, *ca*. 563-483 BC (Kohn 1994); it is thus likely that mirror metaphors were used by Buddhists from the religion's inception. Buddhists were active proselytizers, and frequently relied on metaphors to explain complex metaphysical concepts, according to the listeners' prior levels of comprehension. And so wherever Buddhism went, the mirror metaphor was sure to go; it became so widespread that it has been called "pan-Buddhist" (Wayman 1974), but given its use by other religious traditions, such a moniker hardly does the mirror metaphor justice. It is likely that, after the introduction of Buddhism to communities across central and eastern Eurasia, Buddhist metaphysics "re-contextualized" mirrors and mirror metaphors (*sensu* Saunders 1999), while local mirror concepts re-contextualized Buddhism.

Luminosity has been associated throughout Eurasia with clarity of thought and vision—expressed in terms such as *enlightenment*, *elucidation*, etc. It is also associated with holy people, who, in pictorial representations, are often shown with radiating haloes of light (e.g., in Hindu, Buddhist, and Christian art). In Eurasian philosophies, a chain of metaphors—what Reding (2004: 156, note 7) refers to as a "metaphor-web"—links light, brilliance (shininess), thought, vision, the mind/soul, wisdom, holiness, and mirrors. Bayly (1986: 291) notes that in Indo-Persian philosophy, light—which in turn was metaphorically connected with mirrors—was "a visual manifestation of God's reason working in the world." The themes of light and mirrors appear repeatedly in Persian and Urdu literature, and the fascination with them "gave rise to an enormous taste for mirrors" in the Islamic world (ibid).

In a comparison of metaphors in ancient Greek and Chinese philosophy, Reding (2004: 129) demonstrates that "Western metaphysics has been dominated…by optical metaphors, such as light or the mirror. The human mind has been pictured, throughout the history of Western philosophy, as a huge mirror, faithfully trying to reflect reality or mischievously distorting it." Here too we find that light is associated with wisdom:

> many expressions for 'knowing' and 'understanding' have originated in the domain of sight, from where they have been transposed…into the domain of knowing... The linguistic raw material for expressing the idea of knowledge and understanding through the metaphor of light and vision is…basically the same in both [Greece and China] (ibid: 145).

It seems that by the 5th century BC, the audience's competence in understanding such metaphors was presupposed by Greek, Indian, and Chinese writers (ibid: 150), so it undoubtedly predates that period.

Early Greek uses of the mirror metaphor tend to be of the first type defined above, that is, the mirror as a distorter:

> …the early Greek authors always use this metaphor for its *subjective* properties. Plato uses mirror images to contrast true objects of knowledge with mere imitations and imperfect copies of it. He uses this metaphor to point out the ontological gap between the archetypal form and its sublunary copies....A mirror image is less valuable than its original for the simple reason that the image is ontologically dependent upon its prototype. Moreover, mirror images systematically distort the original, by inverting left and right, for example….The function of the metaphor of the mirror is to explain the possibility of subjective knowledge, that is, cases where one and the same object is perceived ('mirrored') in different ways, or even distorted, by different knowing subjects, whose [minds act as mirrors] (Reding 2004: 156-157, emphasis original).

On the other hand, ancient Chinese writers mostly use mirror metaphors of the second and third types. The mirror in China is never used to metaphorize distortion or deception, but rather, the clarity and luminosity which is naturally inherent in the human mind/heart/soul, or *xin* 心[50], just as in the passage from the *Svetasvetara-upanishad*. Yet it seems that the mirror metaphor existed in China prior to the introduction of Sanskrit Buddhist texts around the first century AD (e.g., Reding 2004: 150). In fact, the earliest Chinese texts to use the metaphor are Daoist.

The *Zhuangzi* (*ca*. 300 BC), a Daoist philosophical tract, frequently applies the mirror metaphor to the metaphysical concept of *xin*. According to Oshima (1983: 72),

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[50]*Xin* denotes the anatomical heart, but as in English, the organ is metaphorically associated with thoughts and emotions. "Mind" is an approximation, but does not completely convey the meaning of *xin*, which has also been translated "spirit." Oshima (1983: 65) argues that *xin* should simply be borrowed without translation, a practice which has proven successful with other Chinese metaphysical terms such as *dao*, *yin* and *yang*, and so forth: "'Mind' and *hsin* [= *xin*] share little more than this common property of thinking....And although thinking is a property of the *hsin*, it by no means exhausts its functions. One gets the impression, in fact, that the *hsin*'s ability to think is only incidental to its real significance, which goes far beyond mere human calculation."

when a metaphor is used to explain an abstract concept such as *xin*, it is easy for it to become a "determinative metaphor," that is, it actually influences how one conceptualizes and understands the subject; in this case, "a single, powerful metaphor, the mirror, was the determinative model for many of the *Chuang-tzu*'s [= Pinyin *Zhuangzi*'s] ideas about the *hsin* [= Pinyin *xin*]" (ibid: 73). In fact, as suggested by Reding (2004), the mirror metaphor was probably already established as a determinative model long before the *Zhuangzi* was compiled. Wang (2005: 247-248) argues that in order to understand how mirrors were thought to relate to the mystical *xin*, it is necessary to consider their physical and optical properties (he refers here to concave Chinese mirrors):

> The [concave] mirror gathers and condenses the surrounding visual field into a concentrated half sphere. The clarity of the reflection only reinforces its eerie otherness; the reflection is distinct from the one obtained from a flat mirror, which plainly and accurately yields what lies within its field and therefore does not challenge the quotidian mode of perception. It is for good reason that the convex mirror has the capacity to inspire associative thoughts about its reflection as a window onto a heightened plane of experience. One additional quality adds to its perceived otherness. The clarity of the convex mirror is sustained only when it is held squarely in front of the beholder. Once it is tilted, the skewed angle allows the reflection to be diluted by sources of light, thereby producing a hazy sheen and veiling the beholder's face in the mirror.

Furthermore, mirrors were linked to the luminary heavenly bodies, especially the sun, because concave "burning mirrors" were used to concentrate sunlight and thereby kindle fires (Oshima 1983: 75). The *xin*'s relationship to the heavens is analogous to the mirror's relationship to the sun; a common inscription on mirrors of the time was "Shine on men's *xin* as bright as the sun and moon" (ibid: 76).

Buddhism in China has co-evolved with Daoism and the two are more productively viewed as in dialogue with one another rather than opposition. The origins of Daoism are traced to the 5th century BC philosopher Laozi (= W.-G. Lao Tzu), but it incorporates elements of shamanism on both the practice and philosophical levels, such as veneration of nature and ancestor spirits (Wong 1997: 17; Fowler 2005). The harmonizing of Daoist and Buddhist philosophy resulted in the appearance of Chan 禅 (Japanese *zen*), Buddhism in China. Chan texts frequently use mirror metaphors, but instead of being used to illustrate the subjectivity of human knowledge, or the innate

purity and brilliance of the heart/mind/soul, the mirror metaphor is used to illustrate the unreality of *what is there to be known*, that is, of reality itself—"the ontological nothingness of [the mirror image] is analogous to the emptiness of all existence" (Wang 2005: 248). The 6th century monk Zhiyi said, "Reflections in a mirror do not come from outside and do not arise within" the mirror (ibid: 264)—if they are neither inside nor outside, then there is no*where* for them to be and, in short, they must not exist; and yet, there they are. So it is with all phenomena.

One of the most famous rhetorical uses of the mirror metaphor in Chan Buddhism is a verse from the "Platform Sutra," a late-7th century dialogue between two students, Huineng and Shenxiu. Shenxiu composed the following verse:

> The body is the tree of the awakening;
> The mind is like a clear mirror.
> Be unceasingly diligent in wiping and polishing it
> So that it will be without dust.

To which Huineng replied:

> Awakening entails no tree at all,
> Nor does the clear mirror entail any material frame.
> The Buddha-nature is eternally pure;
> Where could there be any dust?
> (Demiéville 1987[1947]: 13).

Although Huineng contradicts Shenxiu's proposition, underlying both their uses of the dirty mirror simile is the idea that while the nature of the mirror (or *xin*) can be obscured, the dust on the mirror cannot actually *alter* it. That is, the mirror is reflective whether one can see that or not; one's inability to perceive a clear reflection is due to factors limiting perception, not to a limitation of the mirror's reflectivity *per se*. This is the significance of Huineng's riposte: awakening or enlightenment is not a matter of making oneself pure, but of recognizing one's inherent purity.

The first century AD Jewish philosopher Philo of Alexandria used the mirror metaphor frequently: "In most cases it is a matter of seeing the suprasensory 'as in a mirror,' that is to say, in an indirect and mediate way: thus does man's spirit see God in the mirror of things, and thus does the soul contemplate 'mysteries' through the mirror of words, and so on" (Demiéville 1987[1947]: 27). St. Paul did the same in the famous line,

"For now we see through a glass[51] darkly; but then face to face: now I know in part; but then shall I know even as also I am known" (I Corinthians 13:12). St. Gregory of Nyssa (AD 337-400), a Christian theologian from what is now Turkey, on the other hand, uses a mirror metaphor in a way much more akin to Sanskrit and Chinese sources:

> Freed from the movement of the passions,…the soul draws into itself and is able to know itself completely, as it is in its nature; and it contemplates the archetype in its own beauty, like an image in a mirror….The spirit is like a mirror, receiving a form from the object that appears in it. The nature, which is subordinate to the spirit, cleaves to it, and in turn receives its adornment from this beauty set beside it, as if it were the mirror to a mirror….But when matter, which itself has neither form nor constitution, emerges in its deformity, it corrupts the beauty of the nature. Then the ugliness of matter passes via the nature to the spirit itself, with the result that the impression of the divine image is no longer visible there. And the spirit, presenting like a mirror only its reverse side to the idea of the all-good, repulses the manifestations of the splendor of the good, and models in itself nothing but the deformity of matter. Thus is evil born….A piece of iron, when cleaned by a stone of the rust which had shortly before obscured it, reflects in itself the light of the sun and shines back rays. So too the interior man, whom the Lord calls the heart: when he has removed the defiling rust covering over his beauty, he will receive anew the image of the archetype (ibid: 30, emphasis removed).

Properly polished, the soul reflects God; but precisely because of the accuracy of reflections, it is necessary not only that the mirror be clear, but also that it be oriented correctly—that is, toward God, so that it will reflect the good and beautiful, rather than the base and material. The introduction of dichotomies of sin and virtue, matter and spirit can be seen as a Christian re-contextualization of the metaphor.

The Persian Sufi Al-Ghazzālī (AD 1059-1111) uses a similar argument:

> Imagine an oxidized [metal] mirror, with rust covering its surface, its clarity obscured, unable to register our images. Normally a mirror is able to receive images and reflect them just as they are, but whoever wishes to restore this mirror must carry out two tasks. He must first wipe and polish it, so as to remove the rust which does not belong there. Then he has to position the mirror in front of the object which he wants to be reflected. Thus the human soul has the capacity to become a mirror which can at any time be oriented to the true. Just as with the image and the mirror, it receives the imprint of the true when, in a certain sense, it identifies itself with the latter, even though in another sense it remains distinct….Angels do this eternally, just as pure water by nature reflects images in its characteristic manner. But for a human this ability exists only potentially, unmanifested in action. By doing battle against himself, he can attain the status of angels; but if, yielding to his appetites, the human continues to allow rust to accumulate on the mirror of his soul, his potentiality for reflecting the true will be completely eclipsed….When the surface of the mirror is covered with rust, it fails to receive any image—but when it is put opposite the image and the polisher sets about his work, the reflection of the image gradually comes into view (Demiéville 1987[1947]: 25-26).

[51] This is the King James version; the line can also be translated, "Now we see in effect by a mirror, enigmatically" (Demiéville 1987[1947]: 28).

Here it is emphasized that the luminosity of the mirror (= human mind/heart/soul) is only its potential; left to our own devices, we will fail to shine. In the writings of Gregory and Al-Ghazzālī the individual must reflect some aspects of reality (the "good"-*qua*-spiritual) and ignore others (the "bad"-*qua*-material), whereas in Daoism and Buddhism, the goal is to reflect all reality without judgment or prejudice. Gregory of Nyssa and Al-Ghazzālī would agree with Shenxiu rather than Huineng.

Western Eurasian mirror metaphors, focusing on the faithfulness or unfaithfulness of reflection in order to characterize the nature of knowledge and the mind/soul, and the individual's relationship to God (viz., the absolute or divine) continued to be employed by theologians into modernity. However, the specific form of the metaphor often sounds suspiciously Indo-Chinese. The following example sounds like a passage from the *Zhuangzi*: "Water which has been agitated can neither be clear nor receive the image of nearby objects; but tranquil water is like the clear glass of a mirror. It receives without alteration all the images of various objects, and keeps none of them" (ibid: 32)—but it reveals itself to be a Christian product (in fact it was written in France in 1699) when it continues, "It is the same for the pure and peaceful soul. God imprints on it his image and that of all the objects he wishes to imprint there." In Christian texts, God must endow the spirit with brilliance through His grace, whereas in Daoist and Buddhist texts, brilliance is the nature of spirit.

Just as the Chan Buddhists pressed the mirror metaphor into service as an illustration of the fundamental illusoriness of "reality," Christians and Muslims adapted it to their pre-existing ideas of sin, and of the dichotomies of spirit and matter, good and evil. Yet given their late dates, the metaphor of the dusty mirror in Gregory of Nyssa and Al-Ghazzālī are likely derivative of the one from the *Upanishads*, most likely via Inner Eurasian Buddhism.

The *Jinno Shōtōki* (*Chronicle of Gods and* Sovereigns), written by the Japanese historian Kitabatake in AD 1339, includes much discourse on mirrors. The book, which draws heavily on the *Kojiki* and *Nihon shoki* as well as Chinese political philosophy, was intended to instruct the Emperor Go-Daigo 後醍醐 (r. ca. 1318-1339). In standard Chinese style, Kitabatake writes:

> …the mirror hides nothing. It shines without a selfish mind. Everything good and bad, right and wrong, is reflected without fail. The mirror is the source of honesty because it has the virtue of responding according to the shape of objects. It points out the fairness and impartiality of the divine will (quoted in Ono 1962: 23).

In the last sentence of the passage, however, we see a reference to Japanese cosmology, for as Chinese philosophy had grown increasingly esteemed and well-known in Japan, its ideas about mirrors were incorporated into the existing body of Japanese beliefs and practices involving them. The *Jinno Shōtōki* weaves together the Chinese metaphor of mirrors generally as models for ideal human nature with the specific, Japanese mirror that is regarded as the holiest object in Shintō belief (the *yata no kagami*). Such syncretic blending of ritual practices and transference of concepts to new semantic domains is characteristic of modern Japanese religion. Thus, the mirror to which Kitabatake refers the passage quoted above is not just a generic metaphorical one, but Amaterasu's mirror-body, which is part of the imperial regalia.

According to the *Jinno Shōtōki*, because the mirror "is an accurate reproduction of the august image, it must certainly contain the profound august heart" (Dumpert 1998: 31). It is important to note the terminology used: the mirror is both *reproduction* and *container* of the goddess; image and heart are inextricably linked. This establishes functional equivalency between the reflection and the person reflected (a theme which frequently recurs in Eurasian folklore, discussed below); at the same time, the passage reveals that Amaterasu can be the mirror, and be *in* the mirror. That the notion of mirror as reproduction (or more properly speaking, reiteration) had already existed for centuries is illustrated by passages in the *Nihon shoki*:

> At this time Ama-terasu no Oho-kami [=Amaterasu Ōmikami] took in her hand the precious mirror, and, giving it to [her son] Ame no Oshi-ho-mi-mi no Mikoto [忍穂耳の命], uttered a prayer, saying: —'My child, when thou lookest upon this mirror, *let it be as if thou wert looking on me*. Let it be with thee on thy couch and in thy hall, and let it be to thee a holy mirror' (Aston 1924[1972] vol. 1: 83; emphasis added).

And:

> Then the Sun-Goddess opened the Rock-door and came out. At this time, when the mirror was put into the Rock-cave, it struck against the door and received a slight flaw, which remains until this day. *This is the great Deity* worshipped at Ise (Aston 1924[1972] vol. 1: 47-48; emphasis added).

Note that, in the second passage, the mirror itself is referred to as "the Deity." We now have the following correspondence: Amaterasu = her reflection = the mirror.

Kitabatake elaborates on this correspondence in a way which illustrates how mirrors manifest transubstantial or metaphorical relationships between semantic fields (cf. Gosden 2005; Reding 2004). He states that the mirror "gives form to light. Since its 'heart nature' is bright, it embodies compassion, resoluteness, and decisiveness" (Dumpert 1998: 31). This argument illustrates a number of complex intersections in Japanese philosophy: (1) The mirror does not merely reflect, but actually *embodies*, light; (2) the mirror, though ostensibly inanimate, has a "heart"[52] just as a human being or god does; (3) light is associated with moral qualities, viz. compassion, resoluteness, decisiveness. A similar line of reasoning can be seen in Chinese and Classical Greek philosophical texts, where the mirror and light both figure prominently as metaphors for knowledge and wisdom (Reding 2004), however here, the mirror is not merely a metaphor for the brilliance of the soul, but has its own brilliant soul.

The Peircean trichotomy of signs (Peirce 1982 [1867]) consists of icon, index, and symbol. An icon physically resembles what it signifies; an index is causally linked, usually by empirical, sensory phenomena, to what it signifies; and a symbol is an entirely arbitrary representation of the signified. Japanese thinking about mirrors confounds this trichotomy in that the mirror can be icon, index, and symbol all at once. Specifically, there are three ways in which the mirror "signifies" the sun/Amaterasu: (1) brilliance (icon); (2) reflection (index); and (3) symbol. In modern Shintō belief, as probably in earlier forms of Japanese religion, any object can be inhabited at will by a god[53], becoming the deity's "god-body;" the *yata no kagami* mirror is Amaterasu's god-body. Beyond being merely an icon, the mirror can actually *be* the god. Furthermore, although Amaterasu instructed her descendants to honor the *yata no kagami,* specifically, as though it were herself, all mirrors share her luminosity and luminous "heart nature," and

[52] Japanese *kokoro* 心, "heart," is equivalent to the Chinese *xin*.

[53] Shrines often contain an object, or are located near a natural feature, that acts as the "god-body" (*shintai* 神体) or "august-spirit-substitute" (*mitamashiro* 御霊代). Neither worshippers nor priests are allowed to look at it (Ono 1962: 21).

thus any can be used to represent (symbolize) her. However, any one mirror also shares the physical and personal properties of all other mirrors, and so can metonymically reference the original *yata no kagami*; in short, they can act as symbols of a symbol—hence their prevalence at shrines, where they recall both the goddess and her emblem.

Texts on mirrors

Many mirrors made in what is today China had short texts cast as part of the mirrors' decoration. These inscriptions are usually generic poems, some of which even speak in first person with the voice of the mirror itself.

> Untarnished *brightness* at your service, Sir,
> Lest gloom should dim the light;
> [I speak] else benefits ensuing from this magic alloy
> Be forgotten with the lapse of time.
> Even though my fair qualities *endure unchanged*,
> The false intrigues of others may yet win your favor.
> By virtue of its intrinsic *purity* [this mirror] *reflects the light*;
> Its radiance is like that of the *sun and moon*.
> My heart aspires to prove its loyalty;
> But it is thwarted and has no vent.
> (Composite mid-1st century AD inscription from Wang 1994: 528-529, emphasis added.)

The italicized phrases are common themes in mirror inscriptions: references to brightness, purity, and unchanging continuity as qualities of the mirror, and analogies with the sun and moon.

Mirrors given as gifts were also often inscribed with blessings for the recipients:

> As for the mirror's nature of ancientness, it is characterized by its solid durability,
> Residing in the famed mountains, it awaited the labourer.
> Smelting extracted its essential efflorescence, causing its radiance to be bright.
> It elevates lofty uprightness and advances family closeness.
> When it reflects a bright shine (?), you can examine your body.
> Blessings and advancement are daily before you.
> You will eat jade flowers and drink from sweet springs.
> As extravagant pleasures become laid out, you will encounter divine immortals.
> You will nurture long life and cause your longevity to reach ten-thousand years.
> Reverting, you will return to the origin.
> May [the mirror] be passed down to your children and grandchildren.
> (Han inscription from Brashier 1995: 224.)

This text suggests the mirror is primordial, the metal ores waiting as if consciously to be cast; it promises its owner a similar longevity to that of the mirror itself.

Other inscriptions describe the mirror and its properties, sometimes even lauding the skill of the specific factory where it was made. The characteristics ascribed to the mirror are the same ones seen in philosophical texts that use mirror metaphors, i.e., clarity, purity, brightness, endurance, and perfect nonjudgmental response to all phenomena.

> Fair is the magic mirror,
> Wondrously perfect in its inspired craftsmanship.
> Its clarity resembles still waters,
> Its purity seems to mount skyward.
> Its brightness bathed in the halls of Chin;
> Its reflections illumined the palace of Ch'in.
> It guards against lewdness, and draws together the altars of the soil;
> It responds to all things without fail.
> High let its writings be hung in jade-like seal characters;
> Long will endure the carvings on the green bronze.
> (Undated mirror inscription from Soper 1967: 59.)

Comparisons to the sun and moon are common, and may preserve an echo of northeast Asian shamanism(s), as in the case of the Amaterasu cult.

Inscriptions could also be added after the mirror was cast. Loubo-Lesnitchenko (1973: 34) briefly describes a mirror fragment from the Minusinsk Basin in Siberia inscribed in "runic signs" with the words "'a bit of my mirror.'" This mirror fragment dates to the 6th-10th centuries AD, when the Minusinsk Basin was ruled by Turkic-speaking Kirghiz khans (ibid: 30). During this period, imports of Chinese-manufactured mirrors decorated with the twelve Chinese zodiacal animals increased in number; the Chinese recorded that the Kirghiz recognized the same zodiacal divisions and used the same zodiacal symbols (ibid). Mirrors with zodiacal designs may have been preferred because their decoration was meaningful to their purchasers in Inner Eurasia. Certainly mirrors of other types were available, since somewhat later Japanese and Korean mirrors have also been found in the Minusinsk Basin, testifying to the wide trade networks of the region. Fragments of these mirrors—and of mirrors made in other parts of Eurasia—were evidently curated for long periods of time, as they are often drilled with holes for suspension and the edges have become polished with wear (ibid: 29, 34, 53). It seems

reasonable to assume that in the case of the fragment inscribed "a bit of my mirror," the nature of the fragment as a bit of some mirror was obvious; therefore, the significant part of the inscription is *my*. The inscriber of the mirror was clearly asserting his or her ownership of the fragment, but notably, rather than a name, the inscription uses only the possessive adjective (*my*). One may imagine that anyone viewing the fragment, then, was expected to know who its owner was, suggesting a rather intimate circle of access.

Ethnography and contemporary practices

Mirrors continue to be used in the present day for a variety of purposes other than personal grooming. We cannot presume that these contemporary practices and beliefs are the same as those of Iron Age people, but in some cases they do reveal surprising continuity, or convergence, with what is seen in the archaeological evidence.

Shintō. Shintō 神道 ("the way of the gods") is a Japanese religion combining elements of shamanism, animism, and Buddhism. It is a religion based not on faith in gods, but on ritual practices which are integral to Japanese social life. Faith-based religions such as Christianity have been unable to gain much of a foothold in Japan (less than 1% of the population self-ascribe as Christians) (Watanabe 2004). Shintō shrines are numerous and although often linked to impressive natural features or phenomena such as mountains and waterfalls, they can be found nearly anywhere, including the roofs of apartment buildings. Much of Shintō practice revolves around the cleansing or mitigation of "pollution" (*kegare* 穢れ) (Boyd and Williams 1999), seasonal festivals, weddings, and rites of passage, while funerals and memorials of the dead are practiced within a Buddhist context. Shrines and Buddhist temples are often combined into religious complexes.

Shintō shrines, as well as palanquins used for religious festivals, are commonly decorated with mirrors. At shrines, mirrors are placed between the offering tables (where supplicants place money before praying) and the doors to the inner shrine; these mirrors are symbolic of "the stainless mind of the kami, and at the same time [are] regarded as a sacred symbolic embodiment of the fidelity of the worshipper towards the kami," but are not themselves objects of worship (Ono 1962: 22). However, at some shrines, a mirror

acts as the *kami*'s[54] "god-body," in which the deity may choose to occasionally embody itself, but in such cases the mirror is kept inside the inner shrine and even priests are not allowed to see it (ibid: 23).

The association of mirrors with liminality, indicated in the *Kojiki*, can still be seen in present-day Japan. Liminal spaces are fraught with the danger of physical and spiritual pollution or impurity (*kegare*[55]), and customs intended to avoid such contamination are followed by Japanese regardless of what religion (if any) they ascribe to (Ohnuki-Tierney 1984: 29-30). Department stores and office buildings have uniformed employees to open doors and push elevator buttons, and taxi doors are remotely opened by the driver so that customers do not have to touch these potentially polluting things[56] (ibid: 30); an indication of the uncleanliness of transitional spaces such as elevators, escalators, doorways, taxi cabs, and—metaphorically—political campaigns, is the fact that the people who work in such environments wear white gloves, both protecting their hands and symbolizing purity. Mirrors are a liminal space because they are, in fact, not a space at all, yet they seem to contain one; in folklore they are often depicted as portals into the reflected world, and like all portals, are in-between places. In modern times, mirrors are not treated with the same precautions as elevator buttons and door handles, but they retain vestiges of their former liminality. For example, round cakes called *kagamimochi* (鏡餅, "mirror rice-cakes") are offered at household shrines and eaten at the beginning of the new year—a liminal and dangerous period (ibid: 135-136).

Shintō maintains many vestiges of shamanistic practices, but most of these have become divorced from their origins. For example, *miko* 巫女 (literally "female shamans") are essential staff at every shrine; today these young women assist at certain rituals and generally work in the shrine's gift shop, where amulets can be purchased. Their title, however, clearly reflects their earlier status as important ritual practitioners.

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[54] *Kami* can be translated, imperfectly, as "god" or "spirit." Shintō recognizes an infinite number of kami, most of which are attached to specific topographical features. A small number are associated with more universal—though generally not abstract—phenomena and are recognized throughout Japan.

[55] The etymology of the word means a withering of the life force (Ohnuki-Tierney 1993: 56).

[56] The stated reason for employing these staff members would probably be *sābisu* ("service"), courtesy shown towards customers as a mark of respect, but the deep ambivalence toward transitional spaces in present-day Japan has been noted by anthropologists (e.g., Ohnuki-Tierney 1987).

Traditional forms of dance and theater also reference shamanistic practices and involve the use of mirrors. In *kagura*, a type of ceremonial dance believed to be the oldest in Japan, the dancer sings a song of worship to a series of ritual objects traditionally held sacred in Shintō, one of which is a mirror (Kirby 1973: 272). It is believed that kagura derives from the dance performed to lure Amaterasu from her cave hiding place, whereupon the sun saw her reflection in the first mirror. Meanwhile, the backdrop for *nō* theater—also thought to have derived from the original dance—is referred to as *kagamiita* 鏡板 ("mirror-panel"), although there is no overt representation of a mirror on the background, nor is it reflective. The nō kagamiita is painted with an image of a pine tree, which once represented a sacred tree through which a spirit descended to possess and speak through the performer (ibid: 274-275). This pine also links nō to Shintō, as trees are often venerated in Shintō practice, and nearly every shrine has its *shinboku* 神木 ("god tree") (ibid: 275).

Feng Shui. Mirrors are used in feng shui ("wind-water"), Chinese geomancy, to intensify or counteract various forces. Certain mirrors—such as the eight-sided *ba gua*—are used as apotropaics to avert the danger of threatening forces (Too 1997). Mirrors can also be used to multiply the effect of desirable things—a mirror placed in a dining room will reflect and multiply the food therein—or to increase the volume of an oddly-shaped or narrow space in order to make it more auspicious (ibid).

Mirrors can also have a direct effect on one's health. If the edge of a mirror "cuts off" the reflection of part of the body, especially the head, it is said to cause health problems (SantoPietro 2002: n.p.). It can "create headaches of the physical and situational kind. If the mirror cuts you off at the throat, you may experience throat- neck-related problems" (ibid). Mirrors in the bedroom can ostensibly increase anxiety and insomnia and even magnify the electromagnetic fields present in the room (ibid). Conversely, placing a mirror under the bed or mattress can help cure ailments of the body part beneath which it lies (ibid).

Shamanism. Shamanism is an umbrella term incorporating diverse ritual practices and beliefs. Nelson (2008: 4) argues that it may be more realistic to speak of *shamanisms*. Speaking of shamanisms in East Asia, Nelson writes that "the relationship between spirits and their human counterparts is the constant that underlies the considerable differences" among different types of shamanic practice (ibid: 5), and this could be extended to other recorded cultures. One feature which pertains to many, if not most, forms of shamanism is the belief that certain individuals possess the ability to communicate directly with spirits, or are possessed by the spirits (ibid: 72). This renders the spirits and the spirit world accessible to ordinary humans, albeit indirectly, but at the same time mysterious and even dangerous, insofar as not everyone possesses the ability to safely interact with spirit. Many ethnographers have noted the use of mirrors in shamanic rituals around the world, but especially in northern and eastern Eurasia (Eliade 1964; Freidel *et al*. 1993; Kirby 1973; Saunders 1988, 1990, 1999, 2001; Tedlock 2005; Van Deusen 1994, 2004; Wood 2003).

> Among the different Tungusic groups of northern Manchuria (Tungus, Khingan, Birartchen, etc.) copper mirrors play an important role. Their origin is clearly Sino-Manchurian, but their magical meaning varies from tribe to tribe; the mirror is said to help the shaman to 'see the world' (that is, to concentrate), or to 'place the spirits,' or to reflect the needs of mankind, and so on. V. Diószegi has shown that the Manchu-Tungusic term designating the mirror, *pańaptu*, is derived from *pańa*, 'soul, spirit,' more precisely the 'soul-shade.' Hence the mirror is a receptacle (*-ptu*) for the 'soul-shade.' Looking into the mirror, the shaman is able to see the dead person's soul (Eliade 1964: 153-154).

The language used in Eliade's account is tied to vision—the mirror helps the shaman "see." However, in Tuva, mirrors are related to hearing: "The *küzüngü* (bronze mirror)…sends out vibrations, which reflect back from the mountains and rocks giving the shaman information;" when used for healing, "These…energies are another kind of frequency that interacts with sound and light to produce the desired results" (Van Deusen 2004: 125-126). This may be a case of what Houston and Taube (2000) have called "cultural synaesthesia," a coalescence of senses.

Mirrors are not only used to amplify the shaman's senses, but to effect healing by holding the mirror over the affected part of the patient's body (Van Deusen 2004: 125-126). The mirror is said to concentrate healing energy (ibid), much as a burning mirror

concentrates the sun's light. Alternatively, the mirror can draw illness out, attracting it like a magnet (Tedlock 2005: 99). According to Eliade (1964: 498), the mirror was the most essential tool in the shaman's kit: "a shaman can perform without costume and drum so long as he has the mirror".

Mirrors are also worn on the shaman's costume or hanging around the neck in northern Manchuria, Mongolia, Siberia, Japan, Vietnam, Korea, and Burma (Tedlock 2005: 47). These mirrors are said to attract spirits and hold them, and belled mirrors also contribute to the creation of a synaesthetic experience, "a mystical union of glittering light and shimmering sound" (ibid: 48). The mirrors can also act as apotropaics, to shield the shaman from negative spirits (ibid).

In some cases, mirrors used in shamanistic practices are curated for long periods, which may also have been true in the Iron Age, explaining the wear exhibited on some archaeological fragments (e.g., those from the Minusinsk Basin described by Loubo-Lesnitchenko [1973]):

> Unlike the rest of a shaman's equipment, a new mirror is not made for a specific shaman. Usually in the past a new shaman would find one in an old river bed or ravine. The mirror might be flying in the air obliging the shaman to sing to make it come to earth, thus proving his or her readiness to being practising. Mirrors were not buried when shamans died. They simply disappeared, presumably to reappear to shamans of later generations (Van Deusen 2004: 18-19).

> My Mongolian friend, Bayar Odun, told me that when she was first training as a shaman she dreamed repeatedly about mirrors. Her grandmother appeared standing before her holding a large mirror in her right hand and a set of three smaller mirrors tied together with a red string in her left hand. As she studied these mirrors her grandmother smiled, then laughed, and both she and the mirrors disappeared. A few weeks later, when Bayar was tending her reindeer herd, she noticed a young animal circling a thin spot in the snow. She went over and dug up the snow and even removed some of the mud underneath. There, about six inches below the surface, were the four mirrors from her dream!....On their backs were Chinese characters that she said represented good luck and happiness (Tedlock 2005: 109-110).

The second account suggests that in some cases, archaeological mirrors may have been recovered and reused by later shamans.

Neo-paganism and Wicca. Mirrors are utilized by some neo-pagans and witches for many purposes, mostly derived from divinatory practices common in the relatively recent past. For example, among some practitioners, one becomes a witch by saying "I

am a witch" three times into a mirror (Rabinovitch 1996: 88). The mirror thus not only reflects, but indeed constitutes, the individual's identity as a witch. Mirrors are also used for divination through the practice of scrying (catoptromancy) (Pendergrast 2003). Recently an entire book has even been devoted to the subject of "mirror magick" (Telesco 2003).

Summary

Ancient Eurasian texts about mirrors fall into three categories: historical, philosophical, and inscriptions on mirrors themselves. The historical texts are not about mirrors *per se*, but rather were written by the Chinese about their "barbarian" neighbors, to whom mirrors were often given as political gifts, or they record religious-historical events relating to the origin of the Japanese archipelago, its gods, people, and early state. In this latter context, one mirror in particular features prominently—the *yata no kagami*, in which the sun goddess Amaterasu is sometimes embodied.

Philosophical texts, on the other hand, are much more variable. Frequently, whether from a Classical Greek, medieval European, or Chinese Buddhist context, the mirror is used as a metaphor for light and/or vision. Whereas European texts usually emphasize the distortion or inversion of mirrors ("now we see as through a glass, darkly"), in Buddhist and Daoist writings the mirror is a metaphor for perfect clarity and truthfulness. Japanese philosophical texts draw on both Chinese Buddhism and the mythic-historical accounts of Amaterasu, adding to the metaphor of clarity a symbolic association with the sun. Mirrors with inscriptions come primarily from China, and the inscriptions reiterate the notions of brightness found in philosophical texts, with added implications of high status and good fortune; for example, they often bear good wishes for the owner, such as longevity or many descendants

FOLKLORE

Modern folktales are believed to be descendants of much older stories which were passed down orally before eventually being committed to writing. There is no way of knowing what the original versions of the tales discussed here were; however, folklore reveals two things about mirrors: (1) ways in which mirrors were perceived at some unspecified point in the past, probably earlier than the date at which the tales were first transcribed; and (2) current beliefs about mirrors, since oral literature evolves in the telling. It is not alleged here that folklore about mirrors can reveal how they were used in prehistory, but it can demonstrate cultural links across space and through time.

Oral literature about mirrors and their polysemic properties can be found throughout Eurasia, and the same themes often recur in widely separated areas. To some extent, this is likely due to ancient trans-Eurasian contacts, while other cases may be independent inventions inspired by common human reactions to the actions of mirrors. Among these themes are confusion about the nature and identity of the reflection; the mirror as an inverter of social mores; the mirror as a container of souls; and as a window to other times and places. Many other references to mirrors exist, but the types below are particularly common and still well-known today.

Who is in the mirror?

One widespread folkloric theme is classed according to the Aarne-Thompson typology as tale type 1336A, "Man does not Recognize his own Reflection in the Water (Mirror)" (Grayson 2006). Extant versions of this motif are particularly old, demonstrating how popular it has been through time: a Chinese version was written down by the second century AD in China, while a first century BC Greek version of the myth of Narcissus was found among the Oxyrhynchus Papyri (Keys 2004; Grayson 2006). Versions of various antiquity are known from England, Ireland, Iraq, Turkey, Afghanistan, Israel, ancient Rome and Roman Egypt, ancient Greece, Korea, Japan, China, and among Yiddish-speaking Jewish communities in Eastern Europe; Grayson (2006: 357) speculates it may originate in India (Keys 2004; Grayson 2006; Ben-Amos

2007: 322-324; Ovid 2010 [AD 8]). Although Narcissus is familiar to most Europeans and Americans, in a more common version of the mistaken reflection, a mirror is introduced, usually to a married couple or family, and each person mistakes the reflection in the mirror for a real person. The result is strife within the group as the appearance of "strangers" causes everyone to re-evaluate their relationships to one another. The following is a 20th century Japanese version related by Makino Etsu, published in English translation in 1963 (Grayson 2006: 273):

> In a certain place there was a young man who loved his parents very much. He married and shortly afterwards his father died, so that he was very sad.
>
> One time, he had to go up to Edo [Tokyo] on business, and there he saw a mirror shop. Wondering what sort of unusual things were sold there, he looked into one of the mirrors. He saw his own reflection, which looked exactly like his own father. He was very surprised and said, 'I didn't know that my father would be here!' He bought one of the mirrors and took it home. After he got home, he put it up in the *butsudan* [household Buddhist shrine used for communicating with ancestors] and prayed before it every day.
>
> One day his wife said to herself, 'What is my husband doing, looking into the *butsudan* all day?' She went to look for herself. She found that there was a woman's face in the mirror. She became very angry and said to her husband, 'Old man, nobody but you would do a thing like this. You bring a concubine home and put her inside this gold frame!'
>
> 'What are you saying! That is my dead father', and the two of them began quarrelling back and forth.
>
> Just then a nun came by. After she had found out what they were arguing about, she said, 'Please let me take a look'. And when she looked in the mirror, she saw a nun there. 'Oh, the woman has repented and become a nun, so you can pardon her', she said.
>
> And so that was the end of the argument.

The following is a contemporary European version of the story. Séamus Ó Catháin recorded the following tale from Michael McCanny of County Tyrone, Northern Ireland, in 1976 (Glassie 1985: 89-90):

> Well, before it leaves my head now, I'll tell you something about a pair that lived up thonder. You know in them days, everybody, every man, especially, was out, well, out, any day he could stay out—and some days he couldn't—he was out digging. Naturally enough, some people's hands was harder than others and the harder the hand the worse it was, for it cracked up, you know, hacked, bleeding. So mirrors was never used then, they were hardly known, you know, and you were above the ordinary if you had a mirror in the house.
>
> But then this Vaseline box came out then to the relief of the country—Vaseline they got for sore hands. So these old pair got a box and Paddy used to put it on when his hands would be sore. So he come in this day and there were one of his hands bleeding and he says: 'Where's that Vaseline?' So Rosie got him the Vaseline and she says: 'All's in it, take it with you, and if your hands be sore, put it on. They're not much in it now anyway.'

> So Paddy took it with him to the field and after a while he got it and from the first time when he was born, he seen himself in this wee mirror—there was a wee mirror in the lid of the box. I'm sure you seen one of them.
>
> So, this was his father! After all these years he was dead—and that was him! So every now and again when he was smoking, he admired this, admired himself and he thought it was his father in this little mirror.
>
> But Rosie called him in to his tea and he was interested in this [i.e., the mirror] and she thought she would see what he was looking at. So that night—she forgot all about it then—they were going to bed. Paddy was away to bed anyway, he was tired and she was ready to go to bed. There were very few nightgowns at that time, you know. But she minded about this, and she went to Paddy's purse and she got the Vaseline box.
>
> She was like Paddy—she seen herself for the first time ever. So she left it down and she reached for the tongs and she till Paddy in the bed. She says, 'If that's the sort of an old dame you're interested in, in soul I'm long enough here!'
>
> So Paddy parleyed with her and said everything would be all right, and he says: 'We'll see in the morning what we're going to do about it.'
>
> So she got up in the morning and made breakfast and she produced the Vaseline lid. 'I think in God's name,' she says, 'we'll put it in the fire and be done with it.'
>
> 'Oh,' he says, 'that wouldn't be right at all, that's my father.'
>
> 'It's not a bit odds,' she says, 'I never seen your father,' says she, 'and I suppose I never will. But I'm sure,' she says, 'he never had hair and diddies like what I seen on that old dame last night.'
>
> And, naturally enough, when the glass got the heat, it sparked out. 'Now,' she says, 'didn't I tell you! Thanks be to God,' she says, 'there it is. I told you it was bad from the start.'

Important features of this story type are that the incidents take place in a past where most people are ignorant of their own reflections (in the Irish version, simply "those days," and in the Japanese version, during the Edo period, 1603-1868). Not only are mirrors inaccessible for most people, but they apparently have never seen their reflections in water either. Failing to recognize themselves, they therefore mistake the reflection for an actual person. In East Asian versions of the tale, a mediator usually intervenes to resolve the dispute (such as the nun in the Japanese version above), although sometimes even the mediator mistakes the reflection (Grayson 2006: 273). In the Irish version, a mediator is not necessary because whereas the husband mistakes his reflection for his own father, the wife mistakes hers for a picture of a naked woman, which she simply destroys. In a Lao version, the husband's father destroys the mirror when he attacks his reflection with a knife (Tossa 2008: 44).

By setting the story in a vague past, listeners can laugh at the ignorance of their forebears who were not sophisticated enough to own mirrors and recognize their reflections; even more amusing is the protagonists' own imagined cleverness, in some versions. For example, in the Northern Irish version, the wife believes she has found her

husband's hidden pornography and that she has seen through his "lies" about his father being in the lid of the Vaseline tin. In the Korean versions of the story analyzed by Grayson (2006), another dimension is added: the characters are variously portrayed as members of the educated upper class or as wealthy commoners, who might be expected to be worldly, although the story reveals them to be quite the opposite. The listener's amusement is at the expense of people with pretensions to sophistication, rather than at their own ignorant ancestors.

Meanwhile, in the second century Chinese version (the oldest recorded Asian version of this story motif) the married couple's discord—and there, not only the wife, but the husband also mistakes his reflection for his spouse's lover—is resolved by a holy man, who smashes the pitcher full of wine (Grayson 2006: 266-267). Listeners would presumably be familiar with Buddhist philosophy and would recognize in this tale an echo of the mirror metaphor, where all phenomena are ultimately revealed to be insubstantial, like a reflection.

From the examples above, it can be seen that this folkloric theme varies slightly according to cultural and historical specifics in each region where it is told. In all the variants of the tale, however, the literal reflection becomes a metaphorical reflection of the viewer's insecurities or weaknesses. In the Chinese version, where the couple are newlyweds, their passions cause both to jump to jealous conclusions (each believing the other to have been unfaithful). Even where more mature married couples are portrayed, such as the Irish and Japanese versions, the wife's jealousy may be aroused by what she perceives to be her husband's unfaithfulness or obsession with pornography. Listeners must have been sensitive to a wife's dependent position in these cultures and periods, perhaps predisposing her to insecurity, and might have sympathized with her jealousy while still being amused by her lack of sophistication. But she is not the only one who is deceived: In the Irish and Japanese versions, the husbands mistake their reflections for their own fathers; in the Korean versions, magistrates think a new magistrate has come to replace them. In a Chinese version recorded in 2002, the wife's parents each think their daughter has become ashamed of them and replaced them with surrogates, no doubt a reflection of the dependence of the elderly on their children's support. And in the second

century Chinese version a friend of the husband thinks he has been replaced with a new friend, while a nun thinks the husband has taken a nun for a lover. In other words, each person sees something which threatens his or her social position and relationship to other individuals. The reflection thus manifests vanity and insecurity in tension—that in which we take pride is our greatest vulnerability.

Importantly, in each case, the viewer's uniqueness is under threat—the wife is no longer the only woman in her husband's life (and *vice versa*); the mother and father are not the only parents; the friend is not the only friend; the magistrate no longer the only magistrate. So there is a danger in mimesis, a danger which is embodied by the mirror. From a rhetorical point of view, the mirror demonstrates what is lacking in the characters, to wit, (self-) reflection. It is not just their stupidity or ignorance, but their lack of self-knowledge and insecurity in their identity, which drives the plot. Thus, rather than simply being a social satire, the tale makes a point about the human condition—if these characters had a deeper understanding of their own fears and desires, metaphorized by the reflection, they would recognize their initial reactions as the product of these inner demons.

Social distortion

The mirror is often a deceiver, especially in European folklore that is heir to the Greek philosophical tradition—"for now we see as through a glass, darkly"—its insubstantial reflections are a model for imperfect understanding.

> The metaphor of the mirror is…used in ancient Greek philosophy, by Plato and Democritus. But the early Greek authors always use this metaphor for its *subjective* properties. Plato uses mirror images to contrast true objects of knowledge with mere imitations and imperfect copies of it. He uses this metaphor to point out the ontological gap between the archetypal form and its sublunary copies....A mirror image is less valuable than its original for the simple reason that the image is ontologically dependent upon its prototype. Moreover, mirror images systematically distort the original, by inverting left and right, for example….The function of the metaphor of the mirror is to explain the possibility of subjective knowledge, that is, cases where one and the same object is perceived ("mirrored") in different ways, or even distorted, by different knowing subjects, whose mind acts as a mirror (Reding 2004: 156-157, emphasis original).

Just as water embodies a paradox, that it is both necessary to life and also potentially deadly (Kamash 2008), the trickster and liminal properties of mirrors allow them to

metaphorically share in this paradoxical quality. In folklore, the use of the mirror as a metaphor for deception or subjectivity becomes a device to satirize social mores. Not surprisingly, the characters that embody mirror-like traits are disruptive and potentially dangerous.

Fenkl (2007) discusses the mirror only as a peripheral aspect of his comparative analysis of two trickster figures, Tyll Eulenspiegel in German, and Kim Seon-dal in Korean folklore and literature. Nevertheless, his comparison reveals much about the mirror in the public imagination. The names of these two tricksters have similar meanings. *Eulenspiegel* means "owl-mirror"—owls are a common symbol of wisdom in Europe (e.g., Saunders 1995: 112). The primary reading of *Seon-dal* is a title (something like "gentleman"), but because the words are homophones, it can also be understood as "enlightenment-moon" (Fenkl 2007: n.p.). The moon in Korean folklore and literature is commonly conceived as a reflector—metaphorically, a mirror—of the sun's brightness, which indeed it is (2007: n.p.). Homophonic puns are common in Korea and Japan, where words of Chinese origin coexist with ones of native Korean and Japanese derivation. Chinese writing uses unique characters for each word, but the writing systems developed in Korea and Japan—whose languages are not related to Chinese—are phonetic, which allows for multiple meanings underlying the same phonetic sounds. Moreover, in the telling of a folktale, writing is not a factor since the tale is related orally. Thus the double meaning of *Seon-dal* is entirely intentional.

So while at first sight the names "Owl-Mirror" and "Enlightenment-Moon" might not seem that similar, in fact both are *wisdom-reflectors* (ibid). However, being tricksters, Eulenspiegel and Kim Seon-dal not only reflect, but invert, conventional wisdom: "Ultimately, Eulenspiegel's pranks are not primarily about the exposure of human weaknesses and malice but the implicit breaking up and sublation of a given status of consciousness by means of negation itself (animus) as that which Eulenspiegel embodies" (Bote 2009). Eulenspiegel and Kim behave in ways decidedly contrary to their societal norms and are even downright immoral—for example, Kim blackmails his neighbors. Why then aren't these tricksters considered villains? Much of the enjoyment of the tales, and approbation for the characters, comes from the ways in which they

outsmart those who think themselves clever. By inverting their interlocutor's cleverness, Eulenspiegel and Kim reveal-through-reflection groundless vanity and hollow pretensions.

The similar inversions of wisdom in *Eulenspiegel* and *Seon-dal* cannot both be derivative of Greek mirror metaphors, for they are found on opposite ends of Eurasia. Furthermore, the frequent mirror metaphors in East Asian philosophy never show the mirror as a distorter (Reding 2004: 157). Instead they seem to be echoes of ideas attached to mirrors in popular wisdom and exchanged throughout Eurasia.

Soul-catchers

One of the most common mirror themes in folklore is the mirror as a container for souls (e.g., Chernetsov 1963, cited in Jordan 2001: 89, Frazer 2008 [1935]: 197-198), a belief also reported by Eliade (1964: 153-154) in his descriptions of Inner Eurasian shamanism. Somehow, the mirror traps the reflection, and with it, the ineffable subjectivity of the individual. Sometimes, the soul can temporarily leave the mirror, or can bring others into it. In some versions, an individual spirit can appear in any mirror, which suggests a belief in a world on the other side of the mirror (see below), while in others, a specific mirror is haunted. As mentioned above, Tedlock (2005: 47) records that Manchu-Tungusic speaking shamans use mirrors to attract and hold spirits. Therefore it seems this folkloric theme has direct analogues in traditional Eurasian practices. This belief is generally thought to be the basis for traditions of covering mirrors or water basins after a death, as well as the reason breaking a mirror brings bad luck.

One popular contemporary phenomenon celebrating a spirit in a mirror is the "Bloody Mary" ritual. The Bloody Mary ritual seems to have originated in the United States in the 1960s, and has since spread to Great Britain and Sweden (Ellis 2004: 163). This "legend trip" (Thomas 2007: 37), alternatively described as a "fear test" (Tucker 2005: 186), is performed by adolescents and pre-adolescents, usually females. In legend tripping, individuals—often teenagers—visit the site of reported supernatural activity in order to try and experience it first-hand (Goldstein et al 2007: 13). A legend trip may act

as, but is not necessarily, a fear test. Other social factors are in play, such as a desire to approach the numinous or even just local history. At any rate, minor performative details of the Bloody Mary ritual vary, but in all versions, the participants go into a darkened room with a mirror (frequently a bathroom), and summon the spirit of a deceased murderess—Bloody Mary (not Mary Tudor, despite the shared moniker), Mary Whales, Mary Ruth, Mary Weather, or Mary Worth (Tucker 2005)[57]. The spirit is then said to appear in the mirror and often to come out of the mirror brandishing a weapon with which to kill the participants.

Langlois (1978: 11) suggests that the entity appearing in the mirror—or expected to—in the Bloody Mary ritual "literally reflects the identification of the participants with the revenant," who is "victim, witch, mother, avenger, child abuser, and protector" (Dégh 2001: 244). In some versions, Mary's children were murdered, in some she murdered them herself—the latter version seems to reflect some confusion with the popular legend of *La Llorona* ("the weeping woman"), an infanticidal mother whose appearance is common in regions of the country with large Mexican-American populations.

Dundes (2002: 86) stresses that the mirror is a locus for identity crisis in girls, who, "influenced by a host of cultural factors ranging from Barbie Dolls to mass media advertising have already begun to worry about their appearance….A mirror is an obvious source of narcissistic pleasure (or concern) in this respect." The profusion of blood associated with the revenant Mary is, Dundes argued, symbolic of menstruation, since many of the participants in the ritual are around the age of puberty (2002 and pers. comm.).

Tucker (2005) interprets that in the ritual, "Preadolescent girls see an aggressive mother figure who threatens to inflict pain, an early initiation into the perils of female maturity," and that "through a modified Jungian analysis…it is possible to identify patterns of self-discovery in later adolescence [through] a quasi-initiatory experience that facilitates their development of a more complex sense of self" (Tucker 2005: 186, 199).

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[57] I was introduced to the Bloody Mary ritual about age 11, by a female friend of the same age. According to my friend, if we chanted "Bloody Mary, I killed your baby" three times in a totally darkened bathroom, Bloody Mary would appear in the mirror, and even come out of it with an axe to kill us. Bloody Mary sought to avenge the mysterious death of her baby. I declined to participate.

Psychoanalyses such as those discussed above are right to emphasize the role of the mirror in the formation and reification of selves, but overlook the popular belief in the mirror as a container and/or embodiment of the souls of the dead. Of course, crafting the self using a mirror, which therefore is a source of fascination and *Angst*, and a belief that the reflection/soul can be contained or trapped within a mirror, are not mutually exclusive. However, the Bloody Mary ritual as an initiatory fear test, legend trip, or enactment of menstrual- or appearance-related anxiety are simply variations on a much more ancient and widespread Eurasian theme.

The following Tunisian Jewish legend is typical of stories of souls in mirrors, although in this case, the souls are evil, that is, demons:

> The girl glanced at herself in the mirror all the time, and in this way she was drawn into Lilith's web.... For that mirror had hung in the den of demons, and a daughter of Lilith had made her home there. And when the mirror was taken from the haunted house, the demoness came with it. For every mirror is a gateway to the Other World and leads directly to Lilith's cave. That is the cave Lilith went to when she abandoned Adam and the Garden of Eden for all time [Lilith was Adam's first wife], the cave where she sported with her demon lovers. From these unions multitudes of demons were born, who flocked from that cave and infiltrated the world. And when they want to return, they simply enter the nearest mirror. That is why it is said that Lilith makes her home in every mirror....Now the daughter of Lilith who made her home in that mirror watched every movement of the girl who posed before it. She bided her time and one day she slipped out of the mirror and took possession of the girl, entering through her eyes. In this way she took control of her, stirring her desire at will.... So it happened that this young girl, driven by the evil wishes of Lilith's daughter, ran around with young men who lived in the same neighborhood (Schwartz 1988: 120-121).

This tale contains elements of another theme, the otherworld behind the mirror's surface, which is discussed in greater depth in the next section.

The theme of souls in mirrors features in several contemporary horror movies, including *El espejo de la bruja* ("The Witch's Mirror, Mexico 1962), *Al otro lado del espejo* ("On the Other Side of the Mirror," Spain 1973), *Candyman* (USA 1992), *Into the Mirror* (South Korea 2003), and its American copy, *Mirrors* (2008), *Donde nadie nos ve* ("Where No One Can See Us," Spain 2005), *Chermin* ("Mirror," Malaysia 2007), and *Mirrors 2* (USA 2010)[58]. In addition, a number of popular television shows as well as internet archives of personal ghost stories feature individuals recounting their experiences

[58] In the Japanese movie *Ringu* (1998) and its American copy, *The Ring* (2002), videotape takes the place of a mirror as a container for human souls.

of ostensibly ghostly phenomena, or legendary hauntings associated with historic buildings, and these stories frequently report apparitions in mirrors (Ayalon et al. 2011; Becker et al. 2010; Blake et al. 2010; Bluemke 2005; Bozak et al. 2009; castleofspirits.com, cited in Goldstein et al 2007: 77, 185; De Brito et al. 2010; Dennis and Platt 2005, 2006; Eshed et al. 2008; Gsell et al 2011). Reports of ghosts in mirrors can be classified among the folklore about "disembodied spirits looking for embodiment" (Goldstein et al: 223). If a spirit were seeking embodiment, a mirror would be a natural point of attraction, since its purpose is to double the bodies of the living. At the same time, as an inverted otherworld, it is a liminal space that corresponds to the liminal nature of ghosts. The belief that spirits can become trapped or embodied in mirrors is obviously alive and well.

If mirrors can be seen as containing spirits, they make excellent tools for the performance of mimetic magic intended to act upon the person linked to the mirror. Mimetic or substitutive magic allows an object to stand for an individual, so that actions performed on the substitute affect the person it represents; the more the stand-in can be made to resemble the target, the more effective the magic (Rozin and Nemeroff 1990). Mimetic magic is practiced in many cultural contexts (most familiar to Americans may be the "voodoo doll"). A medieval Jewish ritual involved scratching a beloved's name in the back of a mirror, then reflecting in the mirror a pair of mating dogs, followed by the beloved; "The intention is to excite the girl when she is in his company through the magic power of the sexual act, fixed in the mirror that has been associated with her name and person" (Trachtenberg 1977: 128). In Japanese folklore, mirrors sometimes stand in for individuals (e.g., Hearn 1971 [1903]: 57-59), which is perhaps not surprising since nothing resembles an individual more than his or her own reflection. Actions performed upon the mirror thus have an effect on the individual who owns it. A Japanese folktale, published in English as *Of a Mirror and a Bell* during the early 20th century illustrates the principle:

> There was at that time a young woman, a farmer's wife, living at Mugenyama, who presented her mirror to the temple, to be used for bell-metal. But afterwards she much regretted her mirror….Now, when all the mirrors contributed for the Mugenyama bell had been sent to the foundry, the bell-founders discovered that there was one mirror among them which would not melt….She had not presented her offering with all her

> heart; and therefore *her selfish soul, remaining attached to the mirror*, kept it hard and cold in the midst of the furnace (Hearn 1971 [1903]: 54-55, emphasis added).

In this case, the woman's soul is linked to the mirror, but not trapped within it; however, once the woman had died, the link was presumably broken so that it was possible to melt the mirror (ibid: 55).

In another Japanese folktale, the soul of a woman persists in her mirror after her death. As the woman lay on her deathbed:

> …she called to her little daughter, and said: 'Dear child, when I am dead take every care of your father. You will miss me when I have left you. But take this mirror, and when you feel most lonely look into it and you will always see me.' Having said these words she passed away….[And thereafter] the little one, remembering her mother's words, would retire to a corner and eagerly look into the mirror, where it seemed to her that she saw her dear mother's face, not drawn in pain as she had seen it on her deathbed, but young and beautiful (Davis 1917: 196-198).

The same process of mirror capture was sometimes thought to work for inanimate objects as well: In medieval Britain, when large crowds prevented close approach to sacred objects, a mirror "was held up to catch the sacred feature's reflection, so that its 'radiated grace' passed into and sanctified the physical object [the mirror], which could then be shone on a piece of bread to turn it into a cure, a simile for the Eucharist" (Hinton 2005: 211; see also Schechner 2005). In this case, a mirror could capture the spiritual essence of an object, and then transfer it (in the form of reflected light) into another object.

Through the looking-glass

The idea that souls can exist within mirrors is often linked to the notion that another world may lie behind the mirror's surface, as in the Jewish example above, where mirrors are a gateway to Lilith's Cave. The mirror may act as a window or portal to that otherworld, or to this-worldly, but distant, places or times; or it may possess a mind of its own, telling its interlocutor about the world beyond. In a similar manner, Van Deusen (2004: 125) writes that Tuvan shamans use mirrors to "clairvoyantly" see their patients' illnesses, which demonstrates that this aspect of mirror lore relates to concrete practices

in some Eurasian communities. According to Eliade (1964: 154), Mongol shamans refer to mirrors as white horses, indicating the shamans' abilities to travel using them. It is interesting that although the world behind the mirror is such a common theme in folklore, it does not seem to be actually believed in today, the way that the soul in the mirror is.

One of the most famous examples of a world beyond the mirror in popular literature is Lewis Carroll's *Through the Looking-glass: And What Alice Found There* (Carroll 1993 [1872]), in which the protagonist, Alice, is able to see another world exactly like this one, but reversed, beyond the mirror. As Alice instructs her cat:

> "First, there's the room you can see through the glass—that's just the same as our drawing-room, only the things go the other way….the books are something like our books, only the words go the wrong way; I know that, because I've held up one of our books to the glass, and then they held up one in the other room" (ibid: 9-10).

At first, Alice pretends that she does not recognize herself or her surroundings in the mirror (or, in cognitive terms, that she lacks mirror self-recognition). But shortly afterwards, the surface of the mirror dissolves and Alice really does fall through into "Looking-glass House" (ibid: 11-12). Although Carroll's book is a fiction, the products of a particular individual's imagination, the events surrounding the mirror are based on oft-repeated themes in Eurasian folklore.

Many European folktales are best preserved today in children's literature, such as *Through the Looking-glass*; most children today are familiar with versions of the "fairy tales" *Snow White* and *Beauty and the Beast*, made popular by Disney animated features (Cottrell et al 1937; Trousdale and Wise 1991). In *Snow White*, the eponymous main character's stepmother is able to consult a "fairy mirror" about events and people far away (Grimm and Grimm: 199). She famously asks, "Who is the fairest one of all?" (Cottrell et al 1937). That the mirror can answer this question suggests that it has knowledge of the appearance of every living woman. However, it is not the stepmother herself—that is, the subject—who views all these women through the mirror, but the mirror itself which has this knowledge and articulates it.

In *Beauty and the Beast*, a story first published in French in the 18th century, the Beast gives Beauty a mirror which enables her to see her family at the same moment, though far away (de Beaumont 2002 [1757]). In some versions, such as the film by Jean

Cocteau, when Beauty returns to visit her father and sisters, the mirror lets her see the Beast in his palace (Cocteau 1946). Cocteau later used a mirror as a literal portal between the world of the living and that of the dead in *Orpheus* (Cocteau 1950). Orpheus follows Eurydice into Hades, stepping through a liquid-like mirror.

The world behind the mirror is possibly the most prevalent theme of all mirror lore, especially as it may underlie popular and widespread divinatory practices. Indeed, Tucker (2005) speculates that the Bloody Mary ritual may derive from earlier divinatory practices where young women sought the face of their husbands- or lovers-to-be in a mirror, although if so, the meaning of the ritual has entirely transformed. Mirrors are consistently linked to vision, often standing in as a metaphor for vision, which itself can act as a metaphor for knowledge (Reding 2004). Vision, of course, is the sense through which we interact with mirrors, and they also show us our own eyes, which, though the organs of sight, cannot themselves be seen. In folklore, mirrors can enhance vision to allow sight into other realms. Mirror divination, or *catoptromancy*, has been practiced in many cultures, and is still extant today (Pendergrast 2003). Almost any metaphysical bookstore catering to neo-pagans will stock books on scrying. In this type of catoptromancy, an individual gazes not at their own reflection, but with the eyes focused through the mirror, that is, into the background of the reflection, in order to see visions of past, future, or the distant present (Tyson 1997: 152). Beauty in *Beauty and the Beast* could be said to have been scrying in her mirror. In two current versions of this idea, a mirror is used to receive communiqués from a parallel universe in the science-fiction television program *Fringe* (Abrams 2010), while in the world of Harry Potter, two fragments of a mirror each reflect the environment around them, even when widely separated, allowing one to use one fragment to see what is around the other (Rowling 2007)—all of which shows that the idea survives in stories intended for adults as well as fairy tales for children.

Phenomenologically, scrying, along with other divinatory practices such as reading tea leaves, may depend on an effect called pareidolia, in which the mind attempts to extract recognizable information from random patterns (Martin Araguz et al. 2002). The actual content of the information varies from individual to individual, like the

interpretation of Rorschach ink blots. The flickering light of candles, often the preferred light source during scrying, may help to generate more random reflections and shadows, from which more information can be discerned through pareidolia[59].

Again, the notion that mirrors can be used as windows to other worlds or distant lands appears across Eurasia. During a ritual known as *kut*, a Korean *mudang*, or female shaman, recites the following as part of an invocation to several spirits:

> Oh, I am the great mountain god.
> If I sit down, I cover three thousand *li* [the entire land of Korea].
> If I stand up, I stretch over ninety thousand *li* [the whole world].
> If I look down with my clear mirror, I can observe ten thousand *li*.
> Oh, I am the great mountain god (Wilson 1991: 258).

The *Sansang*, or mountain god, is one of the spirits which the shaman will temporarily embody in the performance of the *kut* ritual. Although he can interact directly with mortals through the shaman, the mountain god nevertheless uses a mirror to view a space more than three times the length of Korea.

Meanwhile, one Rabbi Adam possessed a mirror, once owned by King David, which allowed him to see things happening all over the world. He used the mirror to watch over his fellow Jews, and fortunately, was able to enchant his horse so he could ride to their aid (Yolen 1988: 276).

In fact, this theme even appears in the Americas. If petitioned through a mirror, the god Quetzalcoatl would send rain (Olivier 2003: 260), which is to say, through the mirror mortals could communicate with the gods. The god Tezcatlipoca ("Lord of the Smoking Mirror")—also known as Tezcatlanextia, "Mirror that Causes Things to Appear"—used a mirror to observe the world and "reveal people's sins and destinies" (ibid: 262; Saunders 2001: 222). Similarly, it was said the king could use a mirror to observe his subjects (Olivier 2003: 267). Indeed, the word "mirror" (*tezcatl*) was used by diviners to refer to any tool of divination (ibid). According to Saunders (1988: 7),

[59] I make no comment on the efficacy or accuracy of catoptromancy, whether it involves pareidolic effects or not; my interest here is merely to describe the physiological-cognitive effects of mirror-gazing. Moreover, even pareidolic perception of random phenomena can draw forth information from the subconscious, which is, after all, the point of the Rorschach test.

> In Central and South America there is a widespread belief in a parallel or reflected spirit-world….mirrors are 'windows' into the spirit-world and the images they reveal are considered 'real' spirit-beings inhabiting a parallel universe….These spirit-beings, imbued with a life of their own, may also use mirrors to 'see.'

Access to mirrors gave Mesoamerican rulers visual access to their subjects' hearts and souls, and thus, access to power (Saunders 1990: 168). Since the notion of the mirror as a window or portal appears in both the Old and New Worlds, one may hypothesize that this is a "universal" reaction to mirrors, and it therefore may have independent origins. However, the extensive nature of contacts across Eurasia likely contributed to the spread of this aspect of mirror lore and its popularity in the Old World.

The mirror in *Snow White* has become the focus of a number of psychoanalytic and symbolic analyses. Per a Freudian reading of the tale, for example, the mirror becomes the focus of the queen's penis envy, for which she tries to compensate with beauty (Barzilai 1990: 518-519). Feminist scholars have argued that the mirror, in *Snow White* particularly, represents the patriarchal gaze (ibid). The wicked queen's sole source of validation is the mirror, which is to say, her appearance, and the (masculine) mirror's approbation of it.

Rather than being a *representation* of patriarchal gaze, however, the mirror is an *enactment* of it. That is, the presence of the mirror in *Snow White* may act according to patriarchal realities of the time when the story circulated (including the present), in which a woman's worth may be established largely based on her appearance and how pleasing men judge it; but it has already been demonstrated that mirror lore is subject to modification according to prevailing cultural mores in any given time and place. In this case, the agency of the magic mirror takes the form of evaluating women's appearance because that is the question put to it by the subject—that is the queen's agency in effect.

Alternatively, it has been suggested that the magic mirror "allows the doubled, divided, or multiplied self that reflects women's psychological experiences to be fully portrayed" (Schanoes 2007). Here the mirror is not so much a representation or symbol, but a metaphorical tool—the only way to represent the mimesis of the feminine self. As with the patriarchal gaze hypothesis, however, the power of the mirror—it's "affordance" of magical communion with distant times and places—remains unaltered by the subject's specific concerns. As attested in other folktales, such a mirror may be used by mortals to

observe immortals (and vice versa), to observe co-religionists (as Rabbi Adam did) or loved ones (as Beauty did). Significantly, the nature and power of the mirror are not altered by the interests of the user.

Summary

Mirrors are represented differently in folklore than in philosophical texts. In folktales, mirrors have magical properties which are not simply metaphorical but are meant to operate literally. Mirrors can be portals to other worlds, allowing the dead to enter the world of the living or vice versa; or they can contain the soul or essence of people with whom they have once come into contact. However, mirrors also function in social satire, by inverting social expectations of correct behavior and thereby revealing hypocrisy, and by forcing the listener/reader to contemplate identity, often in a lighthearted, humorous way. For example, in many stories, the viewer does not recognize his or her own reflection, mistaking it for another person, and chaos ensues. These folkloric motifs can be found from western Europe to East Asia.

PSYCHOLOGICAL AND BEHAVIORAL STUDIES

A number of studies have been published on the subject of mirror self-recognition in humans and other animals, and what this actually means in cognitive, ontological, and phylogenetic terms. Mirror self-recognition (MSR) is the ability to recognize a reflection as the image of one's own body. A smaller number of studies concern the effect of mirrors on the subject's consciousness. Most of the properties and powers attributed to mirrors are probably not the result of ethology, but are more culturally-specific; nevertheless, if mirrors can be said to act upon a subject's consciousness in one culture, they can be hypothesized to act upon consciousness in other cultures, even though the specific effects may vary. For example, as discussed above, brightness and certain colors seem to be universally eye-catching; the meaning individual subjects may attribute to that brightness or color once it has caught their attention is another matter.

Mirror self-recognition in humans and other animals

Can studies of other species reveal anything pertinent to understanding the human relationship to mirrors? To date, only humans, Asian elephants (*Elephas maximus*) (Plotnik et al 2006), dolphins (*Tursiops truncates*) (Reiss and Marino 2001), magpies (*Pica pica*) (Prior et al 2008), chimpanzees (*Pan troglodytes*) (Gallup 1970; Povinelli et al 1993; Povinelli et al 1997), bonobos (*Pan paniscus*) (Walraven et al 1995), orangutans (*Pongo pygmaeus*) (Lethmate and Dücker 1973; Suarez and Gallup 1981), and possibly gibbons (*Hylobates lar*) (Hyatt 1998) and gorillas (*Gorilla gorilla*) (Suarez and Gallup 1981; Ledbetter and Basen 1982; Patterson and Cohn 1994) have demonstrated self-recognition in a mirror. For each species (other than humans), not every individual exhibits mirror self-recognition (Prior et al 2008: 1642). African gray parrots (*Psittacus erithacus*) can use mirrors for a variety of tasks, including locating hidden objects, which suggests that they understand that the mirror reflects real objects, and thus potentially may recognize the reflection of their own bodies, but have so far not shown self-recognition (Pepperberg et al 1995). All of these animals are known to be quite intelligent, but other intelligent mammals and birds have so far not demonstrated mirror self-recognition, from which a question naturally arises: What is the cognitive and social significance of mirror self-recognition (MSR)? Meanwhile, many studies have attempted to determine the ontogeny of self-recognition in human infants (Papoušek and Papoušek 1974; Bertenthal and Fischer 1978; Mans et al 1978; Johnson 1983; Meltzoff 1990), made philosophically famous in Lacan's "mirror stage."

Functionally, MSR means that the subject recognizes its reflection as an image of its own body, as opposed to mistaking it for another individual. Yet outside the context of human society, of what use is this skill? That is, would natural selection favor the evolution of MSR or is it merely a coincidental byproduct of intelligence? Mirror self-recognition "cannot be an important adaptation," since animals thought to lack this ability have survived for millions of years (de Waal 2008: 1621). It is important to note here that all the animals which have so far exhibited MSR, including humans, are highly social. There is thus arguably a greater selective pressure on recognition of specific individuals in the community, including, it would seem, oneself. The ability to recognize one's own

body is probably not as meaningful for social animals, or as instructive for researchers, as is the ability to remember and enact specific relationships with other individuals. Indeed, possible ontogenetic and phylogenetic connections between MSR and empathy have been proposed based on the appearance of "sympathetic concern" in young children and "targeted helping" behavior in great apes (also seen in dolphins and elephants) (ibid: 1622; Plotnik et al 2006: 17053), which is to say, social behavior which involves the imagination/understanding of another's mental state. The same "perspective taking" is necessary for tactical deception (de Waal 2008: 1622).

Testing for MSR involves marking the body of an animal in a place they cannot see without recourse to a reflective device, for example, on the forehead (or pretending to mark them to see if the experience of being touched as if marked will result in self-examination). If the animal sees its reflection, observes the mark, and then attempts to examine their own body (e.g., by rubbing at the mark), they have passed the test. Conversely, if they attempt to interact with the reflection as if it were another individual, they fail. According to Plotnik et al (2006: 17053):

> Animals that demonstrate MSR typically go through four stages of behavior when facing a mirror: (*i*) social response, (*ii*) physical mirror inspection (e.g., looking behind the mirror), (*iii*) repetitive mirror-testing behavior (i.e., the beginning of mirror understanding), and (*iv*) self-directed behavior (i.e., recognition of the mirror image as self)... The final stage is verified if a subject passes the "mark test"….Animals without MSR tend to remain at stages 1 and 2.

The introduction of mirrors into a previously mirrorless environment has been shown to produce changes in behavior other than self-examination. Although bottlenose dolphins ignored marks placed on the bodies of other individuals, they used mirrors (or selected the best alternative reflector) to examine their own bodies for marks (Reiss and Marino 2001: 5940, 5942). If no mark had been made, once the dolphins had ascertained that their bodies were unchanged, they abandoned self-examination (ibid: 5940). However, among male dolphins, the presence of a mirror excited significantly more sexual activity than when the mirror was absent (ibid). In fact, the dolphins preferred to engage in sex-play in front of the mirror, where they could see their reflections, and if they drifted away from it, they broke off activity until they could resume in front of the mirror (ibid). The dolphins' behavior seems to combine the introversion of self-

inspection with the extroversion of sex[60], a social activity. Elephants brought food to the mirror and ate before their reflections (Plotnik et al 2006: 17054).

A further important element of MSR is that it is likely dependent on the subject's degree of interest in the mirror and reflection. Among magpies, it was found that those which showed no interest in examining the mirror never came to recognize their reflections, and vice versa (Prior et al 2008: 1646). Carpenter (2003: 482-483) introduced a large mirror to the Biami, a New Guinea community who had seldom previously had opportunity to view their own reflections; he observed considerable fascination with the mirror. De Waal (2008: 1622) humorously suggests that magpies' famous love for shiny objects might have something to do with their ability to recognize their own reflections in them; might the same not be true for humans?

In sum, it is clear that "essential components of human self-recognition have evolved independently in different vertebrate classes with a separate evolutionary history" (Prior et al 2008: 1642) along with convergent evolution of cognitive and social complexity. Moreover, the recognition of one's own body in a mirror reflection seems to have implications for other social behaviors, such as sex, empathy, grooming, and deceit, in humans and other animals.

Mirror self-recognition and identity

What animal behavioral studies show us is that sociality is at least as important as intelligence when it comes to recognizing one's own body as distinct from those of other individuals. Following closely upon self-recognition, many animals engage in social behavior with their own reflections. This suggests (although it does not prove) that these individuals are experimenting with seeing themselves as others might see them. It seems that it is not so much mirror self-recognition, as defined in experimental terms, but the interaction with self—the ability to temporarily imagine oneself as an observing other—that is the true socio-cognitive leap. Passing the MSR test itself, though it has been the "gold standard of self-identity" for some four decades (de Waal 2008: 1621), is not an adequate proof of the existence of a self, much less a conception of having one.

[60] *Sex*, as opposed to mating, is not aimed at procreation. For example, male dolphins will often engage in sexual activity with one another, which is clearly non-reproductive behavior.

Carpenter (2003) has argued that, for humans, the moment of self-recognition is terrifying, a moment of profound tension. Such shyness appears around the age of two (Rochat 2003: 718). Carpenter states,

> The notion that man possesses, in addition to his physical self, a symbolic self, is widespread, perhaps universal. A mirror corroborates this. It does more: it reveals that symbolic self OUTSIDE the physical self. The symbolic self is suddenly explicit, public, vulnerable (Carpenter 2004: 483, emphasis original).

Carlson (2006) has argued that mirrors actually spectacularize the world around them; so it could be said that it is not so much the visual manifestation of the symbolic self that "terrifies," but its *spectacularization*. Whether toddlers or adults who have never seen their own reflection, when confronted with a mirror, "Their behavior indicates a drive to vanish from the public eyes" (Rochat 2003: 718). Suddenly the individual's self becomes the object of others' visual attention. One becomes an object to oneself, and others can see one seeing oneself. Lacan (1966) deems this to be a profoundly isolating experience.

Identities are formed out of one's relationships with others:

> Individuals are more often than not self-aware *with others*, not on their own….The fact is that we are never aware outside of a social context, whether real or virtual. In relation to social-cognitive development, infants and children show that they develop to become "co-aware" of the world, including themselves. They develop awareness *with* others, not independently of others (Rochat 2003: 729, emphasis original).

The mirror allows one to become other to oneself, in an immediate, visual sense. One can enter into a new kind of relationship with oneself, and out of that relationship, new identities may emerge.

Altered states of consciousness

Mirrors have documented psychological effects on individuals who contemplate their reflections. Some of these effects seem to be universal among humans, and others are shared with other species as well. An ethological approach to mirrors is probably not particularly useful in understanding the specific realities that led to the deposition of mirrors in burials or hoards, but psychological studies do demonstrate one very important point: the mind can be trained as surely as the body can. We should not assume that Iron Age people brought exactly the same cognitive-psychological "affordances" to their

experience of mirrors as we do today. Psychological-behavioral studies can help to differentiate the activity of human neuro-physiology versus the products of specific cultural contexts, or at least can be used to generate testable hypotheses.

Schwarz and Fjeld (1968) found that subjects who gazed at their reflections in a mirror in a dimly lit room, experienced unusual visual phenomena, such as the transformation of their reflection into that of someone else. The authors were testing the hypothesis that mirrors caused schizophrenics to hallucinate, but discovered that mirrors had the same effect on most subjects, including those judged "mentally healthy" and those with mental illnesses other than schizophrenia. The results of the study may suggest that divinatory uses of mirrors arose from a universal experience of hallucinatory "visions" arising in reflective surfaces, but no cross-cultural comparative studies have been attempted.

During catoptromancy, the practitioner attempts to achieve what Lindstrøm and Kristoffersen (2001) term a "light hypnotic state." Just as a mild trance state arguably facilitates the perception and recognition of images within intricate Germanic animal-style designs, it also facilitates the perception and recognition of images in reflective surfaces. In the case of mirror surfaces, this may entail pareidolia, where the subject's visions are produced by their interpretation of random visual stimuli, because unlike the design of a fibula, the surface of a mirror changes according to its surroundings. Thus mirrors could be used to produce altered states of consciousness such as trances or hypnosis. Although some individuals are more "hypnotically talented" (Tellegen and Atkinson 1974) than others, i.e., they more easily move between different states of consciousness, through practice, anyone can become skilled at achieving altered states of consciousness (Rock et al. 2008).

Rock et al. (2008) examined the correlation between "shamanic-like" experiences—using "techniques that demonstrate some similarity to shamanic practices and yet deviate from what may genuinely be considered shamanism," such as monotonous drumming (ibid: 60-61)—and "thin" ego boundaries, in order to gauge the subjective effects of shamanic practices undertaken for therapeutic purposes. Ego boundaries are more ideally than ontologically real; thin boundaries is a descriptive term

for "a broad personality dimension that encapsulates measures such as absorption, openness to experience, and schizotypy" (ibid: 78). Thinner boundaries are associated, with statistical significance, with lucid dreamers, frequent dream recallers, shamans, and psychics (or people who self-ascribe as such), and with greater changes in mood in response to internal and external stimuli (ibid: 63). The concept of ego boundaries *per se* is not of particular usefulness in the consideration of mirrors' effects on the mind, however, Rock et al.'s experiments suggest that, on the one hand, some individuals are predisposed to exhibit greater sensitivity to stimuli (ibid: 77), but on the other hand, training in "the skill-set necessary to cultivate ASCs [altered states of consciousness]" may be necessary to consistently produce major changes in perception (ibid: 75), while shamans' mental imagery tends to reflect culturally-specific learned cosmologies (ibid: 61). These results lend some support to the argument that the mind can be trained to be more susceptible to "mood disturbances" associated with divination, trance states, and shamanic journeying.

Although scientific epistemology does not generally advocate altered states of consciousness as a means to glean or interpret useful information, in many societies, altered states of consciousness are preferred for the performance of certain activities, such as healing (Van Deusen 2001, 2004; Tedlock 2005; Michel et al 2006). Mirrors can be used as training tools for developing skills in altering consciousness.

MacDonald et al (1989: 39) propose that the experience of moving from one reality to another through a tunnel, hole, or other aperture—known as *portalling*—is common cross-culturally and is "fundamental to the phenomenology underlying multiple reality cosmologies." The portalling experience can be achieved through "re-entrainment of the neurological systems mediating experience in the brain" by mentally focusing on an object such as a mirror, labyrinth, or mandala (ibid).

> …first, some mirrors are used psychodynamically as portals, second, their convergence occurs at the junction between ordinary and non-ordinary realities (the latter being experienced in alternate states of consciousness), third, portalling-mirrors are used in many mystical traditions to bridge multiple realities, and, fourth, the experiential bridging has theoretical and methodological implications for our understanding of such traditions (ibid: 40).

Shamans are individuals who regularly portal, a dangerous journey along which they may be aided by animal spirit guides, diagrams, and songs (ibid: 46). Personal grooming, such as combing the hair, is often part of the preparation for moving between worlds; in modern times, grooming is, of course, closely associated with mirrors, and it has physio-neurological effects (ibid: 47). Portalling at will is a learned skill, constrained by cultural information:

> …societies typically define a set of possible phases of consciousness for their members, who are then socialized to recognize the appropriate attributes as definitive of their own and others' states of mind….This recognition sets boundaries on phases of consciousness typically experienced in a culture through the establishment of conditioned, internalized control of attention. In addition, many of the structural features comprising consciousness are causally entrained by attention (ibid: 49).

Once learned, culturally-determined symbols of portalling (such as mirrors) can alter consciousness and prompt the neurological experience of portalling (ibid: 53). The portalling experience is generated from a combination of characteristics of the individual, phenomenological properties of the mirror, and the cultural context and its mental training procedures (ibid: 54).

Summary

For an individual to recognize him- or herself in a mirror is very rare in the animal kingdom: only humans, great apes, dolphins, Asian elephants, and magpies have so far demonstrated this ability. It has been demonstrated that these animals will use mirrors to examine parts of their bodies they cannot normally see, but in some cases it can even inspire new kinds of self-observation during other activities (for example, sex-play among dolphins). Mirrors allow one to imagine oneself as another might see one, to become other to oneself, and to interact with oneself as if with another; not surprisingly, then, mirror self-recognition (MSR) studies indicate that sociality is at least as important as intelligence in species that exhibit MSR.

Mirrors can create altered states of consciousness in at least some people. For example, they can trigger hallucinations or be used to enter a light hypnotic state. Depending on the cultural context, altered states of consciousness may be preferred for certain activities, such as healing, and ways of achieving them may be taught and

practiced in order to gain skill. Mirrors are one kind of tool used to invoke altered states of consciousness.

IMPLICATIONS FOR ARCHAEOLOGICAL INTERPRETATION

All this evidence encourages thinking more deeply about the relationship between the individual and the mirror. Compared to other objects of quotidian use, there is a special intimacy between the individual and his or her mirror (Moyer 2010). With a mirror, it is not necessary to rely on others for feedback about one's appearance, giving one direct control over this aspect of their relationships. It allows us to embody, externalize, and even possess the most magically vulnerable, if intangible, part of ourselves. The face—the source of human communication as well as vision—is the part of the body which interacts with the mirror, and in this way, the mirror communicates back to us. We see, and seem to be seen, confounding the distinction between subject and object. Self-reflexivity may be taken for granted in the modern world, but the concept of a self is not universal. La Belle (1988) approaches self "not as an *entity* but as an *activity*….a reification of specific sensate and material acts of enormous complexity" (La Belle 1988: 3, emphasis original). Problematizing the idea of a primordial self without reducing it to an "ontological absence" allows us to consider the mirror's agency in social interactions. When we accept that "personhood is a forensic fact, not a natural one" (Pietz 2005: 201), it becomes possible to question more deeply what exactly it is that mirrors do.

A few recent papers have discussed the notion of personhood as a cultural construct (e.g., Gillespie 2001; Brück 2004), but such studies rest on problematic assumptions such as a polarization of individual and society, while there is linguistic confusion between terms such as "self," "person," "individual," and "identity," which are often used interchangeably. These analyses have been important contributions to anthropology, but prevailing paradigms of selves and identities will have to be rendered explicit and challenged in order to truly test them against the archaeological evidence.

Etymologically, the English word *self* derives from an emphatic identification of a person or thing—rendering it unique and not to be confused with any other similar person or thing. It also means that something is wholly of the same material, not a composite nor subject to adventitious mixture or successive variations. The English *self* is singular and invariant; applied to humans, as it so often is, *self* suggests an atomistic subject. We as English-speakers are thus heirs to a historically- and linguistically-specific ontology of human being; and alternative kinds of humanness are difficult to describe, if not indeed to imagine.

In the archaeological literature to date, the factual existence of a self, and a universal recognition and acceptance of such, is never questioned. But this is not the case for all philosophical traditions: Perhaps the most famous and thorough challenge to the ontology of self comes from Buddhism. According to the Buddhist concept of *anattā* (Sanskrit *anatman*), the self does not exist, and belief in it is a dangerous delusion that perpetuates suffering because it attempts to create permanence where there can be none. (The word *atman* is usually translated *self*, although the correspondence is not exact.) Instead, any thing or being is really an aggregate of constantly fluctuating relationships. Yet the perception that a self exists seems to be widespread and especially dear to human beings (cf. Loy 1992). In order to perpetuate the cherished myth of an atomistic, unchanging self, purportedly independent evidence for that self must be manufactured; in other words, the self must be objectified (Loy 1992: 240).

In short, not only can archaeologists not take for granted a belief in selves in prehistory, but arguably selves are not taken for granted even by those who believe they are one. Mirrors are tools that allow the objectification of the subject and the self, and this is crucial to understanding their ubiquity and their placement in burials.

Carver and Scheier (1978) tested the proposition that the presence of a mirror makes people more self-focused. They found that both mirrors and TV cameras did indeed make their subjects (all American female college students) more reflexively attentive. The mirror, or camera, seems to make people more attentive to their thoughts and feelings, which, at least in "Western" cultures, are generally attributed to the self; importantly, individuals seem to be more able to regard themselves from the point of

view of an imaginary Other—in other words, to objectify themselves. Ironically, the self, so often regarded as the source of an individual's subjectivity, is principally constituted through objectification. The mirror allows one to simultaneously examine his or her reflection in detail as if it were the face of another person, to examine his or her self as an imaginary Other might, *and* to imagine the reflection as an Other's self looking back at them. They can locate their own thoughts and feelings in their self (manifested as reflection) and at the same time attribute to the reflection the thoughts and feelings of the imaginary Other. This means that mirrors manipulate one's consciousness of self, and although the individual is usually not attentive to that manipulation, the fact that mirrors are so common suggests that people enjoy its effects.

In fact, the very function of mirrors is one of relationship; their nature is dependent upon the existence of something (or someone) to reflect, and the faces they show change according to the faces they are shown. But this is not necessarily to say that they are passive. Meaning emerges in communicative—which is to say, relational—acts. All parties in a relationship define it; and each is an active agent in the creation of meaning. But what if the relationship is between a person and a reflection?

In reality there are two relationships: one with the mirror itself, and one with the reflection in the mirror. This complicates the analysis of mirrors in (inter-)action. Reflections are particularly hard to grapple with: a reflection is a thing (in that it is not an organism), yet it is no thing (it has no materiality). It acts like a person, but it has no will of its own. People often regard their reflections as their selves, which grants the reflections a kind of agency which, although illusory, is nevertheless integral to an understanding of how humans relate to mirrors; on the other hand, mirrors *qua* things exert a definite influence which can be described as real agency. Mirrors can make the distinction between persons and things highly problematic.

During prehistory, self-reflexivity as mediated by mirrors was restricted to a relatively small number of people. Obviously, we do not know what the many conceptions of personhood and self were in Iron Age Temperate Eurasia, but self tends to be on every individual's mind often, even when one is not philosophizing about its ontology. It must first be remembered that death and the funeral are moments of

profound transformation. Such a transformation poses a sense of terror for the living, because the potential annihilation or disappearance of the self of the deceased looms, and the living face the moment when they will be forever deprived of embodied contact with the deceased. In this context, mirrors in burials reify and reinforce, even embody, the eternal, objective self. Mirror folklore often portrays mirrors doing just this. This may be why the living were compelled to articulate the relationship between the mirror and the deceased's face and body so strongly.

Non-archaeological sources of evidence allow us to formulate more nuanced interpretations of archaeological data. Folktales recorded across Eurasia suggest that many notions about the agency of mirrors were shared by communities across the continent. Although these tropes may not date back as far as the Iron Age, they do testify to the extensive cultural contacts that existed. The fact that some of these folkloric themes are also found in the Americas suggests that some may spring from phenomenological qualities of the human encounter with mirrors. Psychological studies show that the presence of mirrors encourages introspection, other-perspective taking, and altered states of consciousness. Mirrors are part of the human cognitive and social environment, to varying degrees depending on specific local circumstances. Moreover, mirrors reify notions of self and even the immortality of the non-tangible self, so their presence in Iron Age burials and sacrificial deposits is more easily understandable.

The work of MacDonald et al (1989) lends weight to Lindstrøm and Kristoffersen's (2001) speculation that mental skills can be learned through exposure to certain types of visual stimuli. In particular, mirrors seem prone to induce hypnotic states and portalling experiences, especially in cultures with cosmologies consisting of multiple worlds or levels of reality. Along with mirrors, actual apertures such as caves and doorways can be used to portal, so the entrance to tombs may have been regarded as such. The presence of mirrors in graves, then, may have been intended to help facilitate movement between realities, for example, between the worlds of the living and dead. Mirrors are sometimes present in tombs as representations (Shiraishi 1999), but according to MacDonald et al (1989), even a representation of a mirror could trigger portalling.

Mirrors, or their representations, reify the liminality of the grave itself, and thus evoke the idea of passing into another phase of being.

We may surmise, then, that in the Iron Age, whatever mirrors were believed to be and do while their owners were alive, they continued to be and do after their owners' death, even in the grave. Saunders (2001) has argued that Mesoamerican mirrors derived ritual agency from an "aesthetic of brilliance" that permeated Mesoamerican worldviews and conceptually linked many kinds of shiny matter:

> Within this complex web [of] metaphorical and metonymical meanings, a mirror's 'performance,' in terms of reflective capacity, may have been less significant than the *situation which generated beliefs concerning shining images and reflected images, and thus created avenues for their manipulation*" (Saunders 1988: 5; emphasis added).

The brilliance of mirrors did not need to be perceptible to be both powerful and agentic. The elites whose burials contained mirrors were ready to take advantage of situations "which generated beliefs concerning shining images" and the power of mirrors and which "created avenues for their manipulation." Mortuary ritual, and to a lesser extent sacrificial deposit, were evidently the contexts that enabled such ideological activity.

INTRODUCTION

In considering the range of possible meanings ascribed to mirrors in prehistory, an issue of scale must be acknowledged. Individuals operate according to various motivations, which may even seem superficially contradictory. Just as biological anthropologists distinguish proximate from ultimate motivations in the behavior of humans as organisms, so archaeologists must consider past behavior at the level of the individual and the larger community, *as well as* allowing for differing proximate and ultimate motivations within every individual. An individual's proximate, or immediate, motivation for burying a mirror might be a desire to conform to local tradition, and the individual might never think about the underlying reasons for the tradition's existence; but when the practice is viewed at the community level, it becomes possible to observe its effects on a larger scale, and in turn, to consider why the tradition was maintained in the first place. An analogy can be drawn with the modern practice of placing flowers in and around graves—each individual may offer flowers as a an appropriate, traditionally-sanctioned final gift to the deceased, but these gifts operate within a system of floral and mortuary symbolism. An operating assumption of this analysis is that it is more interesting to examine the potential meanings of the flowers than the bare act of their prestation.

Since the mirrors under consideration here were made, used, and deposited in prehistory, it is impossible to ascertain their many meanings. The present analysis was undertaken with full consciousness of the polyvalence of mirrors, now and in the past. Thus, the hypotheses examined in this chapter are neither mutually exclusive nor exhaustive. It is possible that all operated, albeit on different levels of awareness. These hypotheses are, rather, a way of examining the *actions* of mirrors in the context of their burials, taking the other grave goods and the method of deposition into account.

METHODS

The hypotheses tested here were derived from the common themes of Eurasian folklore about mirrors discussed in Chapter 7, as well as some conventional assumptions held by archaeologists, such as the notion that mirrors are quintessentially feminine artifacts or that grave goods are possessions intended for use in an afterlife. For each testable hypothesis, predictions were made about what sort of burial evidence might be expected to support it (summarized in Table 7), and burials in each region were examined to see how well they met those expectations. Note that some hypotheses were judged to be untestable with burial evidence, and in some cases, the same prediction may apply to multiple hypotheses.

Model expectations and hypothesis testing

The model expectations are designed to predict how archaeologists might recognize the organizing principles behind certain observed behavior, viz., the deposition of mirrors in burials. In other words, correlations between mirrors and other aspects of material culture and grave organization are sought. Naturally, it is not possible to understand every motivation or potential communication involved; but some of the patterning in mirror burials will be elucidated. A burial may be regarded as a microcosm or a snapshot of a society, in that the dead person does not simply disappear from his or her social relationships, and this includes relationships with objects. The relationships may be reorganized, but they continue to function—and therefore, objects continue to function as well.

Below, each testable hypothesis and the predictions specific to it is explained in greater depth.

Hypothesis 2 – mirrors as portals. In Eurasian folklore, mirrors can act as a means of crossing between worlds, and/or viewing one world from within another (in other words, a mirror can act as a door or as a window). The theme of mirrors as portals is in fact the most common in folklore. If the social value of mirrors, and therefore the

decision to include them in burials, was based upon their interpretation as portals, some possible material correlations might be:

(1) In addition to being deposited in graves, they might also be found in other contexts suggestive of religious or ritual activity. Defining a context as ritualistic is of course theoretically and methodologically problematic, but deposits that appear to have been purposefully organized (especially when multiple sites share similar organization, as if governed by certain rules) and which do not have obvious economic or subsistence functions are strong candidates. Communication between worlds, e.g., the worlds of the living and of the dead, would be a potentially dangerous enterprise, so it is likely that such activity would be circumscribed with magical precautions that would appear "ritual" to archaeologists. Where mirrors were found, for example, in hoards but not in areas of strictly domestic or economic activity, this would be suggestive of a magical use for the mirrors. However, by itself it would not indicate that mirrors were thought of as portals, as opposed to some alternative magical function. It is also worth bearing in mind that articles in both hoards and burials can be thought of as sacrifices, and the magic might lie in the act of consecration rather than in the object itself.

(2) The reflective surface of a mirror is the part that acts as the door or window, so it is possible that mortuary mirrors would be oriented with the reflective surface toward the deceased. If the deceased were expected to look into the mirror, or to leave the body and pass through the mirror, this would be facilitated by placing the reflective side towards the body. By itself, this prediction is not definitive, but it could act to strengthen the other predictions.

(3) Corroborating evidence that the reflective surface of a mirror was thought to act as a portal would come from the attribution of similar potential to other kinds of reflective surface, such as still bodies of water (cf. Saunders 1990, 1999, 2001 on Mesoamerican mirrors and their metaphorical connection with water; also Mallery 2010). There is ample evidence from Eurasian folklore that many of the same attributes of mirrors also applied to water. This would likely leave few archaeological traces, but could be indicated by (ostensibly) votive deposits in watery places in the same region as

the burial(s) in question, especially if the watery locales were still pools or lakes, since these give the best reflections.

(4) Another type of evidence in support of this hypothesis would be the presence in a burial of other objects which would assist the deceased to travel or transition, implying a belief in a journey from one world to another. For example, grave goods associated with mobility, such as vehicles or horses, would lend support for this hypothesis. It might be expected that horses and vehicles were present in a burial simply because of their economic importance, for example, among nomadic communities. This does not negate their potential, however, to act as transport *post mortem*. Moreover, among societies that were less mobile, the horse or vehicle could have more symbolic than literal importance, in life as in death. Horses would be particularly suggestive, given the widespread Eurasian belief in horses as psychopomps (Eliade 1964).

Hypothesis 3 – mirrors as containers of the soul. Another recurrent theme in Eurasian mirror folklore is the belief that, once a mirror has reflected a person, it will always contain some intangible part of him or her, perhaps conceived as the soul or self. It is thus possible to act upon the mirror and thereby affect the individual, or to separate the individual from his or her spirit—which means that the spirit can be present when the body is not, e.g., after death. In many cultures, the shadow or reflection is thought of as integral to the life of the individual, even constituting a manifestation of the soul. On the other hand, this theme may not be entirely independent of the mirror-as-portal theme, especially as regards the relationship between the living and the dead; it really depends whether the world seen in the mirror was perceived to be infinite or contained within the mirror. If the former, the mirror would be a portal to that other world; if the latter, the mirror would be a world unto itself. (This hypothesis is more limited in scope than the phenomenological ruminations on mirrors and the self discussed in Chapter 7.)

(1) As in the model expectations of the previous hypothesis, a mirror's ability to entrap or retain a spirit could render it very dangerous, so its use would likely have been surrounded with precautions. Therefore, mirrors would be found in contexts likely to be

Table 7. Hypotheses and model expectations.

HYPOTHESIS	TESTABLE?	PREDICTION
1. Social satire	No	n/a
2. Portals between worlds of living & dead	Yes	1. Mirrors in burials and "ritual" contexts; 2. Mirrors oriented to reflect deceased; 3. Ritual significance also ascribed to other reflective surfaces, e.g., water; 4. Association with other forms of transport (horses, vehicles)
3. Containers/preservers for soul/self	Yes	1. Mirrors in burials and "ritual" contexts; 2. Mirrors placed near body of deceased, especially near heart or head; 3. Mirrors oriented to reflect deceased;
4. Solar symbols	Maybe	1. Representations of sun/solar symbols on or around mirror; 2. Reflective surfaces oriented deliberately, e.g. to direct light
5. Possessions for use in afterlife 5a. Toilet implements 5b. Political gifts 5c. Feminine gender	Yes	1. Relatively more "first generation" mirrors buried than heirlooms and mirrors exhibit use wear 2. Buried mirrors associated with other grooming items 3. Buried mirrors restricted to wealthy burials; 4. More than one mirror likely in wealthy burials 5. Buried mirrors found primarily in graves of females and associated with other artifact types also usually found with females, and *not* with males
6. Symbols of socioeconomic status 6a. Shaman/priestly status	Yes	1. Buried mirrors restricted to wealthy burials; 2. More than one mirror likely in wealthy burials 3. Mirrors associated with objects of "ritual" significance
7. Apotropaic devices	Maybe	1. Reflective surface oriented away from body; 2. Mirrors external to body enclosure and oriented outward
8. Philosophical metaphor for mind/soul	No	n/a

identified as "ritual" in the archaeological record. By contrast, they would not be recovered from domestic contexts such as house floors or midden heaps.

(2) Mirrors would be placed near the body of the individual, with whom they share a relationship arguably much more intimate than did any other type of object. In particular, mirrors might be positioned near parts of the body traditionally identified as the seat of the mind or spirit, i.e., the heart or head. Such placement would reify the bond between the deceased and their reflection as embodied in the mirror. The body segment categories utilized in this analysis are the head, chest, waist, hand, leg, and foot, as well as other. Mirrors were placed in the category "other" when they were found several feet away from the body (a relatively rare position), making it difficult to tell if or how they were originally meant to be related to the body. In this analysis, "waist" and "hand" are separate categories, but depending on the position of the body, a mirror may be equidistant from both. For instance, in extended supine position, with arms extended, the hand rests just below the hip. It is difficult to say which body part was the intended target, so the two categories could arguably be placed together. Where the mirror has been categorized as placed with the hand, the mirror was positioned in, under, or on top of the hand, or just next to it.

(3) Continuing with the theme of intimacy, the reflective surface of buried mirrors might be oriented to face the deceased, so to continue reflecting the individual after death.

Hypothesis 4 – mirrors as solar symbols. Ethnographies of Siberian shamans indicate that mirrors are often associated with the light of celestial bodies, in particular, the sun. The Japanese myth-histories, *Kojiki* and *Nihon shoki*, make a very specific connection between mirrors—including the first, primeval mirror—and the sun goddess Amaterasu. The goddess instructs her descendants to honor the mirror as they would honor herself, which means that it embodied both a specific person and the sun. When Amaterasu first saw her reflection in the mirror, she said "*omoshiroi* 面白い," meaning both "interesting" and "white surface" or "white face" (referring to the mirror's surface); this scene is an astute recognition of the human fascination with our own faces as well as

with shiny objects. Separating the indexical or symbolic association between the sun and the mirror renders a hypothesis which is difficult to test archaeologically, but which might receive support:

(1) If buried mirrors were accompanied by representations or other putative symbols of the sun, especially if these were present on the mirror itself. Identification of an image as a solar representation would, of course, vary according to the culture that made it, and would inevitably be a matter for debate. And,

(2) If the reflective surfaces of mirrors were oriented deliberately—not necessarily to face the body of the deceased, but in order to direct light in any particular direction.

Hypotheses 5/5a/5b/5c – mirrors as a personal possession (e.g., toilet objects, political gifts, or women's items) intended for use in an afterlife. The interpretation of grave goods as simply a collection of belongings is not as common in Anglophone archaeology today as it once was, but it still appears from time to time, particularly in the guise of an interpretation of mirrors as toilet objects (most common in European and Chinese archaeology) or political gifts (most common in Japan). Of course, neither of these is exclusive of magico-religious meanings; even in the 21st century, a simple bathroom mirror can be a grooming tool, a site of a teenage initiation ritual/fear test, and a portal through which the vengeful spirit of "Bloody Mary" can emerge. As Hill (1997) and Quarcoopome (1991) have demonstrated, the act of grooming and personal adornment, and the "technology of the body" associated with them, are not necessarily simple or devoid of symbolism or magic.

In Japanese archaeological literature, meanwhile, the interpretation of mirrors as political gifts goes along with the notion that mirrors were ritual tools used by shaman-rulers (Kobayashi 1968). This hypothesis overlaps with the idea that the mirror was an embodiment and/or symbol of the sun, and that its use was at least metaphorically ritual.

European archaeologists long cherished the assumption that mirrors were the possessions of women, and therefore their presence in a grave indicated that the deceased was a woman (who, incidentally, would have used the mirror for personal grooming/vain

self-admiration). This is partly due to the fact that mirrors are rarely found in the same burials as are weapons, especially swords, which are taken to be high-status men's possessions. If the elite man was expected to spend his time fighting, evidently the elite woman was expected to spend her time preening. Archaeologists specializing in Inner Eurasia and the steppes and Temperate East Asia, on the other hand, have found that grave goods tend to be broadly similar for both males and females, suggesting that grave goods were not strongly gendered. Although today European archaeologists question a direct connection between feminine gender and mirrors, a systematic test has not hitherto been performed.

(1) Relatively more "first generation" mirrors would be found in burials, as opposed to heirloom mirrors, because they would be buried with their original owners. Moreover, buried mirrors would likely exhibit wear consistent with having been used during the life of the deceased.

(2) If mirrors were used mainly or entirely as personal grooming tools, they would likely have been buried along with other grooming tools, such as tweezers, ear scoops, or nail clippers. These have been collectively described as "technology of the body" by Hill (1997). Moreover, a close spatial association between mirrors and other technology of the body would be even more suggestive, implying they were part of a kit.

(3) If mirrors in burials were political gifts received by the deceased during life, they would be restricted to the wealthiest and seemingly most politically-important burials. Japanese archaeologists, especially Kobayashi (1968), have speculated that mirrors were given as political gifts to help cement alliances. Local paramount chiefs would obtain mirrors—either through trade with China or patronage of skilled craftspeople—for redistribution to less powerful chiefs. Support for this argument has come from the discovery of matching sets of mirrors (made from the same mold) in various graves, with the largest number in the most wealthy graves (taken for the burials of paramount chiefs). But this hypothesis has not been tested in other regions of Eurasia. Unfortunately, it is virtually impossible to test it where mirrors were not cast from molds nor made as matched sets.

(4) The graves of the most politically powerful individuals would contain more than one mirror, because they would presumably have been involved in multiple alliances and networks.

(5) If mirrors were indeed the possessions of women, they will be recovered from burials of females (where sex can be biologically assessed from skeletal remains). Mirrors will be associated with other types of artifact known to be related to feminine gender, and will not be found with goods related to masculine gender. This can only be effectively tested where there has previously been thorough analysis of burials including biological assessment of sex in order to assess correlation with specific categories of grave goods—which in turn requires adequate skeletal preservation.

Hypotheses 6/6a – mirrors as indices of high socioeconomic status. Like the assumption that grave goods were merely the possessions of the deceased, this explanatory model has largely been abandoned in Anglophone archaeology as too simplistic, but again, it warrants testing specific to mirrors. According to this model, grave goods may or may not have been possessions of the deceased, but their action in the burial was to indexically represent the socioeconomic status of the deceased, which is really to say, his or her social relationships. It is likely that in reality, this hypothesis would entirely overlap with Hypothesis 5, since objects never do only one thing.

(1) Since most prehistoric Eurasian mirrors were made from bronze, and the raw materials, copper and tin, were expensive, only wealthy people would have had access to them. Therefore, they would have a restricted distribution, likely being found only in graves that can be considered wealthy according to other parameters, such as the quantity of grave goods or their exotic provenance. Where mirrors were the possessions of shamans specifically, their distribution would be even more restricted, and would be accompanied by other items thought to have been used in "cultic" activity.

(3) Very wealthy burials might have more than one mirror, to emphasize status.

Hypothesis 7 – Mirrors as apotropaic devices. The idea that mirrors were placed in burials to ward off evil is particularly common in Chinese archaeology, because Daoist

texts refer to mirrors having this power (e.g., Verellen 2006: 167). This hypothesis is very difficult to test against burial evidence. Possible support could be found where:

(1) The reflective surface of the mirror—which seems to be regarded as the potent aspect—should be oriented away from the body and therefore toward any possible intrusive evil forces.

(2) Mirrors were directly attached to grave architecture or to the coffin (if present), facing outward, in order to keep evil from entering in the first place.

Burial data

Not every burial is adequate for testing every hypothesis; for example, the skeletal remains in a burial may be so decomposed, or so thoroughly burned, that biological sex cannot be ascertained, or the position of the mirror relative to the body may be unknown or not reported. The following 76 burials were suitable for consideration in this analysis (listed by region in Table 8). They were selected according to the completeness and detail of published information, in particular detailed illustrations of the position of artifacts *in situ*.

In calculating basic descriptive statistics, burials without the necessary information are omitted. Where this has been done, it is indicated in the text.

RESULTS

Below, burials from each region will be considered separately and evaluated for potential fit with the model expectations. As appropriate, regional or chronological sub-groups will be examined individually.

Temperate Europe

Continental Europe. Continental mirrors demonstrate contacts between Europe north of the Alps and Mediterranean societies. Although there are few mirrors from Temperate continental Europe (these being La Motte Saint Valentin, Reinheim, Wederath

2370, Dühren, Nijmegen, Compiègne, Hochheim am Main, and Chotín, and at the oppida Stradonice, Manching, and Bibracte (Steuer 2005: 347), they span a long period, from the mid-5th century BC to the 2nd century AD. (Hochheim and Chotín and the mirrors from oppida are not analyzed in this dissertation due to insufficient documentation.) It is therefore possible that the burials might vary significantly chronologically; nevertheless, because the sample is so small, the burials will be considered together.

Hypothesis 2. In Temperate Europe, the practice of depositing hoards of objects—especially metal goods—in watery places such as rivers, lakes, springs, and bogs was widespread in prehistory (Bradley 1990; Mallery 2010). The practice of watery deposition had appeared by the Mesolithic (Bradley 2005: 142-143), and still occurs today at holy wells (Mallery 2010). The exact purpose of the prehistoric deposits is unknown, but their consistency, and apparent economic counterproductivity, has led to their being interpreted as the product of ritual activity.

Although some form of watery deposition could be found at sites all over Europe from the Mesolithic to the present day, each case should be evaluated on its own terms because unbroken continuity across time and space cannot be assumed. There are many reasons why water might attract devotional activity; as Mallery (2010: 78) points out, symbolic meanings can change rapidly. In one place a pool might be venerated, while in another springs received ritual treatment. Moreover different types of object might be deemed suitable for deposition (cf. Bradley 2000; Sauer 2005).

Nonetheless, in many parts of Temperate Europe, deposition continued through the Neolithic and Bronze Age, experienced a lull in the Early Iron Age, only to pick up once more in the Late Iron Age (Bradley 1990). Yet it appears that the veneration of holy wells and springs in Temperate Europe was heavily influenced by spring veneration in the Mediterranean Basin, rather than being simply a continuation of indigenous practices (Webster 1995; Aldhouse Green 1996; Mallery 2010).

On one hand, there are some remarkable similarities to well- or spring-related beliefs across Europe. For example, Greek, Scandinavian, Irish, and Welsh mythology[61] depict a well or wells as sources of wisdom and prophetic knowledge, as well as being the abode of (usually female) divinities such as nymphs or norns (Davidson 1988; Mallery 2010). On the other hand, the types of objects selected for deposition varied somewhat between Temperate and Mediterranean Europe. In the Roman world, springs were often attributed healing powers, and depositions frequently included miniature representations of organs to be healed, or individuals to be cursed or "bound," and *defixiones* (curse tablets), and altars (Allason-Jones and McCay 1985; Farone 2003). In Temperate Europe, on the other hand, votive offerings included swords, axes, spears, cauldrons, helmets, giant bronze trumpets, miniature bronze wagons (some featuring ostensibly "solar" images), fibulae, arm and neck rings, tools, vehicle parts, coins, slave chains, and even human sacrifices (Brunaux 1987; Bradley 1990; Cunliffe 1994, 1997; Fox 1946). Furthermore, in Temperate Europe deposits have been found in lakes, rivers, and bogs as well as springs[62] (Bradley 1990; Cunliffe 1994).

Webster (1995) states that there is virtually no evidence for spring veneration in Britain prior to the Roman conquest. After the conquest, the usual panoply of Roman votive offerings—coins, curse tablets, altars, miniature body parts—appear at shrines such as Coventina's Well on Hadrian's Wall and Bath (Roman Aquae Sulis). Similar objects are found at springs in Gaul, such as the source of the Seine and other rivers. Mirror fragments are among the *ex votos* from the source of the Seine (Baudot 1845; Corot 1932).

The practice of depositing objects in watery contexts suggests that the water itself, as opposed to an associated deity, held some magico-religious significance, though whether that significance derives from water's reflective properties requires further examination outside the scope of this dissertation. Nonetheless, as mentioned above,

[61] The Irish and Welsh mythologies were recorded in the Middle Ages, and it is not clear to what extent they represent more ancient beliefs. Thus it could be argued that they were influenced by Mediterranean and Scandinavian sources.

[62] The practice of deposition also involved hoards buried in pits or ditches enclosing sanctuaries, and is thus part of a wider context of activity. Nevertheless only the water depositions are relevant here.

Table 8. Burials analyzed (the conservative sample), grouped by region.

TEMPERATE EUROPE (*n* = 21)	CAUCASIA (*n* = 2)	INNER EURASIA & STEPPES (*n* = 48)	TEMPERATE EAST ASIA (*n* = 6)
Aston	Tsemdolina 9	Ak-Alakha	Fujinoki
Beverley	Vani 24	Ak-Alakha 3	Hwangnam 98 North
Bryher		Aksai 1-1	Hwangnam 98 South
Chilham Castle		Aksai 2-2	Kurozuka
Dorton		Aksai 6-1/2	Sara-ri 130
Dühren		Aksai 8-13	Songsan-ri 7
Garton Slack		Aksai 8-15	
King Harry Lane 9		Arzhan 2-5	
King Harry Lane 13		Bekteniz Kurgan 1	
King Harry Lane 66		Bike III Kurgan 1	
King Harry Lane 138		Bike III Kurgan 8	
King Harry Lane 222		Bitak 155-XX	
King Harry Lane 325		Chertomlyk	
La Motte St. Valentin		Filippovka 3-1	
Latchmere Green		Filippovka 4-4	
Portesham		Filippovka 7-Ctl Ind III	
Reinheim		Filippovka 7-Ctl Ind V	
Stanway		Filippovka 11	
Wederath 2370		Filippovka 16-4	
Wetwang Slack 2		Ilekshar I 5-1	
Wetwang Village		Issyk	
		Koktepe	
		Lebedevka II 6-1	
		Mirny Kurgan 1	
		Nikolayevka II 2-2	
		Niyä 95MN1M3	
		Niyä 95MN1M5	
		Niyä 95MN1M8	
		Pazyryk 2	
		Pazyryk 6	
		Pokrovka 02 3-2	
		Pokrovka 02 3-3	
		Pokrovka 02 7-2	
		Pokrovka 02 7-6	
		Pokrovka 02 8-5	
		Pokrovka 02 16-1	
		Pokrovka 08 6-1	
		Pokrovka 10 3-1	
		Prokhorovka B-3	
		Shumaevo II 3-6	
		Shumaevo II 3-9	
		Shumaevo II 9-11	
		Shumaevo II 9-12	
		Tillya Tepe II	
		Tillya Tepe III	
		Tillya Tepe V	
		Tillya Tepe VI	
		Ust'-Al'ma 620	

folklore attributes many of the same properties to water as to mirrors. Scrying, for example, can be performed either with a mirror or with a bowl of still water. If reflective surfaces other than mirrors—for instance, watery places—were believed to be portals, as ethnographic records indicate was the case in other cultures[63], the objects deposited therein may have been destined for the "other side." It is noteworthy that the mirrors from watery deposits in Scotland and Ireland come not from springs but from bogs, where they were likely deposited in pools which have since filled up with peat; pools would be more reflective than the springs favored by Romans, which do not always form a still pool.

No pre-Roman mirrors from continental Temperate Europe have been found in potentially ritual contexts other than the funerary, except possibly the handle from Compiègne, found in the river Oise. Nor were mirrors associated with collections of other putative "ritual objects" in burials. That is, any of the objects in a burial may have been used in ritual activities, but none of them appears to have been *exclusively* or *definitively* destined for ritual use.

The mirrors found in continental burials are reversible (Nijmegen excluded), so it is difficult to tell which side is the (more) reflective surface, and thus, how they were oritented; in the case of Wederath 2370, the mirror closes like a make-up compact, so the reflective surface is concealed inside when not in use. The mirrors were laid parallel to the substrate.

Wagons have been discovered within wealthy burials in Europe north of the Alps, famously, for example, at Vix and Hochdorf. None of these, however, also included a mirror, and none of the mirror burials included horses or indices thereof.

<u>Hypothesis 3</u>. (See above for mirrors and putative ritual contexts, and orientation relative to the deceased.)

At Wederath and Dühren, the human remains had been cremated, while at La Motte St. Valentin they were very poorly preserved; and in the latter two cases, the

[63] Camp Coldwater Spring (Minneapolis, Minnesota), for example, "is considered to be where the god of the waters, *Unktehi* lives, and figures in the Dakota creation story as the god's portal between worlds" (Mallery 2010: 73, emphasis original; see also Rudner 2001: 111).

graves were excavated under less than rigorous conditions, so the relationship of any given artifact to the body of the deceased is unclear. It does appear that the mirror was frequently placed close to the human remains, however: La Motte Saint Valentin lay under some pieces of leg bone, which means that at least some of the remains must have lain in contact with the mirror. The mirror from Reinheim lay even with the right arm, but perhaps some 40-50 cm away, to judge by the burial diagram. At Wederath, the mirror had been placed next to a wooden box which contained the cremated remains, although the exact distance is unclear from the publication. Nijmegen can be interpreted one of two ways: either the mirror and the cremated remains can be considered close, given the confines of the burial (more than this is not clear from the published reports), or the cremated remains, contained within a glass urn, can be considered contained and separate from the mirror. In sum then, it can be said that mirrors were placed in general proximity to human remains, be they burnt or unburnt, but it is impossible to say whether any specific body part was intended.

Hypothesis 4. As stated above, there is no clear rule governing the orientation of mirrors, nor were there any likely candidates for solar symbols, although, as stressed before, these could be very difficult to recognize.

Hypothesis 5. The age of the mirror when it was buried could indicate whether it was a possession of the entombed individual, or indeed, more than one individual. Unfortunately, none of the continental mirrors seems to have been analyzed with this in mind. The handle of the Reinheim mirror at least provides a general date: it most likely dates to the mid-6th century (when Caryatid mirror handles appeared in Greece) to early/mid-5th century BC (the date of the burial itself). This suggests that the mirror was at most a century old when buried. This mirror, therefore, may have been made for the Reinheim individual.

The La Motte Saint Valentin mirror is also thought to have been inspired by Greek prototypes, but in a more general sense. Thus, like the mirrors from Dühren and Wederath 2370, it can only be said that the mirror is generally contemporary with the burials. If these mirrors were heirlooms, they were not handed down for many

generations. Thus far, the mirrors from continental Temperate Europe have not been assessed with regard to use wear.

The intended role of a mirror in a burial may be elucidated by the nature of accompanying grave goods. Mirrors are not the only objects with restricted distribution found in continental Temperate European burials. A group of items, all found in only a few burials, is one of the criteria for calling a burial "wealthy." In Temperate Europe, the wealthiest burials contain items such as gold jewelry and bronze vessels made by highly skilled craftspeople, as at Reinheim. Certain suites of objects were common in rich burials all over Europe, and indeed Eurasia, in particular sets of feasting equipment and weapons. Most of these burials do not contain mirrors (and no burial contains more than one). Thus, while only the wealthy were buried with mirrors, a mirror was not necessary to every wealthy person's burial.

The continental burials did not contain "technologies of the body" other than mirrors. This is not to say that no attention was paid to personal appearance, since jewelry (quite abundant in the case of Reinheim) was present, but special grooming tools, such as ear scoops or combs, were absent.

Where mirrors associated with one gender? Traditionally, European archaeologists have regarded mirrors as feminine, weapons as masculine, and it is true that these two artifact classes do not often overlap in Temperate European burials. In none of the continental burials were there skeletal remains sufficiently well preserved to determine biological sex. The Reinheim and La Motte Saint Valentin graves contained, besides mirrors, ring jewelry, including neck-, arm-, and ankle rings. Although males have been found buried with neckrings (e.g., at Hochdorf and the Glauberg), bracelets and anklets are mostly found in female burials. Therefore it is likely that Reinheim and La Motte Saint Valentin were the burials of women. None of the continental burials contained weapons.

Hypothesis 6. As discussed above, mirrors are found in relatively wealthy continental burials, and thus may reasonably be considered an indicator of high social

status. However, there is no evidence from the grave good assemblages to indicate that their owners were religious practitioners specifically.

Hypothesis 7. A mirror intended for an apotropaic role would likely be placed external to whatever container (if any) enclosed the body, or even external to the whole tomb. No such mirrors have been discovered in Temperate continental Europe.

Britain – Arras group. Because of the distinctiveness of the Arras group of burials, both in terms of mortuary practices and the mirrors themselves, this sub-group warrants analysis separate from other British sites.

Hypothesis 2. There is at present no evidence for Arras-style mirrors from any context other than burials. Of course, the geographical and chronological spread of the Arras tradition is small, and the number of mirrors smaller still. The tradition of votive deposition in watery places was widespread in Europe, including Britain, although it may or may not have been the reflective properties of water that evoked portals to other worlds (cf. Kamash 2008; Mallery 2010).

Because the mirrors have no decoration on the plate, and iron corrodes heavily, it is difficult to tell which side was the reflective surface, much less whether this was oriented toward the deceased. This is further compounded by the fact that many Arras burials were excavated in the 19th century, and the exact position of the grave goods *in situ* is unknown.

Arras mirrors are associated with items of transport (carts) as well as indices of horses (bits and harness fittings). Actual horses or horse bones have never been recovered from an Arras mirror burial, and only one burial without a mirror (the King's Barrow) contained horses (Stead 1965). There are other suggestive links between horses and mirrors besides the presence of carts and harnesses: as noted by Fox (1958), the handles of some mirrors bear a resemblance to contemporary snaffle bits. The mirrors are characterized by large terminal rings, echoing the roundness of the mirror plates, while the bits feature large rein rings at either end. Bits are symmetrical in structure for

functional reasons, but a mirror handle need not be (and indeed, some are not). But this is not the only similarity between bits and mirrors: Fox (1958), in a comparative illustration, shows that bridle bits from Llyn Cerrig Bach, Wales, and three bar-type mirror handles share what he terms "transverse reel and bun-shaped mouldings, quirked" (Fox 1958: 98)—yet he does not pursue the stylistic similarity in his work. Following Fox, examples of baluster bar handles include those from Ingleton, Stamford Hill I (a.k.a. Mount Batten), and Carlingwark (cited by Fox 1958), as well as the more recent discoveries from Wetwang Village, Wetwang Slack 2, and Garton Slack; to this list I would add Ballymoney and Merlesford.

What Fox terms baluster bar handles consist of four segments: (1) a mount at the proximal end, joining the handle to the mirror plate—this is often, but not always, in the form of a ring[64]; (2) and (3) two symmetrical segments of equal length which abut one another in the middle of the bar, sometimes with a decorative join between them; and (4) a distal terminal loop. This basic four-part form continues into the Late Iron Age and is likely the crucial link between the two mirror groups; however, in the Late Iron Age series, the second and third handle segments, rather than being of a "baluster" shape, are often open loops. In the Yorkshire mirror group, the four-part effect may be created by tapering the two segments (parts 2 and 3) at each end (e.g., Ingleton), or by simply adding a decorative molding in the center of the bar (e.g., Garton Slack).

Arras bits follow the same basic four-part structure: (1) and (4) at either end is a loop (rein-ring), while the mouthpiece consists of (2) and (3) two segments of equal length (side-links), joined in the middle by interlocking rings (or sometimes by a third, shorter segment called the center-link)[65]. The most obvious difference between the structure of bits and the Type IB mirror handles is that the bits are flexible. Interestingly, when a center-link is present, it preserves the four part structure in microcosm, with a ring at either end and two symmetrical half-bars joined decoratively in the middle.

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[64] Joy (2010: 141) subdivides bar handles (Fox's Type I) into two subgroups, those with a ring mount being Type IB and those with any other kind of mount IA.

[65] If only the two side-links are present the bit is known as a single-jointed snaffle; if a center-link is also present, it is a double-jointed snaffle. All the bits from Yorkshire mirror burials belong to the snaffle type.

It seems, then, that in the construction of mirror handles and bridle bits there is a great emphasis on symmetry in both the vertical and horizontal planes, which stands in marked contrast to the free-flowing asymmetry of the inscribed La Tène ornament on sheet bronze (including later Iron Age mirrors from southern Britain). This complicates the interpretation of the mirror handle's design: Are the handle loops there to facilitate suspension, balance, or comparison to other elements of material culture such as horse bits? When there are loops at both ends of the mirror handle, was this done only to maintain an aesthetically-desirable symmetry, or is the similarity to bits intentional?

Hypothesis 3. (See above for discussion of mirror recovery contexts and orientation.) In the case of burials with good recording of artifact placement (Garton Slack, Wetwang Slack, and Wetwang Village), the mirrors are in immediate proximity to the body, that is, touching (the Wetwang Slack mirror is less than 10 cm from the body), and lying parallel to the substrate—but in those three cases, the body parts in contact are different (the hand, head/neck/shoulder, and hip/leg respectively). In two cases the mirror was on the individual's right side (Wetwang Village and Wetwang Slack), while at Garton Slack the mirror was on the left. Thus in at least some cases, the position of the mirror seems to echo its disposition in life (held in the hand, perhaps carried suspended from a belt).

Hypothesis 4. There are no representations—"solar" or otherwise, on the Arras-type mirrors. Since the only material culture preserved is that made of metal, ceramic, or bone, it is impossible to know what sorts of decoration may have been present on organic substances; however, the metal objects are decorated with characteristic insular La Tène motifs, none of which can be clearly recognized as representing the sun. As mentioned earlier, it is impossible to discern any regularity to the orientation of mirror surfaces.

Hypothesis 5. Mirrors from Arras burials are not associated with other obvious technologies of the body. And, although it has been suggested that mirrors were the tools of shamans or other ritual-religious specialists, this hypothesis receives no clear support.

Only one object—the mysterious "bean tin" from Wetwang Slack 2—can be argued to be strictly ritual in nature, and then only because its purpose is unknown. Use wear on the mirrors has not been assessed, probably because of corrosion (Joy 2010: 42)

Each mirror is similar to the others, but unique in its details, so there is no evidence to suggest that mirrors were made in sets. Only one mirror is ever present in a burial, although these burials can be considered wealthy in other regards, such as the amount of effort expended in the creation of the ditches and mound, and the presence of the cart.

The biological sex of the skeletons at Wetwang Slack 2, Wetwang Village, and Garton Slack was determined to be female. In only one burial (Garton Slack) was a weapon found as well as a mirror, while there are Arras cart burials which contain weapons but no mirrors (and have traditionally been regarded as masculine). Although Garton Slack is a singularity, because the number of mirror burials is so small, it does put in question the supposed mutual exclusivity of burials with mirrors and those with weapons. Beads are usually considered feminine accoutrements, and some were found at Wetwang Village and at Garton Slack.

Hypothesis 6. Because the Arras burials with mirrors are among the wealthiest, mirrors may indeed have served as indicators of high socioeconomic status. Joy (2010: 59) has noted that the organization of Arras burials was very ordered; those with mirrors correspond to Stead's Type C, with flexed bodies oriented north-south and accompanied by pig bones[66]. This is distinct from Type A, the "normal rite," where the body is accompanied by sheep bones (ibid). Joy finds that among Arras burials, "a mirror can be buried with a person without a vehicle but a *woman* cannot be buried with a vehicle without a mirror"; males, however, could be buried with a vehicle, yet none has so far been found with a mirror (ibid: 63, emphasis added). Thus is seems likely that the observed burial patterning reflects both the gender and social status of the deceased, but possibly also some other dimension of identity. However, there is no material evidence that high status in this case was predicated upon religious authority.

[66] This burial organization is seen at Arras 10, Garton Slack, Wetwang Slack, and Wetwang Village; the context of Arras 28 was not well recorded (Joy 2010: 59).

Hypothesis 7. There are no mirrors placed external to the body enclosure or oriented outward as if to dispel external powers.

Britain – southern/late group. The southern group is distinct from the Arras group not only geographically, but chronologically as well, postdating the Arras burials by at least a century and perhaps as much as three centuries. Along with the burials from southern Britain, there are a few contemporary—or likely contemporary—mirrors from surrounding areas, including Ireland and Scotland. Nijmegen and Compiègne, though found on the continent, can be considered a part of this group, in that they were of the same style as those made in southern Britain (and indeed may have been made there) and appear to be contemporary. In addition, here, some mirrors of post-Conquest date are considered as part of this group, because it cannot be assumed that mirror-related practices transformed overnight upon the arrival of the Roman military. Mirrors of Roman manufacture may have been substituted for local ones in traditional practices. The process and exact timing of change post-Conquest is a subject for future investigation.

Hypothesis 2. Mirrors belonging to this group—specifically, Balmaclellan, Carlingwark, Ballymoney, and possibly Compiègne—have been recovered from watery contexts, bogs in the first three cases and a river in the last. It has not been possible to closely date any of these likely votive deposits, but Balmaclellan and Ballymoney likely date no earlier than the mid-1st century BC. Spatially, mirror burials and mirror deposits do not, or barely, overlap. The bog deposits were found in Northern Ireland and Scotland, while most of the burials are from southern Britain. It is possible that future discoveries will blur this distinction, but at present it seems that votive deposition of mirrors or mirror parts was a less common practice than burial. However, this group is noteworthy because there is clear evidence for mirrors in both mortuary and votive contexts.

The mirror from Balmaclellan provides a tantalizing hint about the convergence of mirrors, water, and votive deposition. Its handle is unique among British mirrors,

being shaped like the handle of some Roman *paterae*. Paterae were common vessels in Rome and her colonies, and were used in both religious and domestic contexts, to pour libations and for drinking (Smith 1898: 469-470). They were incorporated into native British contexts, including watery deposits (Curle 1932; Robertson 1970), but their uses and significance may have been reinterpreted by the British—indeed, they almost certainly were when they were deposited in watery contexts. The "Moorlands Patera" illustrates a different form of hybridization, and thereby provides further evidence that hybridization of these objects was taking place. It was enameled in typically British La Tène style, but had the names of some Hadrian's Wall forts inscribed in Latin around the rim, and a personal name probably in Latinized Greek (de la Bedoyère 2003: 324-325, 2004; Anonymous 2003). A patera was included among the grave goods at Portesham, along with the mirror. Thus, it can be seen that paterae and mirrors overlapped in terms of their archaeological contexts (both found in burials and watery deposits), in their uses (secular and ritual), and in the design elements used to decorate them (Roman and British); and they shared one further characteristic: A patera, when filled with liquid, would have a reflective surface like a mirror. The Balmaclellan mirror, with its patera-like handle, and a patera full of liquid would look very similar. Although the meanings of mirrors and paterae must remain unknown, the form of the Balmaclellan mirror can thus be considered a material manifestation of the overlap between mirrors and water in Eurasian folklore.

Joy (2010: 77-78), in his analysis of British mirrors, notes that mirrors were frequently placed with the reflective surface oriented toward the body, especially the head, but he does not report a quantitative analysis or discuss exactly which burials had mirrors so oriented. In many of the recent discoveries, made by metal detectorists, it is impossible to ascertain because of disturbance of the grave context. In the data set analyzed here, only three burials can be said to have had mirrors oriented toward the body of the deceased (Portesham, Bryher, and Aston). The Bryher mirror had even been propped on edge, perpendicular to the substrate, perhaps to even better reflect the deceased. At Chilham Castle, the mirror had been placed with its reflective surface up.

The handles of the later mirrors—especially those composed of two opposed teardrop-shaped loops—still retain some general similarity to contemporary horse bits, but others show similarities to contemporary tankard handles (Cunliffe 1972; Jope 2000; Joy 2010: 46). Otherwise, there are no carts or pieces of horse harness, nor horse representations, in these burials.

Hypothesis 3. (Deposition context and orientation of mirrors has been discussed above.) There is no question that mirrors were preferentially placed in close proximity to the deceased; however, late Iron Age British graves are typically small, and thus all the grave goods can be said to be close to the body. Mirror position relative to specific parts of the body is also difficult to determine in these burials, since many are cremations and few of the inhumations are well preserved. That is, it is possible to say that mirrors were placed by the remains at Portesham, Dorton, Aston, Latchmere Green, Chilham Castle, and Bryher, the exact body part can only be determined at Bryher (next to the head) and Portesham (where the mirror lay on the waist). At Latchmere Green and Chilham Castle, the cremated remains were inurned within a ceramic vessel, while at Dorton the mirror was inside a wooden box; these containers might be regarded as barriers between the body and the mirror, though they need not have been.

Hypothesis 4. (Mirror orientation has been discussed previously.) Putative solar representations (e.g., concentric circles, spoked circles) from the Iron Age do exist, mostly on coins. However, Creighton (1995, 2000) regards much of the imagery on coins as representations of entoptic phenomena, that is, visual effects arising from within the eye or brain[67] which are perceived cross-culturally by individuals when in a trance state, but interpreted according to specific pre-existing cultural information (Creighton 2000: 47-48). By contrast, the ornamentation of mirrors belongs to an entirely different style, which has even been named the "mirror style." This curvilinear design technique appears to be abstract and non-representational, although the possibility of meanings now lost to us remains (see Chapter 7 for further discussion).

[67] The use of "entoptic phenomena" in archaeological literature differs from that in the medical literature, where it is used to refer only to images arising in the eye itself; for the latter, see Blom 2009: 174.

Hypothesis 5. Many of the late Iron Age mirrors were broken and repaired in antiquity, indicating that they were probably heirlooms, or at the least that they were used a great deal. Joy (2010: 43) has analyzed wear on the mirrors, reporting that at least 10 mirrors seem to have been deposited only after the handle broke from the plate. On the other hand, others, like Bryher, seem to have been repaired after such a break, and the Chettle mirror may have been used without a handle, judging from wear on the plate (ibid). Over a third of the mirrors had wear to the terminal ring, in the form of abrasions possibly caused by contact with metal, but not by contact with fiber (ibid: 43-44). The mirrors at Portesham and Pegsdon were found with fibulae fastened through their terminal loops, possibly to secure a textile covering, a practice which could have caused the observed wear (ibid).

The floruit of these mirrors overlaps with an increase in the use of "technology of the body" such as ear scoops and tweezers (Hill 1997). This increase in tools related to personal grooming may indicate a new focus on personal appearance and/or grooming as an activity. Changes in attitudes toward the body likely followed upon the culture contact brought about by the Roman conquest (ibid).

One of the most outstanding features of the "Celtic" mirrors from Britain is their uniqueness; although broadly similar—insofar as they are composed of an engraved sheet bronze plate and cast bronze handle—the details are distinctive in each example. Each mirror was made individually, but clearly by a craftsperson with knowledge of the design "rules." Each burial has only one mirror, but the possibility that such mirrors were given as political gifts by rulers who could patronize specialist craftspeople cannot be ruled out.

British archaeologists have increasingly begun questioning the assumption that mirrors were feminine-gendered (see for example Hill 2002-3). This is reasonable given that in no case can the sex of the skeletal remains be conclusively determined. Furthermore, Bryher contains both a sword and a mirror.

Hypothesis 6. British late Iron Age burials are both variable and rather poor in grave goods. The presence of only a mirror is enough to vault a burial into the "wealthy"

category, yet rarely are there accompanying objects which suggest great wealth in their own right. The ornamentation of the mirrors may provide indirect evidence for an association with high social status (based on wealth or other criteria). First, the design rules which applied to mirrors also apparently applied to a few other classes of object. Joy (2010) analyzed the incised designs on mirror plates to determine the sequence by which the decoration was laid out, and found similar methods were used in the decoration of sword scabbards. There is also a bronze comb decorated in the "mirror style" (Anonymous 2006). In only a few cases can the style be observed on non-metallic objects (e.g., pottery) (Joy 2010: 136-140). As mentioned above, several of the mirror handles bear strong resemblances to tankard handles. Thus the mirrors share in some of the material characteristics of objects involved in feasting and warfare.

As mentioned previously, a few mirrors (Birdlip, Nijmegen, Holcombe, possibly Old Warden I) have red inlay on the handle, usually enamel, but copper cuprite in the case of Holcombe. Red inlay has been noted as characteristic of weapons and a martial association has been suggested, though it was also frequently applied to personal ornaments such as fibulae (Fitzpatrick 2007: 344-345); the color choice was deliberate, since an a broad spectrum of other enamel colors was available and was used for other kinds of item.

Taking ethnographic reports into account, some British archaeologists have proposed that the mirror owners may have held special ritual status (e.g., Hill 2002-3, 2003). However, none of the objects which share design features with mirrors can be classed as strictly ritual in nature, nor can any of the accompanying grave goods, which consist mostly of animal bones, ceramic vessels, and fibulae.

Hypothesis 7. In late Iron Age burials there is rarely any sort of body enclosure, such as a coffin or chamber, to which a mirror could be external. The deceased was usually placed in a small pit or cist, along with all the grave goods.

Summary—Temperate Europe. The burial evidence from continental Temperate Europe is not an ideal fit with any of the hypotheses. This is no doubt due in part to the

small sample size, and partly to the wide chronological spread of the sites in question—it is not surprising that the burials are quite variable. Whether mirrors were for women and weapons for men is unclear, but it does seem that, in general, the people who were buried with mirrors were not those buried with weapons, i.e., they emphasize different aspects of social identity.

An association with feminine gender is certainly possible, since Greek, Etruscan, and Roman representations usually show women, not men, using mirrors, and Temperate Europe was in contact with these Mediterranean cultures. Certain types of Mediterranean prestige goods—for example, wine-drinking paraphernalia—were adopted by Temperate Europeans and incorporated into their feasting/drinking practices; mirrors could have been similarly integrated into local customs. (Indeed, imported wine-drinking paraphernalia—a stamnos and kantharos—were found in the La Motte Saint Valentin burial.) Gender associations could have come along for the ride.

Nevertheless, it is important to note that Mediterranean material culture was not adopted wholesale; the very same wine vessels intended for men-only symposia in Greece were found in female burials in Temperate Europe (e.g., Vix). Arnold (1995) has analyzed the rise in very wealthy "princess" burials in the early La Tène period in the context of larger social trends, such as the absence of male warriors on campaign. These women's burials contained goods such as feasting equipment (imported and local) and jewelry, but not weapons. The presence of imported goods testifies to these women's active role in trade with Mediterranean cultures, in particular the Greek colony at Massalia. During the 5th century BC, the period of the Reinheim and La Motte Saint Valentin burials, Temperate Europeans were beginning to express power, wealth, and prestige in terms that were meaningful to their exchange partners (Greeks and probably Scythians as well), and mirrors may have been an element in this vocabulary—although the aesthetics of those mirrors clearly had to be "improved" to meet local standards.

Later mirrors, those from Nijmegen and Wederath for example, existed in a very different social milieu. By the late 1st to 2nd century BC, Roman colonies were the principal source of exotic goods. The clasp mirror from Wederath most likely came from Gaul and the Nijmegen mirror was either made in Britain or by someone versed in British

mirror-making techniques. The wealth of these burials pales in comparison to the "princely" burials of the early La Tène. The quantity of grave goods generally, and personal adornments specifically, is smaller in later burials. Nevertheless, like Reinheim and La Motte Saint Valentin, Nijmegen and Wederath represent a juxtaposition of local and imported goods. Access to imports was likely an important component of elite status and display.

It appears the best fit for the continental data is with Hypotheses 3, 6 (but not 6a), and possibly 5c. Nevertheless it must be restated that customs and beliefs underlying them must have changed over the approximately 700 years represented by this group.

The presence of carts and horse harness in Arras burials may indicate that after death, the deceased made some kind of journey or spatial translation, perhaps facilitated or symbolized by the mirror. Carts and harness were restricted to the wealthiest burials, but all sufficiently wealthy adults had them, males and females both. The carts were rather delicate (that from Wetwang Village was reconstructed for an episode of *Meet the Ancestors*) (Stamp and Wilkinson 2002; Hill 2003) and so must not have been used for everyday transport; more likely, if they were used during the individual's lives, they were used for display. If the carts were intended to transport the individual after death (albeit perhaps metaphorically), would they also require mirrors?

The placement of the mirrors at Wetwang Slack, Wetwang Village, and Garton Slack suggests that they were not present merely to display the prestige of the entombed, but readily accessible for use. This is in contrast to the carts, which were disassembled before burial (not to mention there were no horses to pull them, except at the "King's" Barrow). Joints of meat were placed immediately on and around the deceased, so the mirror was as accessible, and/or as personal, as food.

It has been speculated that the Wetwang Village woman might have been a religious specialist, as her burial and her person were both distinctive—the burial in that the woman was positioned "upside down," and the woman in that she was unusually tall and had a markedly asymmetrical face, possibly with a very large birthmark. Ethnographic evidence suggests that such physical characteristics often lead to an individual being thought of as magical (Hill 2003). It is intriguing that this woman was

equipped with a mirror in which to view her distinctive appearance. The best fit for the Arras burials is with Hypotheses 2, 3, 5c, and 6. Hypothesis 2 is unlikely unless modified by another hypothesis, since not all adults (or even all wealthy adults) were equipped with mirrors; in other words, though mirrors may have facilitated a post mortem journey and/or have been containers of the soul, clearly some other factor was important in determining whose burial would have a mirror.

The best fit for the Late Iron Age/southern British burial data is provided by Hypotheses 2 (given the association with water), 3 (given the intimate association with the bodies of the deceased), 5a, and possibly 6. This is almost the same series of expectations met by the Arras burial data, except that there seems a stronger case for feminine gender in the latter, versus a stronger case for mirrors as technology of the body in the former. Also, although both groups meet most of the expectations of Hypothesis 2, they do so in different ways: vehicles in the Arras group and contemporary water depositions in the late Iron Age group.

Caucasia

Although the Caucasian sites add useful and provocative data to the total Eurasian sample, by themselves the two sites make for too small a sample to draw any robust conclusions.

Hypothesis 2. The presence of mirrors at Tsemdolina and Vani was limited to burials, so there is no corroborating evidence to indicate whether mirrors and other reflective surfaces (especially water) were thought to share any supernatural properties. Water was used for catoptromancy by ancient Greeks (Addey 2007), with whom Caucasians did engage in trade—Kacharava and Kvirkvelia 2007 refer to 4th-century-BC Georgia as "Hellenistic"—so it is not inconceivable that such ideas may have been shared, but further material evidence is necessary before any conclusions can be drawn.

The Tsemdolina mirror was a plain, reversible disk, so the intended orientation of its (more?) reflective surface cannot be known. The reflective side of the mirror at Vani,

on the other hand, was oriented upward, but the body did not lie directly atop the mirror, so it cannot be said that the mirror was aimed at the body.

Vani is contemporary with "Scythian" burials in Inner Eurasia and the Eurasian steppes, in which horse sacrifice was *de rigeur* in the wealthiest burials. The horses at Vani may reflect contact with the steppes to the north of the Caucasus. However, at Vani the possible human sacrifices outnumbered the single horse sacrifice. Tsemdolina, contemporary with "Sarmatian"-period burials, contained two horses (unusual during that period) and no human sacrifices. These two sites show continuity of the practice of horse burial, which might have been related to a magical belief that horses could act as psychopomps, although the sacrifice of horses was limited to the relatively wealthy, and so was also an index of socioeconomic status (cf. Hypothesis 6).

The author is unaware of any reports describing the deposition of mirrors in bodies of water in the Caucasus.

Hypothesis 3. (The orientation of the mirrors is described above.) At both Tsemdolina and Vani, the mirrors were placed next to the individual's head, to the left of the head at Vani and to the right at Tsemdolina.

Hypothesis 4. (Orientation of the mirrors is described above.) None of the objects from either burial has been suggested as bearing putative solar symbolism. The concentric circles engraved on the back of the Vani mirror could be interpreted as solar symbols (ample precedent for this could be found in European archaeological literature), but this would be a matter for much debate. The orientation of the Vani mirror toward the sky may be meaningful, but the sample is too small to draw any conclusions.

Hypothesis 5. These mirrors have not been studied for use wear, and their age relative to the date of the burials—i.e., whether they were new or heirlooms—was not reported, although the burials did contain other heirlooms (the Mesopotamian stamp seal at Vani and the eye bead at Tsemdolina), so this practice did occur.

At the time of the Vani burial, mirrors were not common and were limited to relatively wealthy burials, but by the time of the Tsemdolina burial, small bronze mirrors had become much more widespread. They are even considered rather typical for Sarmatian burials in the steppe region (Malyshev and Treister 1994). Nevertheless, mirror burials from Caucasia are much rarer, at least to judge by published data. For all periods, multiple mirrors are almost never found in a single burial.

Personal ornaments were abundant at both sites, but no dedicated grooming tools were found. Although Vani and Tsemdolina are separated by some three centuries, the general types of grave goods were similar: personal ornaments (e.g., fibulae, beads), feasting equipment, and horses. Weapons were more abundant at Tsemdolina than at Vani, which produced only a single spearhead, but can be considered a shared type of grave furniture.

It is known that the Tsemdolina individual was male, but the sex of the several people interred at Vani is unknown due to poor preservation. None of the classes of grave goods is limited to one gender or the other, even if weapons are somewhat more common in male burials and beads more common in female ones. Therefore, it cannot be assumed that the mirror is strongly gendered either.

Hypothesis 6. (The relationship between mirrors-as-grave-goods and overall burial wealth is described above.) None of the items in the Tsemdolina and Vani burials have been proposed as candidates for specifically ritual activity, though of course any of them may have been used in rituals or endowed with magical significance.

Hypothesis 7. Neither mirror was placed external to the body enclosures.

Summary—Caucasia. The burials at Tsemdolina and Vani most closely fit the predictions of Hypotheses 2, 3, and 6. That is, the presence of sacrificed horses might have been related to inter-dimensional travel, which could have been facilitated, or at least symbolized, by the mirror. Meanwhile, the mirrors at both sites were deliberately placed within a few centimeters of the heads of the deceased, which, as has been argued

earlier (see Chapter 7) embodies the intimate relationship between the mirror, the reflection, and the individual.

There is no corroborating evidence that mirrors were exclusively used for grooming or were associated with either gender. Nor is there evidence that the use of mirrors was predominantly ritual or that they pertained especially to shamans.

A good case could be made that mirrors in Caucasia derived at least some of their significance from political gifting. The assemblages of grave goods from Tsemdolina and Vani incorporate goods of many styles and origins, including Greek, Scythian, Thracian, Mesopotamian, and Roman; therefore, it seems that cosmopolitan trade links were important determinants of high status. However, the provenance of the mirrors in question was not reported, if indeed it is known, so they may have been local products rather than gifts from afar.

Inner Eurasia and the steppes

Because the sample is sufficiently large, burials from Inner Eurasia and the steppes will be considered as a single group, and also in chronological (Early, Transitional, and Late) and regional (Black Sea, South Urals, Altai, and Southern Mountains) subgroups in order to elucidate any chronological or regional trends that may be present.

Hypothesis 2. Horse sacrifice, a *sine qua non* of very wealthy "Scythian" burials, passed out of fashion around the 4th century BC—which also, not coincidentally, marks the beginning of the "Sarmatian" period. Only six burials in this sample were accompanied by horse sacrifices: Filippovka Kurgan 4, Burial 4 (6th-4th century BC); Prokhorovka Structure B (4th century BC); Pazyryk Barrows 2 and 6 (5th-4th century BC); Ak-Alakha (4th-3rd century BC); and Chertomlyk (4th century BC)[68]. All of these sites date to around the 4th century BC, the Transitional period. Except for Ak-Alakha, these burials were quite wealthy; Polosmak, the excavator of Ak-Alakha, considered that burial to represent "middle-level nobility," which is to say wealthy, but not as much so as the

[68] Note that Vani 24 (Republic of Georgia) also contained two sacrificed horses.

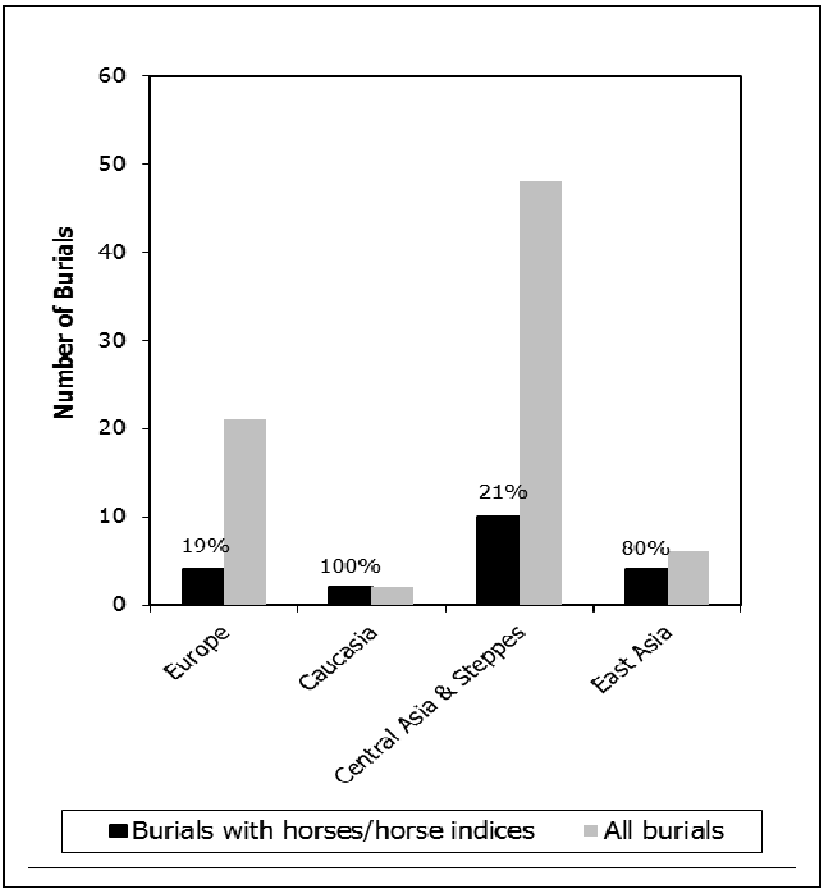

Figure 129. Mirror burials with horses or indices of horses (horse harness, vehicles, body position), plotted by region.

Pazyryk tumuli (Polosmak 1995: 353-354).

Aside from horse sacrifices, some burials contain indices (in the Peircean sense) of horses. However, burials containing only horse harness are less common than those with horse sacrifices. The former include: Filippovka Kurgan 11 (6th-4th century BC); Ilekshar I Mound 5 (5th century BC); Aksai Kurgan 8, Burial 13 (1st century AD); and Ust'-Al'ma 620 (early 1st century AD). These four sites are all located on the western steppes (South Urals and Black Sea groups). Two (Filippovka Kurgan 11 and Ilekshar I) are contemporary with burials containing horse sacrifices, but Aksai Kurgan 8, Burial 13 and Ust'-Al'ma 620—the two most westerly burials, from the Black Sea group—are also the latest, dating to the 1st century AD. Bitak Mound 155 contained 27 burials, one of which (XXIV) was accompanied by pieces of horse harness, but this was not the

individual buried with a mirror. Nevertheless, it does show the practice existed in the South Urals region, as late as the late 1st century BC.

Other indices of horses exist, ranging from burial of the corpse in a horseback-riding position (Pokrovka 10 Kurgan 3 Burial 1), to the inclusion of a bowl of fermented mare's milk (Ak-Alakha 3), to a small number of horse bones, perhaps included as food (Ilekshar I Mound 5; Shumaevo II Kurgan 9; Aksai Kurgan 2, Burial 2; and Pazyryk Barrow 2, which contained preserved horse meat). Although these can all be considered horse indices, archaeological interpretations vary; thus, for example, koumiss is often interpreted as an index of shamanism, rather than of horses (Davis-Kimball 1998a, 2002b). Of course, the two interpretations are hardly mutually exclusive. One common way horses are represented in burials is through depictions on personal ornaments (as at Arzhan, Pazyryk Barrow 2, and Tillya Tepe Tomb III)—however, horse representations were not considered as indices of horses in the preparation of Figure 129, below.

Considering all of Temperate Eurasia, 20 of 77 mirror burials (26%) contained horses, or an index of horses such as elements of harness, wheeled vehicles, and/or horseback-riding body position. Leaving aside Caucasia, which really cannot be considered here because the sample is so small, temperate East Asia has the most burials with horse paraphernalia (80%); this sample is also small, although it is arguably very typical. Temperate Europe and Inner Eurasia and the steppes are very similar in frequency of horse or horse index burials (19% and 21% of burials respectively), but all of the Temperate European burials are of vehicles, whereas Inner Eurasia accounts for all but one of the burials with actual horse sacrifices (the other being Vani 24).

It must be noted, however, that there are many Eurasian burials which contain horses and/or horse indices which do not have mirrors. Thus, whatever the significance of mirrors, horses, and vehicles, they retained their meanings independently. Only the wealthiest members of society seem to have been able to afford all of these, but perhaps less wealthy individuals could engage in the same symbolism or activity with only one or two elements. More accurate understanding of the relationship between mirrors and horses or horse indices must await future research.

There does not appear to be a repeated association of mirrors with bodies of water (or indeed any other potentially ritual contexts outside of burials) such as that observed in Temperate Europe and, to a lesser extent, in East Asia. However, this might not be meaningful if water was not attributed properties of portals and passages. In fact, it is likely that water had sacred as well as secular significance for the prehistoric peoples of Inner Eurasia and the steppes; as Kamash (2008: 225) demonstrates, "The contradictory nature of water (i.e. its ability to give life and bring death) and its transmutable appearance, in terms of both its colour and its three states (solid, liquid and gas), brought out multi-layered, and sometimes conflicting, opinions" among cultures across the world, both in prehistory and modern times. At any rate, whatever multivalence water and mirrors may have held for Iron Age communities in Inner Eurasia and the steppes, its influence on human behavior has yet to be fully investigated archaeologically.

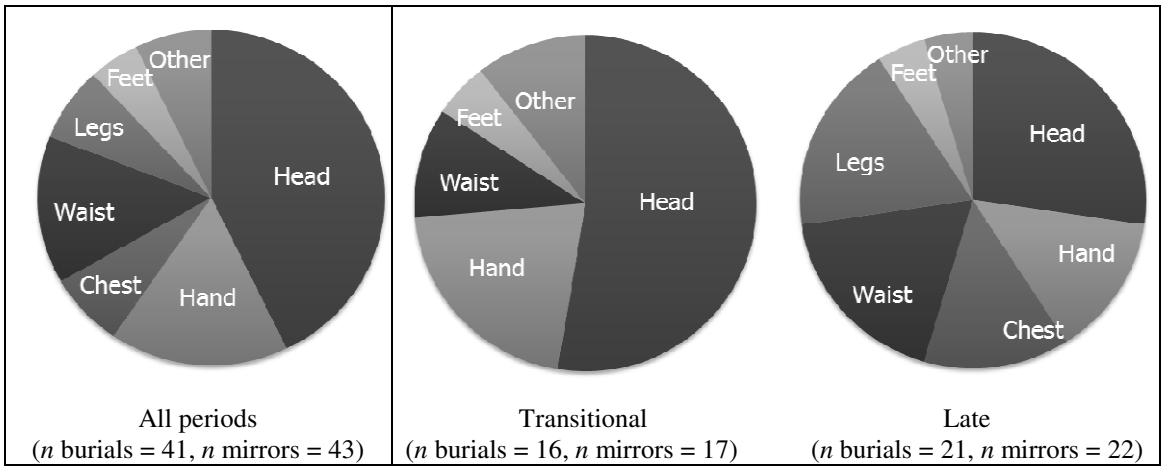

Figure 130. Mirror position in Inner Eurasian and steppe burials by time period.

Although mirror position in Inner Eurasian/steppe burials varied significantly in comparison to burials in Temperate Europe and East Asia, this changed over time (Fig. 132[69]). The Early group is not shown in the figure, because in both burials from this

[69] The following four burials were omitted from the analysis of mirror position, because the position of the mirror relative to the body is unknown or not reported: Aksai 1-1, Aksai 2-2, Filippovka 11, Filippovka 16-4.

period, Arzhan 2-5 and Bekteniz, the mirrors were placed by the head. From 100% of mirrors placed next to the head in the Early period[70], the frequency had decreased to 52% (10 mirrors) by the Transitional period. By the Late period, mirror position was even more variable: 29% (6 mirrors) were found beside the head, 19% (4) by the hand and waist, respectively, 14% (3) by the chest, and 5% (1) by the feet. All but one of the mirrors located at the waist were found at Niyä, and all the mirrors placed on the chest—a fashion which had been in decline since the 6th century BC according to Rubinson.

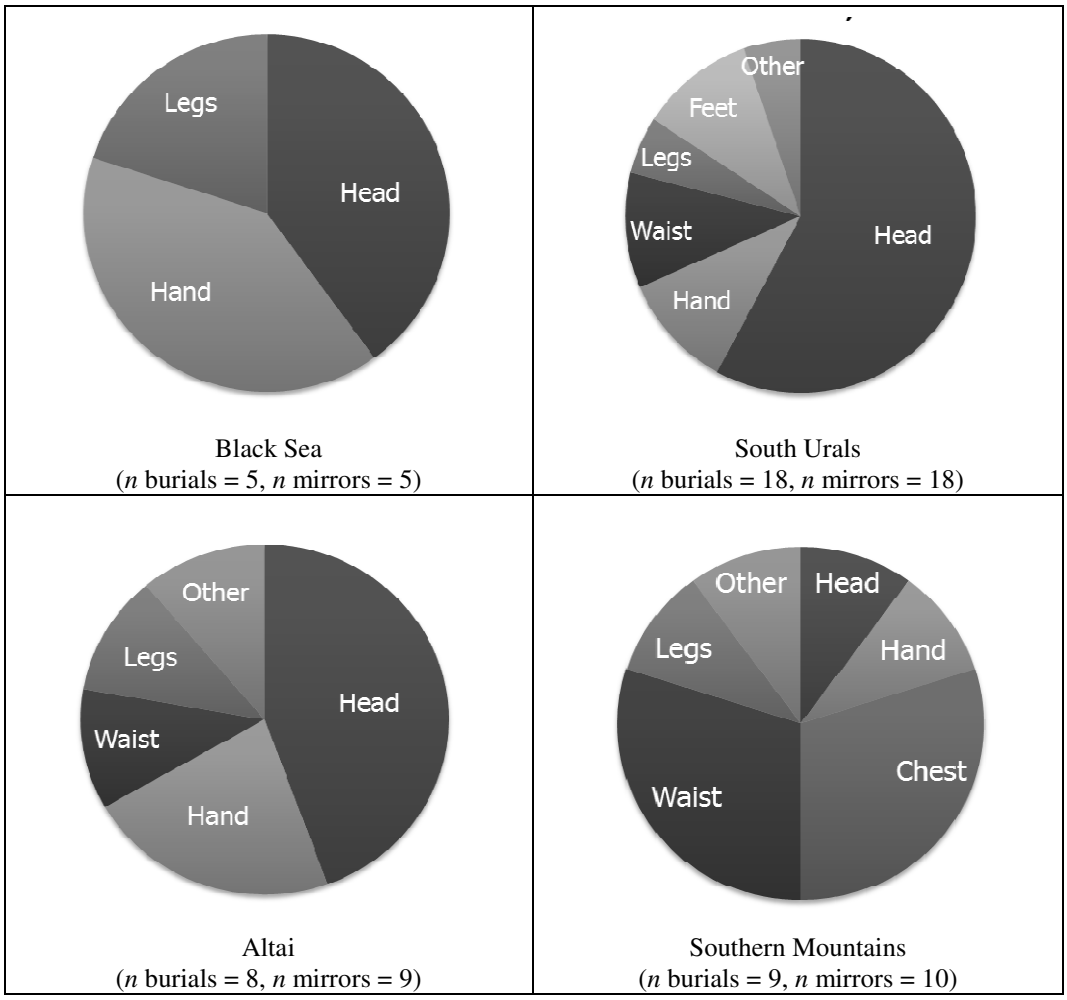

Figure 131. Mirror position in Inner Eurasian/steppe burials by subregion.

[70] N.B. The sample size of two graves, or three individuals with three mirrors, is of course very small and cannot be considered representative without further corroborating evidence.

Mirrors were not consistently oriented to face the deceased, as they might be expected to be if they were meant to be a portal, although in fact the reflective surface may be difficult to determine (if neither side of the mirror is decorated), and frequently the information, if known, is not reported. Of course, it must be remembered that many burials were looted, disturbing the original positions of the objects.
(2002)—were found at Tillya Tepe.

Hypothesis 3. (Orientation and deposition contexts of mirrors have been discussed above.)

When considering the Inner Eurasian and steppe burials by both region and period, the sample sizes are so much reduced that any conclusions would have to be very tentative indeed. As it happens, there are no distinct patterns to be observed. As mentioned above, in burials of the Early group, all the mirrors were placed beside the head; these burials are also all from the Altai region. Mirror position by the head is not a trend that continues in the Altai in later periods, so it may simply be a fashion that disappeared, or the sample may not be representative (which is likely in any case).

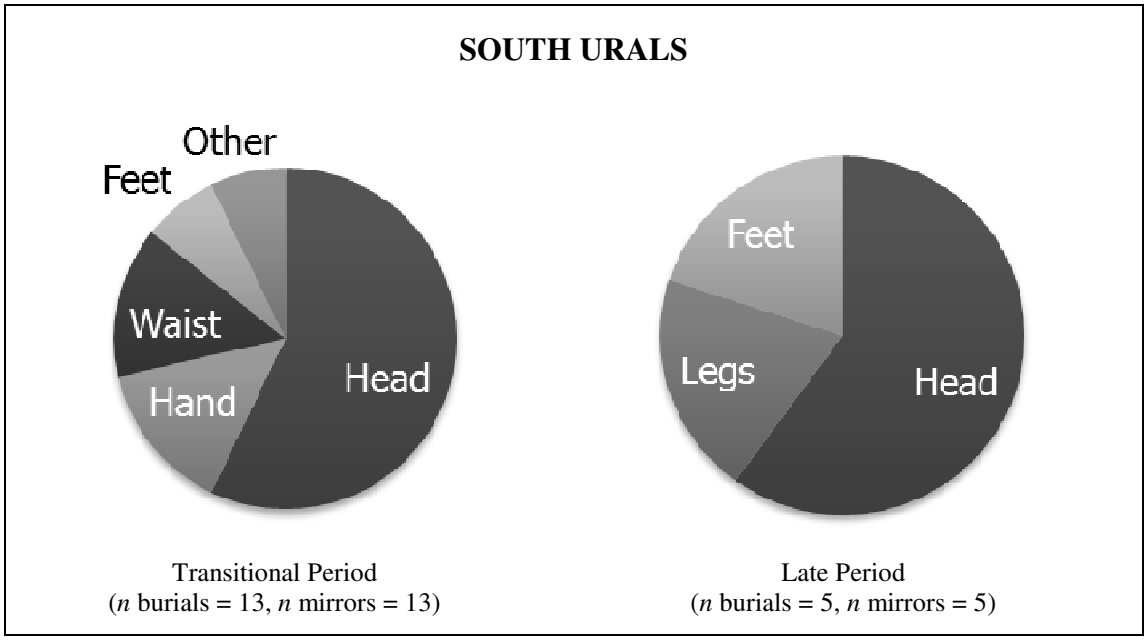

Figure 132. Mirror position in South Urals burials by subperiod.

During the Transitional period, mirrors in Altai burials were found by the head (1 instance, 25% of the sample), hand (2 instances, 50%), and away from the body (1 instance, 25%). In the Late period, however, represented by only two burials, one was found by the legs of the deceased and one by the waist. Again, these samples are too small to be significant. They merely show that, over time, mirrors were found in association with nearly all body parts in Altai burials (mirror position in all Altai burials is illustrated in Figure 132).

Variability in mirror position decreased over time in the South Urals (Fig. 133). Interestingly, however, the proportion associated with the head remained similar (58% in the Transitional period, 60% in the Late period). On the other hand, mirrors were not placed next to the legs in the Transitional period, whereas none were placed near the waist in the Late period.

All the graves in the Black Sea region date to the Late period. This is a small sample, consisting of only five mirrors. The mirrors are found in equal proportions by the head and the hand of the deceased (2 instances, or 40% each), with a single mirror by the legs.

In sum, whereas variability increases through time, there is no such clear patterning by subregion. In all periods and regions, more mirrors were placed by the head than in association with any other part of the body, but this trend is nowhere near as marked as in Temperate Europe or East Asia. Consequently it is difficult to find support for any hypothesis in these data.

Hypothesis 4. Most of the mirror plates in this sample were undecorated, although a few have a simple incised circumferential line. This can make it difficult to determine the orientation of the reflective surface; at any rate, this detail escaped mention in most published reports.

A possible solar symbolism for mirrors can be inferred from the presence of 4th-century-BC mirrors deposited at the Zoroastrian temple at Koi-Krylgan-Kala, Uzbekistan; Ravich (1991: 25) associates the spread of high-tin bronze mirrors in Inner Eurasia after the 6th century BC with the concomitant spread of Zoroastrianism.

As regards mirror decoration, of the more elaborate mirrors whose decoration is described, those from Lebedevka, Filippovka (Kurgan 4 Burial 4), and Ak-Alakha 3 feature ornamentation in a broadly Scythian animal style, depicting a ram or goat and a boar, a wolf, and deer with oversized antlers, respectively. The mirror from Filippovka Kurgan 3 Burial 1 featured floral, geometric and animal designs, as well as two human figures with bird heads, none of which were classic animal style motifs. The most likely candidate for solar imagery associated with a mirror is the Indian mirror from Pazyryk Barrow 2, which is incised with concentric circles infilled with zigzags. However, Ravich states that small (3-4 cm) "Sarmatian" and "Maeotian" mirrors with lateral loop handles from the Caucasus are decorated with "ornament reminding of the Sun disc" (ibid: 28).

Hypothesis 5. Little research has been undertaken to assess the ages of mirrors and whether their manufacture predates their burial. In some cases, it is obvious that a mirror was already old when buried, evidenced for example by fragmentation and broken edges worn smooth. In other cases, animals or writing have been added to the pre-existing engraved design, though this might have been done soon after manufacture. In the case of Han mirrors found far afield, as at Pazyryk, Koktepe, and Tillya Tepe, it is unknown how long it would take for these items to get from China (the presumed place of manufacture) to their ultimate destinations. At Filippovka, the mirrors from Kurgan 3 Burial 1 and Kurgan 11 were dated stylistically to the 4th century BC and 450-300 BC, respectively, making them roughly contemporary with other objects in the funerary assemblage.

Pokrovka cemetery 02 Kurgan 7 Burial 2 and Kurgan 8 Burial 5 contained fragments of deliberately broken mirrors. Presumably, if it was possible to discern that the mirrors had been broken deliberately, the edges were not worn too smooth. Mirrors found in first-century AD Mongolian burials (attributed to the Xiongnu culture) were purposely broken; it remains to be seen whether pieces of a single mirror might have been distributed amongst more than one burial (K. Linduff, pers. comm.; Lai 2006).

Table 9. Biological sexes of individuals associated with mirrors: Inner Eurasia and the steppes.

	Early (800-500 BC)	Transitional (500-350 BC)	Late (400 BC-AD 300)
Black Sea		Chertomlyk – female	Aksai 1-1 – female Aksai 2-2 – male Aksai 6-2 – female Aksai 8-13 – female Aksai 8-15 – female Bitak 155-XX – female Ust'-Al'ma 620 – female
South Urals		Filippovka 3-1 – unr Filippovka 4-4 – male? Filippovka 7-Central-III – unr Filippovka 7-Central-V – unr Filippovka 11 – unr Filippovka 16-4 – female Ilekshar I 5-1 – unk Lebedevka II-6 - unk Mirny – male Nikolayevka II 2-2 – unk Pokrovka 02 3-3 – female Pokrovka 02 7-3 – female Pokrovka 02 7-6 – female Pokrovka 02 8-5 – female Pokrovka 08 6-1 – female Pokrovka 10 3-1 – female	Prokhorovka B-3 – female Shumaevo II 3-6 – unr Shumaevo II 3-9 – female Shumaevo II 9-11-2 – female Shumaevo II 9-12-2 – male
Altai	Arzhan 2 m – male Arzhan 2 f – female Bekteniz – unr	Bike III Kurgan 1 – female Bike III Kurgan 8 – unk Pazyryk Barrow 2 – unk Pazyryk Barrow 6 – female?	Ak-Alakha – female Ak-Alakha 3 – female
Southern Mountains		Issyk – unk	Koktepe – female Niyä 95MN1M3 f – female Niyä 95MN1M5 – female Niyä 95MN1M8 f – female Tillya Tepe II – female Tillya Tepe III – female Tillya Tepe V – female Tillya Tepe VI – female

A number of other burials contain broken mirrors: Shumaevo II Kurgan 3 Burial 6 contained a fragmentary mirror, about half of the original plate, but it is not specified whether this break was deliberate or the result of long use. The mirror from Pazyryk Barrow 6 was broken, but still has sharp edges. It might date to the 5th century BC—making it as much as a century old at the time of burial—but its "broken mountain" design was long-lived and there are no chronologically distinctive features. The mirror from Ak-Alakha 3 had been cut down from a larger piece of metal and set in a wooden

frame; possibly the original object was also a mirror, but this is unknown. At any rate, it illustrates that even if a mirror is not particularly old, its parent materials may be, and that age may have been ascribed to the mirror in memory. Kurgan 6 Burial 2 (the female) and Kurgan 8 Burial 13 at Aksai contained fragmentary mirrors. In the former case, the edges of the mirror were broken, while in the latter, only half the mirror plate was present. It is not made clear whether the breakage happened in antiquity. The handle of the mirror associated with Individual XX, Bitak Tomb 155, was broken off in antiquity. These burials span the Early, Transitional, and Late groups as defined above, so based on this sample the presence or absence of broken mirrors does not seem to reflect a change in burial practice over time. Similarly, these burials come from all of the sub-regions.

The juxtaposition of mirrors and cosmetic sets was common in contemporary Chinese burials, and perhaps not surprisingly, the women associated with mirrors at Niyä, a site in active trade relationship with China, were buried with cosmetics as well as mirrors. A silver cosmetics box was found at Tillya Tepe (Tomb V), while another burial (Tomb VI) contained an iron toilet set and a cosmetics plate. Possible tattooing kits were found in two burials, Bekteniz and Filippovka 16-4. These may certainly be regarded as technology of the body, though they can also be ritual tools (see Hypothesis 6 below). One of the mirrors from Pazyryk Barrow 2 was found inside a wooden box along with unspecified toilet implements, leading excavators to interpret it as belonging to the female in the tomb. Thus, the burial of toilet or grooming implements spans the Early, Transitional, and Late periods, but the sample of graves with toilet implements is not large.

The number of mirrors per burial is generally small, even in wealthy burials. This stands in marked contrast to the wealthiest Temperate East Asian burials. At Arzhan 2-5, two individuals were interred within the same chamber; there were two mirrors, each placed beside the head of one of the individuals. It is therefore reasonable to assume that each individual was provisioned with one mirror. Similarly at Pazyryk Barrow 2, two individuals were interred along with two mirrors (although the disposition of objects in the tomb was disturbed by looters). The central burial in Kurgan 7 at Filippovka contained three mirrors and six individuals—one was placed next to the head

of Individual III, one beside and partly beneath the head of Individual V, and the last on the stomach of Individual V. Thus it spears that the two mirrors closest to Individual V were meant to be associated with that individual. Tillya Tepe burials III and VI each contained two mirrors. Since each individual at Tillya Tepe was buried separately within his or her own coffin, it is clear that individuals III and VI were each deliberately associated with two mirrors. The burials containing multiple mirrors were located in the Altai (Arzhan, Pazyryk) and South Urals (Filippovka) regions, as well as Afghanistan (Tillya Tepe), and pertain to all three time periods.

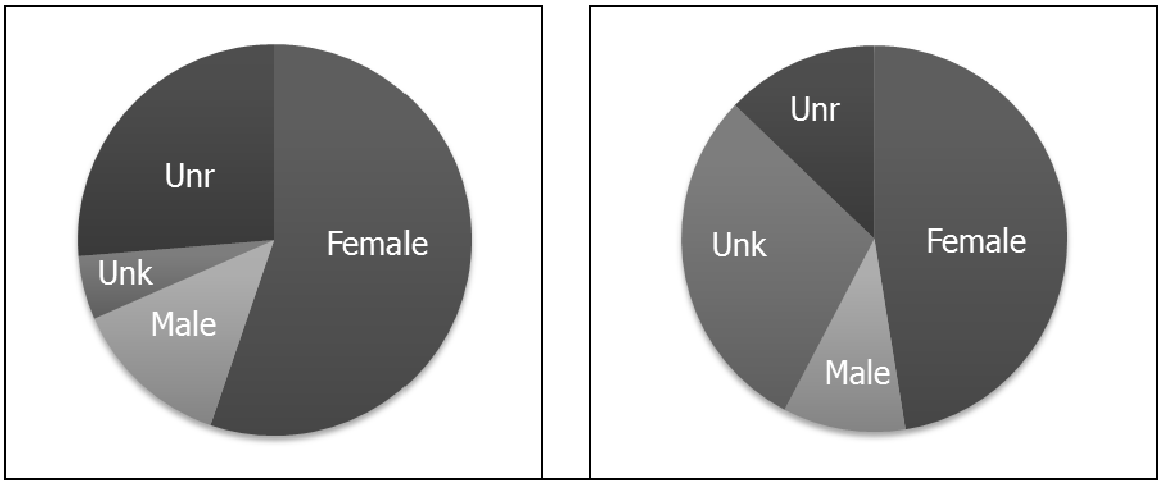

Figure 133. (a) Biological sex of individuals associated with mirrors – Inner Eurasian/steppe burials. (b) Biological sex of individuals associated with mirrors – total conservative sample.

Burials containing mirrors are among the wealthier ones in each time/region, but as Polosmak (1995) has pointed out for the case of Ak-Alakha, they are not necessarily the wealthiest. On the other hand, the "queen's" burial at Chertomlyk is one of the wealthiest of Scythian burials. Sarmatian burials are in general less spectacularly wealthy than those assigned to the Scythian culture/period. In short, while it is very possible that mirrors were bestowed as political gifts, there is no evidence for the large-scale redistribution system which has been proposed for Japan.

The question of a potential link between mirrors and feminine gender has already been discussed and problematized. Table 9 summarizes the biological sex of each individual associated with a mirror for each region and time period. Where an

individual's sex is designated "unk," (unknown) this means that the author(s) of the published report specifically state that sex was impossible to determine, or that it was impossible to determine with which individual a mirror was associated. If an individual's sex was simply not reported, it is listed as "unr" for unreported.

Figure 133a shows the proportion of mirrors associated with each sex, as well as unknown and unreported, for Inner Eurasian/steppe burials. It is immediately obvious that females greatly outnumber males with mirrors (56% of individuals versus 13%, respectively). However, note that sex is unknown or unreported for 31% of individuals. Yet even if all the unknown/unreported individuals turn out to be males, females with mirrors would outnumber them. In the conservative sample as a whole, on the other hand, females only constitute a plurality, with 47% of individuals, relative to 10% male (Fig. 133b). The percentage of sex-unknown or –unreported individuals in the whole conservative sample is 43%.

There do not appear to be any significant differences in the distribution of mirrors by sex of the deceased according to region or time period.

Hypothesis 6. (The relative wealth of mirror burials was described above.)

In burials from Inner Eurasia and the steppes, mirrors are found along with other items with purportedly cultic status. Such items include ladles, spoons, and vessels thought to have been used in the preparation and drinking of koumiss, or fermented mare's milk (e.g., Davis-Kimball 1998a). Davis-Kimball (1998a) states that at Pokrovka, all the cultic items were found in women's burials; her method was to categorize grave goods according to their use and then to compare them to the biological sex of the individuals with which each assemblage was interred. She writes that "The priestesses' burials held stone-carved or clay sacrificial altars, fossilized sea shells, and animal-style amulets" (ibid). She identifies some 7% of the female population buried at Pokrovka as "priestesses" (Davis-Kimball n.d.), as well as the individuals buried at Issyk, Prokhorovka, and Filippovka 3-1 (ibid).

Unfortunately, it is impossible to know exactly what the use of some of these items was. For example, although a sea shell certainly could be regarded as magical, it

need not be. There is no doubt, however, that the grave goods described as cultic are very restricted in their distribution, and some of them occur in combination with mirrors at Pokrovka, Ak-Alakha, Bekteniz, Filippovka, Ilekshar, Issyk, Lebedevka, Mirny, Nikolayevka, and Prokhorovka. In most of these cases, the cultic object was an "altar."

At Pokrovka Cemetery 02, Kurgan 7, Burial 6, the grave goods included animal bones, an iron knife, an animal scapula spoon, a spindle whorl, a boar's tusk, beads, and of course the mirror. Pokrovka 02 3-3 contained a "sacrificial altar."

At Ak-Alakha 3, the woman was buried with a vessel which originally contained koumiss.

The grave at Bekteniz contained a tattoo kit—which might be considered ritual, depending on the rites surrounding the act and/or purpose of tattooing—and a so-called altar. However, the altar might better be viewed as a palette, since it contained remains of pigment.

Individual V in the central burial of Filippovka Kurgan 7 was accompanied by fragments of a stone altar, while the deceased from Kurgan 16 Burial 4 had a tattoo kit.

Ilekshar I-5-1 contained a stone "sacrificial plate."

The Issyk individual was buried with two "ritual spoons," one silver and one wooden.

Lebedevka II-6 contained shells[71] and "ritual pebbles". The exact nature of the latter is not elaborated by Gutsalov (2007).

At Prokhorovka, a woman was accompanied by either a dish (Balakhvantsev and Yablonskii 2009) or "sacrificial table" (Davis-Kimball n.d.) of elk/moose antler.

The grave good assemblages from Mirny and Nikolayevka each included an "altar," although, as in the case of Bekteniz, the presence of pigments suggest the altars may have been palettes. Mirny also included fragments of shell mixed with minerals (pigments?).

Yet all of these objects, with the exception of the boar's tusk from Pokrovka 02 7-6, the shells from Lebedevka and Mirny, and the pebbles from Lebedevka can be

[71] Ust'-Al'ma also appears to have contained shells and animal teeth, depicted in the diagram of the burial but described simply as "amulets" (Zaitsev 2008). Of course, any person may use amulets; they are not necessarily restricted to religious practitioners.

explained according to purely quotidian uses. These items could be considered ritual insofar as no specific use is known for them. The fact that the "altars" from Mirny, Bekteniz, and Nikolayevka were covered with pigment suggests that many of these objects may in fact have been palettes. This does not, of course, negate the possibility of ritual use—far from it—but it does indicate that special care should be taken in the interpretation of these artifacts. The use of koumiss in ritual has been proposed, e.g., by Federov (2000), but this idea is derived principally from later textual and ethnographic sources rather than archaeological evidence (cf. Zhukovskaya 2008).

Hypothesis 7. In none of the Inner Eurasian or steppe burials was a mirror placed external to the body enclosure.

Summary—Inner Eurasia and the steppes. There is little archaeological evidence to support the hypothesis that mirrors in burials were meant to act as portals, except for the association between mirrors and horses; of course, the sacrifice of horses (and/or horse indices) might have had functions other than to be means of transportation.

The orientation of mirrors is difficult to discern, not least because the matter is seldom addressed in the primary literature, but it is clear that there was a widespread concern for the positioning of mirrors close to the body of the deceased. In the Early and Transitional periods, mirrors were placed by the head in at least a plurality of occasions, but in the Late period, mirror position became more variable. Although Rubinson (2002, 2006) suggests that mirrors tended to be placed by the heart prior to the 8th century BC, in the present sample, the proportion of mirrors located near the heart actually increased, although that is also true of placement near other body parts.

There are no putative solar symbols associated with mirrors from Inner Eurasia and the steppes that might corroborate a function as solar symbols.

It does not appear that a great deal of study has been devoted to determining the amount of use wear on mirrors from Inner Eurasian or steppe burials, although in several cases (described above) it has been noted that mirror fragments are worn. In the primary literature, the age of the mirror is generally not commented upon unless there is reason to

believe it is significantly older than the burial in question. However, nor is there any indication that the mirrors in this sample were made specifically for burial. It is therefore possible that they were objects used during the lives of the deceased.

There is some evidence for an association of mirrors with femininity, given that in this sample mirrors were found a majority of time in the burials of females; however, this majority is so small as to raise more doubt than certainty. Likewise, although mirrors were sometimes buried along with "technology of the body" such as tattooing kits and various toilet items (usually unspecified in the primary literature). Nevertheless, these burials are not in the majority. This could indicate that for some less wealthy individuals, mirrors were the only grooming kit they could afford, or that mirrors actions after burial were not thought to be limited to grooming activity.

While mirrors may well have been political gifts, in at least some cases, there is no clear archaeological evidence to conclusively demonstrate this.

Although there is ample ethnographic evidence from the 19th-21st centuries AD which demonstrates the frequent use of mirrors by shamans in ritual/religious contexts, this would be very hard to corroborate with the archaeological evidence. Indeed, this sample did not yield any such evidence. However, it does appear that mirrors were limited to burials of the relatively wealthy and thus did help to display the socioeconomic status of the deceased.

Finally, there is no physical indication that mirrors were intended primarily to act as apotropaic devices.

Temperate East Asia

The Temperate East Asian burials considered in this analysis are divided into sites on the Korean Peninsula (Sara-ri, Songsan-ri, and Hwangnam) and sites in Japan (Kurozuka and Fujinoki). Each group spans a broad chronological range—2nd-6th centuries AD for Korea and 3rd-6th centuries AD for Japan; nevertheless, the sites under consideration share greater consistency according to region than period.

Korean Peninsula. After the disappearance of native geometric mirrors and their replacement with Chinese-style ones, mirrors never enjoyed as much popularity in Korea

as in China and Japan. Nevertheless, contemporary Chinese sources indicate that they were very desirable as trade goods. Most Korean mirrors have been recovered from burials, but a few from votive deposits, primarily in water, are known (Gyeongju National Museum). Similarly, in Japan votive mirrors (納鏡 *nōkyō*) were deposited in pools through the Middle Ages, e.g., that on Mount Haguro, where some 600 mirrors were found when the pool was drained (Blacker 1999: 152; MacGregor 2010). This may suggest that the reflective surfaces of water and mirrors were endowed with similar magico-religious properties. Among burials, mirrors are limited to the wealthiest, to judge from the quantity of grave goods and the presence of prestigious types of objects such as horse harness and weapons, and they were placed within the tomb rather than external to it.

Horses are referenced indexically through harness in two of the three burials: bits at Sara-ri and all elements of harness, and especially ornate saddles, at Hwangnam. A full set of horse harness was buried in the south mound at Hwangnam (that is, outside the tomb but under the surface of the mound), and it has been suggested that this was meant to stand in for a sacrificed animal (Nelson 2003). The Songsan-ri No. 7 tomb does not contain any horse paraphernalia, in contrast to the burials from eastern Korea; later historical texts suggest that horses were more prestigious in the Silla and Goguryeo kingdoms than in Baekje, the kingdom ruled by Muryeong (Nelson 2007).

At Songsan-ri, mirrors were placed by both Muryeong's and his queen's heads, as well as another by the king's feet. Fujita (1993) analyzed the position of mirrors in Japanese Kofun period burials (AD 300-700) and the results demonstrate that mirrors often bracketed the deceased at head and feet; this pattern may have derived from the Korean peninsula, since the early Japanese state was closely allied with Baekje. The mirrors were oriented with their reflective surfaces facing down (i.e., toward the ground). In the south mound of Hwangnam No. 98 (the putative king's burial), the mirror was found somewhere near the individual's feet, but the exact position is not clear from published material; in the north mound, the mirror was placed somewhere in the general vicinity of the head, although again, its exact placement relative to the body is not entirely clear (Munhwajae Yeonguso 1985). The reflective surface was oriented up, that

is, away from the ground (which was also the case with the mirror at nearby Geumnyeongchong, the Gold Bell Tomb). The position and orientation of the mirror in the north ("queen's") mound at Hwangnam, and at Sara-ri, are unknown. This leaves only a small sample of mirrors with known positions, and within it, the treatment of mirrors is highly variable.

It is impossible to determine the exact age of any of the Korean mirrors, although they are broadly contemporary with the burials. All the mirrors in question—with the possible exception of one from Songsan-ri—were made in Korea after the Han style. The mirrors from Hwangnam No. 98 North and one of the Songsan-ri mirrors were based on the TLV design, but featured additional motifs not found in Chinese mirror art; the other two Songsan-ri mirrors were probably made in Korea using a Chinese mold, or a mold made from a Chinese mirror, and this may also have been the method used to make the Sara-ri mirrors. The number of mirrors per burial is also variable, in that the Silla tombs (Hwangnam North and South and Geumnyeongchong) contained only single mirrors, while the Sara-ri burial, which, though it lies in the heartland of the Silla kingdom, predates its historically-attested foundation, contained four mirrors, and the Baekje tomb (Songsan-ri) had one mirror for the queen and two for the king. This may indicate cultural differences, but with such a small sample it is impossible to draw any firm conclusions.

There is not thought to be any overtly solar imagery associated with the Korean mirrors. The TLV layout may represent the Chinese conception of the cosmos, but whether or not this was recognized by Koreans is unknown. The distinctively Korean motifs incorporated into mirror decoration are instead anthropo- or theriomorphic.

There is no mortuary evidence to suggest that mirrors were gendered artifacts. They are found in burials of both males and females (to the extent that sex can be determined). As Nelson (2003) has demonstrated, burials in Iron Age Korea are differentiated mainly along the lines of social status and regional culture group, rather than by gender. Additionally, mirrors are not found in immediate proximity to grooming implements or suspected "ritual" accoutrements.

Japan. In Japan, as in the Korean peninsula, mirrors are mostly recovered from burials, and to a lesser extent from votive deposits around shrines and temples. Some very wealthy burials contain dozens of mirrors—a practice unknown anywhere else in the world during the Iron Age.

Various kinds of horse harness were present at Fujinoki, placed inside the tomb but outside of the coffin. Although further indices of horses or horsemanship are not present at Fujinoki, they can be found in other contemporary burials, such as Sanmaizuka 三昧塚, where a gilt-bronze crown was decorated with multiple horses (Ibaraki-ken Kyoiku Iinkai 1960). Horses are not native to the Japanese archipelago, and were transported from the continent and/or Korean peninsula, probably during the Kofun period (*ca*. AD 300-700). As in the Korean peninsula, horses were prestigious—perhaps even more so insofar as they were rarer in Japan—and horse harnesses in both Korea and Japan included many purely decorative pieces such as bells, dangles, and settings for plumes. The Kurozuka burial was made early in the Kofun period, which may explain the lack of horse equipment—it simply may not have been as plentiful in Japan at that time.

The preference for placing mirrors by the head of the deceased is marked, and has been noted by Fujita (1993). In addition to the burials discussed in Chapter 6, Kurozuka and Fujinoki, many others demonstrate this feature, including the recently and rigorously excavated and published tombs at Yukinoyama, Sanmaizuka, and Higashinomiya. Most wealthy burials contain more than one mirror, but Fujita has shown that the mirror closest to the head was usually older or larger than the others. The present analysis demonstrates that, when only one mirror is present, it would be placed by the head. Where two mirrors are present, it is likely that one is by the head and one by the feet. Further mirrors were arranged around the body, but usually within close proximity (less than a meter away). At Kurozuka, the mirrors had been carefully propped on edge with their reflective surfaces aimed toward the body. At Fujinoki, one mirror was oriented with its reflective surface up (that is, facing the underside of the bodies), while the other three were oriented down, i.e., away from the male body.

Interestingly, in some earlier burials, mirrors were placed outside the body enclosure. During the Yayoi period (traditionally dated ca. 300 BC-AD 300), a common burial practice, especially on the southwestern island Kyūshū, was to place the deceased in a flexed position inside two jars placed mouth to mouth (Imamura 1996, Mizoguchi 2002a and b). Some of these burials contained mirrors, including both Korean-style geometric and Chinese exemplars (Mizoguchi 2002b). In a few cases, a large number of mirrors were found in a single coffin (e.g., six in a single coffin at Tateiwa, and more than 30 each at Sugu Okamoto and Mikumo [Hall 1993: 278]). At Yoshinogari, a mirror had been cemented, reflective side outward, on the outside of the join between the two jars (Shichida 2006). This external placement of the mirror may indicate its purpose was apotropaic, intended perhaps to guard the seal between the two halves of the jar coffin.

As in Korean burials, Japanese tombs from the Kofun period are differentiated more by status than by gender. This is perhaps nowhere better illustrated than at Fujinoki, if it is true that the two individuals interred there were a male and female—both were buried with swords, beads, and mirrors. The sex of the individual buried at Kurozuka has been casually assumed to be male, but the skeletal remains were not sufficiently well preserved to assess this. "Technologies of the body" other than mirrors are not common in Kofun period burials, so there is no indication that personal grooming was emphasized. It has been suggested that the bi-conical bronze object from the Fujinoki sarcophagus was a drum, which might have had ritual significance—but its actual nature and function is not known for certain. Thus it is difficult to say whether the mirrors were intended for "ritual" or cosmetic uses simply on the basis of associated artifacts.

Buried mirrors often represent a long timespan, incorporating both heirloom and newer mirrors. In addition, some burials contain both imports and locally made mirrors. A burial at Hananotani No. 1 (Fukui, Fukui Prefecture, Japan) contained a native mirror dated to the 1st century AD along with a later imported Chinese mirror (Anonymous 2000). If mirrors were indeed used as political gifts, molds may have been reused many times over many years.

Most mirrors found in Japan during this period feature Chinese-themed designs, such as the TLV or the especially-popular deity-and-beast style. Some mirrors were

locally made; indeed, as yet no triangular-rimmed deity-and-beast mirrors are known from China. A few are decorated with completely indigenous motifs. The evidence that mirrors in Japan are associated with the sun, perhaps indeed a solar deity, comes from texts written down shortly after the period under investigation. These texts indicate that rulers were intent on advertising their links to divine ancestors, especially the sun goddess, and often engaged in shamanic rites such as trances (e.g., Allen 2003; Nelson 2008), so possession of mirrors may have served to embody or facilitate both these ancestral connections and trance practices.

Summary—Temperate East Asia. It appears that mirror placement and orientation within burials was more rigorously patterned in Japan than in Korea, although the sample size for both regions is small. In particular, the Japanese practice of orienting mirrors to face the corpse, even to the extent of propping the mirrors on edge, is dramatic. Coupled with the preference for locating mirrors by the head, the evidence best matches the predictions for the third hypothesis, that the function of preserving the soul or spirit was emphasized. Since mirrors have been recovered from votive deposits in watery places, however, it may be that the reflective mirror surface and that of water were thought to share properties and functions. In Europe, one of these functions is to act as a portal; perhaps this was true in Temperate East Asia as well.

Outside of Chinese texts, the best evidence for mirrors as apotropaic devices comes from a woman's burial at Yoshinogari (Kyūshū, Japan), where a mirror was placed with the reflective surface facing out in the sealing of a jar burial (Shichida 2006), but these are too few to assume a broader pattern. Similarly, Japan provides the best evidence for the idea that mirrors were solar symbols and/or shamanic tools, but this is only true when taking historical evidence into account. If we rely solely on the mortuary assemblages, it is difficult to draw such conclusions. There is no indication that mirrors were intended for exclusively, or even primarily, cosmetic use, and the large number of mirrors in some burials, such as Kurozuka, seems like overkill if the mirrors are regarded strictly as grooming tools.

There is no evidence that mirrors were associated primarily with either gender in Japan. Instead, burials seem to have been differentiated more by status. Mirrors in Korea seem to have experienced the nadir of their popularity in burials during the Iron Age (increasing in number after the 10th century AD), and only the wealthiest burials possess them, reinforcing their connection with high status. Unfortunately, because there are so few, it is difficult to draw robust conclusions.

It is very likely that mirrors were given as political gifts, as proposed by Kobayashi (2006 [1961]), and indeed, such gifts are attested in historical accounts. In fact, if mirrors were prestigious, as it seems they were given their restriction to relatively wealthy burials, it seems reasonable that they would make appropriate political gifts everywhere. (Moreover, there is a compelling argument that all gifts are political!) But it is unlikely that mirrors were *only* political gifts; whatever prestige they had must have derived from various aspects of meaning, all acting in combination.

DISCUSSION

General features of Temperate Eurasian mirror burials

Grave goods associated with mirrors. For the entire Temperate Eurasian sample, the most common classes of item found in graves with mirrors were vessels (50 burials), beads (38 burials), and knives (26 burials). Burials from Inner Eurasia and the steppes make up 88% of the burials with knives and 70% of burials with beads, which cannot be accounted for solely by the preponderance of Inner Eurasian/steppe sites within the total sample[72]. Vessels, on the other hand, are a common kind of funerary offering across all regions. Only beads seem to have a strong association with feminine gender, with 59% of burials with beads being burials of females, as opposed to 15% males.

[72] The 47 sites from Inner Eurasia and the steppes make up 62% of the sample analyzed in Chapter 8.

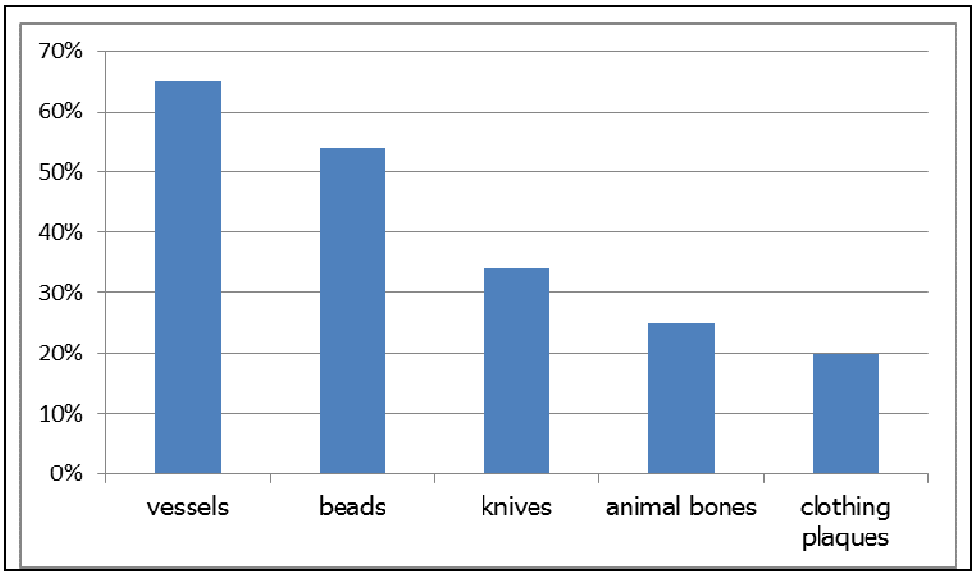

Figure 134. Five most common categories of grave goods found in association with mirrors.

Physical integrity and replication. In examining the archaeological context of mirrors, it is necessary to consider the relationship between whole and fragmentary mirrors, as well as singularity versus replication. Particularly in Inner Eurasia and the steppe regions, it is common to find well-worn fragments of mirrors in burials. This indicates that the mirrors were not broken as part of the burial ritual but were used in a fragmentary state for many years. In burials attributed to the Xiongnu (an ethnonym used by the Chinese for nomadic societies on their northern borders, especially Mongolia), often only fragments are present (cf. recent excavations described in Miniaev and Sakharovskaia 2007). To date, no attempt has been made to refit the portions of mirrors to determine if different burials might be linked through pieces of the same mirror (Kathryn Linduff, pers. comm). Enchainment as a form of relationship among humans may provide insight into cases of fragmentary mirrors (Brück 2006; Chapman 1999, 2000; Chapman and Gaydarska 2007; Jones 2005). Breaking objects up allows them to be kept and given at the same time, forming a material chain among individuals (Chapman 2000). This may also work for identical objects, e.g., mirrors made from the same mold. It can be said that mirrors do not need to be broken to act in enchained relationships, if they are believed to hold some aspect of the people they have reflected.

In East Asia and Europe, most burials with mirrors contain whole objects; but in Temperate Europe, each mirror is unique, whereas in East Asia, multiple copies might be produced from a single mold, or alternatively, a new mold might be taken from an existing mirror and new copies made. The preference for singular versus replicate mirrors in Europe and East Asia respectively may reveal much about social networks and interpersonal relationships in the two regions; similarly, the apparent curation of portions of mirrors in Inner Eurasia may speak to the valuation of mirrors as well as relationships among individuals in possession of pieces of the same mirror. This is sadly beyond the scope of the present analysis, but will no doubt be a fruitful avenue of future research.

The hypotheses revisited

Buried mirrors as portals between worlds. Given the archaeological evidence, it is not unreasonable to suppose that mirrors were at least sometimes considered portals between worlds, e.g., the worlds of the living and of the dead. Certainly this is a motif that appears in folklore from all over Temperate Eurasia; however, in Temperate Europe there is considerable archaeological data to show that bodies of water—which, like mirrors, are endowed with reflective surfaces—were sites of ritual activity. How do we know whether water might have been conceived as a portal? Unfortunately, though this motif does appear in folklore (source), there is no way to verify such a belief archaeologically. Moreover, elites were entombed with vehicles in "Arras culture" burials, which suggests there may have been a belief in a post-mortem journey.

In Inner Eurasia and the steppes, horses or horse harness sometimes accompanied buried mirrors. Ethnographic reports from these regions, as well as folklore from all over Eurasia, led Eliade (1964: 467) to call the horse "Pre-eminently the funerary animal and psychopomp….The horse carries the deceased into the beyond; it produces the 'break-through in plane,' the passage from this world to other worlds." Of course it is not possible to assume continuity from prehistory to the 20th century, yet the centrality of the horse in the lives of nomadic peoples makes it highly likely that this animal would be symbolically or magically endowed with the ability to transport supernaturally as well as in the everyday manner. In burials with sacrificed horses, no doubt such conspicuous

consumption also served to advertise the wealth and prestige of the deceased (and after all, the deceased would only require one horse on which to travel, yet many burials contain numerous horses); however, once again it seems probable that there was a notion of a journey which occurred at or after death.

Even where actual horses do not appear in a burial, they may appear as representations, or be indexed by elements of horse harness or armor. Of course, a representation of a horse was not necessarily meant to operate as a psychopomp, even if real horses were, but it is possible that those who could not afford to sacrifice a real horse for a burial might have substituted representations or pieces of harness instead. Wealth, prestige, and mobility are of course not mutually exclusive.

Although this hypothesis does not find universal support throughout Temperate Eurasia (based on the sample analyzed here), it is also impossible to falsify.

Containers/preservers for the soul or self. Cross-culturally, mirrors were placed in burials with reference to the body of the deceased. Joy (2010: 77-78) notes that in late Iron Age Britain, mirrors were placed close to the body, especially the head, or near the waist/hip, as if suspended from a belt.

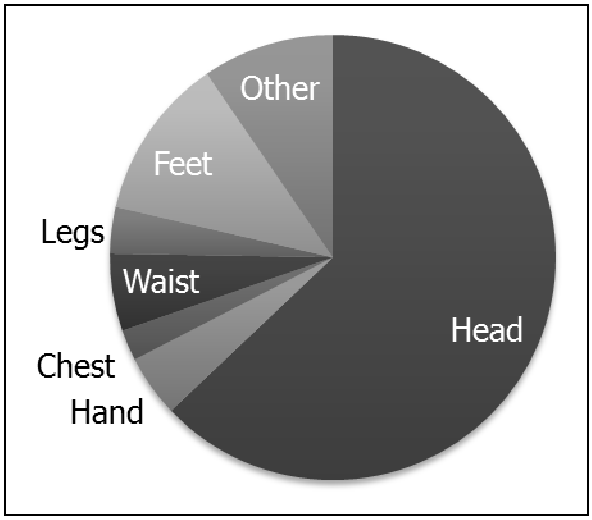

Figure 135. Location of buried mirrors relative to parts of the human body, all burials[73] (*n* mirrors = 178; *n* inhumations = 90).

In a statistical analysis of 90 inhumation burials with mirrors from across Eurasia (these constitute all burials in the original sample for which mirror position was known, and was in near proximity to the body), 63% of the mirrors were placed by the deceased individual's head (Fig. 136). The second favorite position was the feet at 12%.

[73] All burials used for the dissertation for which information on mirror location relative to body segments exists was used to calculate this graph.

In burials with only one mirror (Fig. 138), the mirror is located by the head 52% of the time, with 14% placed near the waist and 13% by the hand. In Eurasian burials that contain more than one mirror, there is a clear preference for the head (69%) and feet (16%) (Fig. 137). This suggests rather consistent rules for placement: when there is only one mirror, it is placed by the head; the second mirror is placed by the feet; and subsequent mirrors are arranged around the body, or clustered at head and feet. This provides further support for Fujita's (1993) analysis of Japanese Kofun period tombs, although Fujita also found that mirrors by the head were more likely to be unusually large, old, or exotic. In China during the Han period (206 BC-AD 220), it was common to place a mirror inside the coffin near the deceased's head (Brashier 1995: 207, note 17), while other mirrors were usually found among cosmetic tools in a separate part of the burial. Most of the burials with multiple mirrors in this analysis come from Japan and Korea, so it is possible these rules of arrangement were limited to these parts of East Asia; however, the preference for positioning *at least* one mirror by the head is found throughout Eurasia.

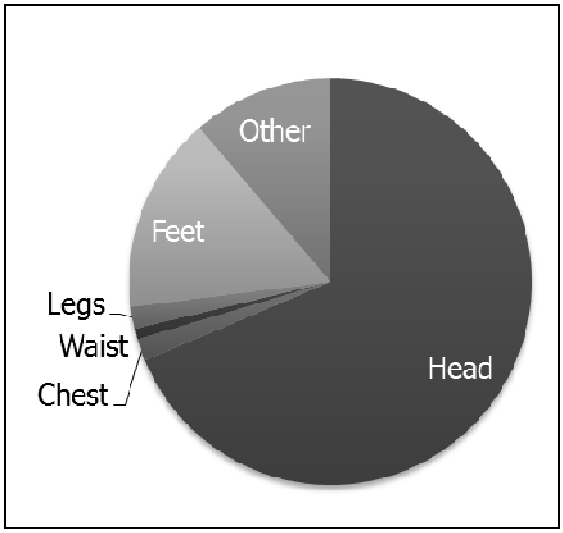

Figure 136. Location of mirrors relative to parts of the body, burials with multiple mirrors (*n* mirrors = 115; *n* burials = 27).

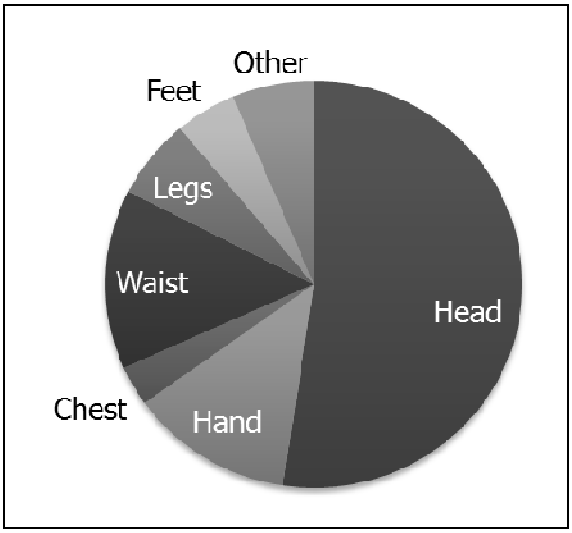

Figure 137. Location of mirror relative to parts of the body, burials with single mirrors (*n* = 63).

When burials are broken down by region, the tendency to favor the head still prevails, although Inner Eurasia and the steppes are quite variable with regard to mirror position (Figs. 100, 101, 106-107). In Caucasian burials the favored position of the mirror was by the head 100% of the time, but since this was a sample of only two, it was not represented graphically.

Writing about late Iron Age Britain, Joy asks, "If mirrors were not all placed in graves for the same reason, why are there similarities such as the orientation of the mirror in graves…in burials from different regions separated sometimes by a hundred years?" (Joy 2011: 480). This question becomes even more pressing and mysterious when extended to all of Temperate Eurasia, where burials are separated by thousands of kilometers and up to a millennium. The answer, suggests Joy, lies in the physical properties of the mirrors themselves. They are made, he argues, to reflect the face, explaining the association with the head (ibid); similarly, mirrors are held in the hands, and perhaps worn on belts at the waist/hip.

But why was it necessary to reiterate these spatial relationships after death? If a deceased individual was believed to use their belongings in some kind of afterlife, presumably they would need to pick up and set down their mirror, thus encouraging their placement within easy reach. However, a more compelling argument revolves around the belief (attested in folklore and ethnography) that a mirror always holds a part (sometimes the soul) of a person it has once reflected: e.g., "the Manchu-Tungusic term designating the mirror, *pańaptu*, is derived from *pańa*, 'soul, spirit,' more precisely the 'soul-shade.' Hence the mirror is a receptacle (*-ptu*) for the 'soul-shade'" (Eliade 1964: 153-154). In other words, there is a uniquely intimate connection between the individual and the mirror, compared to other sorts of grave goods. Since in some cases, many mirrors are buried with a single person (usually in Temperate East Asia—e.g., 34 at Kurozuka, Japan), far more than would be necessary to view one's reflection, the relationships articulated in the burial were arguably even closer and more dramatic than they were during life.

Solar symbols. Although early Japanese literature is replete with associations between the deified sun and mirrors, there is no archaeological evidence that can provide conclusive proof of this belief. Nevertheless, the Japanese origin myths were written down only a short time after the practice of mirror burial had begun to decline, and the connection between mirrors and the sun also exists in modern Shintō belief. It therefore seems likely that at the time the mirrors were buried, there was a notion that the mirror was connected—either literally, metaphorically, or symbolically—with the sun. We are thus reminded of how much information is not preserved in the archaeological record.

As regards solar representations on the mirrors, or on objects found in association, there is little evidence. While putative solar representations were very common in Bronze Age art (e.g., Kristiansen and Larsson 2005), by later prehistory these representations had given way to other types of motifs. In the case of the mirrors analyzed here, their decoration ranges from apparently abstract, curvilinear designs in Temperate Europe to elaborate depictions of gods, goddesses, and mythical beasts in East Asia. The majority of mirrors from Inner Eurasia and the steppes analyzed here had no decoration at all, or only an incised line. It would seem, then, that the solar connection reached its greatest degree of elaboration in Japan, or perhaps Temperate East Asia more widely. However, some "Sarmatian" mirrors, e.g. those mentioned by Ravich (1991: 28) were incised with concentric circles and radiating lines and zigzags, interpreted as solar designs. There may be further evidence for a connection between mirrors and solar worship in the deposition of mirrors at the Zoroastrian temple of Koi-Krylgan-Kala, Uzbekistan in the 4th century BC (ibid: 24).

Utilitarian possessions for use in an afterlife. Were mirrors simply utilitarian grooming items, albeit ones intended for use in an afterlife? Certainly none of the mirrors in this analysis appears to have been custom made for burial, and many show considerable wear, even breakage and repair, indicating they were used for many years before being buried. Yet quotidian use does not strip an object of its numinous qualities; and indeed, we do not necessarily know *how* these mirrors were used in life.

When mirrors are found in association with grooming kits, there is reason to believe that these items can all be considered "technology of the body." They may represent increasing attention to personal appearance. In fact, it is likely that the popularity of mirrors in late prehistory definitely demonstrates a growing interconnectedness between the appearance and notions of self and identity. At any rate, grooming and cosmetic kits were not abundant in the present sample.

Mirrors were undoubtedly political gifts at times, as any expensive object might have been. Such situations were probably highly contingent on immediate circumstances. Only in Japan is there evidence for a more elaborate system of redistribution of mirrors, but it is obvious because of the existence of multiple copies of the same mirror design. Where mirrors are unique, as in Temperate Europe, a system of redistribution would be difficult to discern.

In the present sample, a larger proportion of mirrors were buried with females; however, mirrors were not found exclusively associated with women. Some classes of object—e.g., beads—are more commonly found in burials of females, although this pattern does not hold for Temperate East Asia. But considering the Temperate Eurasian sample as a whole, mirrors are found with individuals of both sexes, and with a range of other goods, many of which do not appear to be gendered (e.g., pottery).

Table 10. Gendered grave goods by region: predicted versus observed.

	Predicted		**Observed**	
	Male	**Female**	**Male**	**Female**
Temperate Europe	Swords Spears	Beads Ring jewelry Fibulae Mirrors	Swords Spears	Beads Ring jewelry Fibulae Mirrors(?)
Caucasia	Swords(?)	Ring jewelry(?) Mirrors(?)	?	?
Inner Eurasia & the Steppes	Swords Bows & arrows	Spindle whorls Needles & thread Beads	Swords Spears	Spindle whorls Needles & thread Beads
Temperate East Asia	Swords	n/a	n/a	n/a

Table 10 summarizes the gender associations predicted for certain types of grave goods, based on the archaeological literature and what has arguably become interpretive

tradition, along with actual associations as observed in this sample. It can be seen that for Temperate Europe, the predicted associations stand up well, although the sex of many of the skeletal remains associated with mirrors cannot be determined due to poor preservation or cremation, and exceptions probably exist.

In Inner Eurasia and the steppes, on the other hand, gender associations are difficult to determine. In general, it can be said that textile-working equipment (spindle whorls, needles and thread) are more frequently found with females, while weapons are more frequently found with males, but the distinctions are less starkly drawn than in Europe.

For Temperate East Asia, grave goods are nearly identical for both sexes; they differ primarily along status lines instead of gender lines. There is some possibility that swords are more commonly found with males, but that cannot be substantiated with the present sample.

Symbols of socioeconomic status. There is no question that mirrors were buried with relatively wealthy members of society. In East Asia, the wealthiest burials contain many mirrors. Thus mirrors must have carried connotations of prestige in the living community. It seems, based on the magical powers ascribed to mirrors in folklore and ethnographic accounts, that mirrors were never *only* indices of socioeconomic status. It is interesting that among the late Iron Age mirrors from Britain, similarities in form can be observed between mirrors, tankards, paterae (Balmaclellan), and horse bridle bits, begging the question, did these items have anything in common besides their form? Tankards and paterae are both vessels for liquid, which would be reflective like the surface of a mirror, while horse harness would have been restricted to wealthier members of the community, as were mirrors. The relationship could be one of socioeconomic status, of ritual usage, or possibly something as yet unconceived.

Do buried mirrors indicate that the deceased was a religious specialist? This hypothesis cannot be falsified. There are simply no clear archaeological indicators of shaman/ritual practitioner status. This is probably due in large part to the relatively

ephemeral nature of many religious tools, so that it is hard to draw connections between mirrors and other objects of ritual significance.

Apotropaic devices. Mirrors are depicted as apotropaic in many Chinese texts. It thus might be expected that their presence in a burial was intended to ward off evil. Once again, this would be hard to demonstrate archaeologically, without relying on texts. In cases where mirrors were oriented externally, as if to ward off intrusive elements, this could be construed as apotropaic, but this was not the case in any of the burials in this sample.

Ni thybiais, ddewrdrais ddirdra,	It never occurred to me
Na bai deg f'wyneb a da,	That my face was not fair and good,
Oni theimlais, waith amlwg,	Until I saw it made plain
Y drych; a llyna un drwg!	In the mirror; and then what an evil!
Ym y dywawd o'r diwedd	For the mirror tells me at last
Y drych nad wyf wych o wedd.	That my looks are far from fine.
…	…
Lleuad las gron gwmpas graen,	Round blue moon, sad-shining compass,
Llawn o hid, llun ehedfaen;	Full with enchantment, a picture most magnetic;
Hadlyd liw, hudol o dlws,	pale-colored, magical jewel,
Hudolion a'i hadeilws;	Fashioned by sorcerers;
Breuddwyd o'r modd ebrwydda',	A fleeting dream,
Bradwr oer a brawd i'r ia.	Cold traitor and ice-brother.
Ffalstaf, gwir ddifwynaf gwas,	Most false, most truth-defiling servant,
Fflam fo'r drych mingam meingas!	To hell with this hateful mocking mirror!
…	…

To hell with this hateful mocking

Y Drych ("The Mirror"), by Dafydd ap Gwilym, *f.* 1340-1370 (translated by author) (Welsh text from Bromwich 1982: 188-191).

Mirrors are such a common object in the twenty-first century that at first it may be hard to imagine a time when they were magical. Yet who has not experienced looking into a mirror and being surprised by the reflection that met them there? As one grows accustomed to the presence of mirrors, one builds a set of expectations about what they will encounter the next time they face a mirror; but when surprised by one, the reflection becomes unexpected, and only then is it a true reflection. In our modern-day dependence on mirrors for self-examination, they become fraught with the danger of undoing the self-image they have been used to create. Compared to other objects of quotidian use, there is a special intimacy between the individual and his or her mirror (Moyer 2010). It allows us to embody, externalize, and even to possess the most magically vulnerable, if intangible, part of ourselves. Ironically, the self, so often regarded as the source of an individual's subjectivity, is principally constituted through objectification, a process in which mirrors are the principal tool.

In the Iron Age, owning a mirror was a much rarer privilege. To own one was to have the luxury of self-consciousness and self-examination—*self* being a notion that is largely culturally constructed. The intimacy of the mirror and the reflection, coupled

with the cosmopolitan relationships that were embodied by the mirror, helped create a self that constantly referenced its own position within the wider world.

That world was populated not only by other Temperate European communities, but also by otherworlds of spirits and ancestors. Mirrors thus referenced this-worldly relationships while allowing the creation of otherworldly ones as well. An increasing focus on the self and its connectedness with these worlds may have underlain the change in mirror position within burials after the 8th century BC. Mirrors were usually placed near the head, or in easy reach of the hand, and with their reflective surfaces toward the body (Chapter 8), probably to reiterate the intimate bond between the person and his or her reflection, and to allow the mirror to continue its role in creating and maintaining relationships.

Of course the ontological reality of *self* cannot be taken for granted. Not only is this true for archaeologists studying prehistory, but arguably selves are not taken for granted even by those who believe they are one. Although this is difficult, if not impossible, to prove on the basis of material evidence alone, it is argued here that the role of mirrors in the objectification of the subject self is crucial to understanding their ubiquity in prehistory as in the present. Death and the funeral are moments of profound transformation. Funerals not only allow, but force, a reevaluation of the individual's (or self's) roles and relationships within the community. Such a transformation poses a sense of terror for the living, because the potential annihilation or disappearance of the self of the deceased looms—and by implication that of their own selves—and the living face the moment when they will be forever deprived of embodied contact with the deceased. Mirrors in burials reify and reinforce, even embody, the eternal, objective self. This may be why the living were compelled to articulate the relationship between the mirror and the deceased's face and body so strongly, as evidenced in the placement of mirrors in burials. Following Saunders 1988: 5), mortuary ritual was a "situation which generated beliefs concerning shining images and reflected images, *and thus created avenues for their manipulation*" (emphasis added).

Mirrors seem prone to induce hypnotic states and portalling experiences, especially in cultures with cosmologies consisting of multiple worlds or levels of reality.

Along with mirrors, actual apertures such as caves and doorways can be used to portal, so the entrance to tombs may have been regarded as such. The presence of mirrors in graves may have been intended to help facilitate movement between realities of the living and dead. Simultaneously the presence of mirrors, or their representations, establish the liminality of the space of the grave, and thus evoke the idea of passing into another phase of being.

But what was the wider social context of mortuary mirrors? Given the myriad local variations in burial practice, what elements would have been shared among cultures, along with the mirrors themselves? During the Iron Age, every individual burial unfolded within the consciousness, not only of beliefs and values held by the community, but of the place of that community in an increasingly far-flung network. Iron Age globalization is nowhere more in evidence than in examining mirrors: It describes both the wide geographical distribution of the mirrors themselves, and the consistencies in their use within mortuary contexts. As mirrors were exchanged, ideas about them were communicated as well. These ideas included concepts of the appropriate and possible uses of mirrors, but also the consciousness of their cosmopolitan histories. Mirrors were thus one element in a vocabulary of prestige shared by the wealthier strata of Temperate Eurasia; through mirrors elites could literally contemplate their position within the wider world.

This globalizing aspect of mirrors and their locally-specific designs and meanings were not mutually exclusive. Globalization not only allows for diversity at the local level, but arguably creates it (cf. Pitts 2008). Thus we see, for example, mirrors with lateral handles and mirrors with suspension loops; mirrors with specific styles of decoration—La Tène, Zhou, Scythian animal style—and mirrors with no decoration; mirrors made from various alloys; mirrors placed by the hand of the deceased and mirrors placed by the head (discussed in Chapters 3-6). That communities were conscious of their interconnectedness did not equate with a desire to homogenize; rather, it spawned creative forms of communication among those communities.

A phenomenological examination of mirrors allows a window into their affordances (Chapter 7). It is evident that mirrors' brilliance is central to their tendency

to attract attention, to manipulate states of consciousness, and of course, to reflect images. Color, replete with symbolic associations, is also intimately tied to the materiality of mirrors. The shininess and color of mirrors linked them to other substances in a web of analogical and symbolic associations (as has been argued by Saunders 1988, 1990, 1999, 2001). Folklore and written documents indicate that mirrors shared in the light-giving properties of the sun and in the portalling properties of water, and linked the worlds of the mundane and the numinous.

A number of avenues for future research present themselves based on the results of this analysis. Bronze mirrors first appeared and began to make their way around Eurasia during the Bronze Age, so by expanding the chronological framework, a more in-depth understanding will be possible.

Achaemenid burials from the fringes of the Empire (e.g. in present day Turkey and Syria) have produced mirrors (Kohler 1980; Moorey 1980). It will be enlightening to explore the possible roles of these mirrors in the negotiation of identity on the frontiers. Future research can also delve into questions of interaction between nomadic and settled societies, or between centralizing polities (e.g., empires) and smaller-scale societies around them.

It may be possible to refit fragments of mirrors in Xiongnu burials from present-day Mongolia, as suggested by Kathryn Linduff (pers. comm.). The tradition of burying broken mirrors was not widespread in Temperate Eurasia, but the Xiongnu territory was located in the heart of the continent, and this culture is still not well understood archaeologically outside of Mongolia.

By analyzing the composition of mirrors, it will be possible to trace patterns in metals sourcing, and therefore trade networks in Eurasia. If particular ores were chosen for mirrors, it will be possible to demonstrate this.

A question that persistently arises and warrants further study is, if mirrors were usually limited to relatively wealthy individuals, how did poorer ones experience reflection and self-investigation? Were alternative materials used (such as still water), or was self-reflection a pastime (perhaps a value system) of interest only to a small group?

Finally, though globalization can describe phenomena of culture contact which took place in late prehistory/protohistory in Temperate Eurasia, it cannot ultimately explain them. Therefore, future research will delve more into discovering what were the causes and mechanisms of the observed phenomena of cultural interaction.

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Appendix A – List of Mirrors

This table lists all mirror finds used in analyses for this dissertation; that is, the extended sample, which includes the descriptive (Chapters 3-6) and conservative (Chapter 8) samples, along with the location, context, and main source of publication for each find.

	MIRROR	LOCATION	CONTEXT	SOURCE
1	Ak-Alakha	Altai, Russia	inhumation	Polosmak 1995
2	Ak-Alakha 3	Altai, Russia	inhumation	Rubinson 2002
3	Akenham	Suffolk, England	unknown	Joy 2010
4	Aksai 1-1	Rostov, Russia	inhumation	Dyachenko et al 2000
5	Aksai 2-2	Rostov, Russia	inhumation	Dyachenko et al 2000
6	Aksai 6-1/2	Rostov, Russia	inhumation	Dyachenko et al 2000
7	Aksai 8-13	Rostov, Russia	inhumation	Dyachenko et al 2000
8	Aksai 8-15	Rostov, Russia	inhumation	Dyachenko et al 2000
9	Arras 10	Yorkshire, England	inhumation	Stead 1965
10	Arras 28	Yorkshire, England	inhumation	Greenwell 1877, Stead 1965
11	Arzhan 2-5 male	Altai, Russia	inhumation	Chugunov et al 2001
12	Arzhan 2-5 female	Altai, Russia	inhumation	Chugunov et al 2001
13	Aston	Hertfordshire, England	cremation	Rook et al 1982
14	Atagotsuka 愛宕塚	Yamashiro, Japan	inhumation	Fujita 1993
15	Bac Mhic Connain	Isle of Uist, Scotland	settlement	MacGregor 1976
16	Badingham	Suffolk, England	unknown	Joy 2010
17	Ballymoney	Co. Antrim, Northern Ireland	watery deposit	Jope 1954
18	Balmaclellan	Dumfries & Galloway, Scotland	watery deposit	MacGregor 1976, Fox 1958
19	Bekteniz Kurgan 1	North Kazakhstan, Kazakhstan	inhumation	Tairov & Bushmakin 2002
20	Beverley	Yorkshire, England	inhumation	Stephenson 1895, Walford 1897
21	Bike III Kurgan 1	Altai, Russia	inhumation	Kubarev 2001

22	Bike III Kurgan 8	Altai, Russia	inhumation	Kubarev 2001
23	Billericay I	Essex, England	cremation?	Bulleid and Gray 1911
24	Billericay II	Essex, England	cremation?	Bulleid and Gray 1911
25	Billericay III	Essex, England	burial?	Bulleid and Gray 1911
26	Bitak 155-XX	Crimea, Ukraine	inhumation	Puzdrovskii 2005
27	Birdlip	Gloucestershire, England	inhumation	Staelens 1982
28	Brecon	Powys, Wales	cremation	Sealey 2006, Joy 2010
29	Bridport	Dorset, England	cremation	Staelens 1982, Joy 2010
30	Bromham	Bedfordshire, England	unknown	Burleigh et al 2007, Burleigh and Megaw, 2011
31	Bryher	Scilly Isles, England	inhumation	Johns 2002-3
32	Bulbury	Dorset, England	dry deposit?	Cunliffe 1972
33	Carlingwark	Dumfries & Galloway, Scotland	watery deposit	MacGregor 1976
34	Chertomlyk "queen"	Dnipropetrovs'ka, Ukraine	inhumation	Boltryk & Fialko 2006, Menghin & Parzinger 2007
35	Changsha Western Han	Changsha, China	inhumation	Brashier 1995
36	Chettle	Dorset, England	dry deposit or burial	Joy 2010
37	Chilham Castle	Kent, England	cremation	Parfitt 1998
38	Choubouji Minamihara 長法寺南原	Yamashiro, Japan	inhumation	Fujita 1993
39	Colchester I (Lexden Grange)	Essex, England	cremation	Fox and Hull 1948
40	Colchester II (Hyderabad Barracks)	Essex, England	unknown	Sealey 2006, Joy 2010
41	Compiègne	Oise, France	watery deposit?	Guillaumet and Schönfelder 2001
42	Desborough	Northamptonshire, England	unknown	Smith 1909
43	Disney	unknown (England)	unknown	Smith 1909
44	Dorton	Buckinghamshire, England	cremation	Farley 1983
45	Dühren	Baden-Württemburg, Germany	cremation	Fischer 2005
46	Essex/Sussex Border	Essex or Sussex, England	unknown	Joy 2010
47	Filippovka 3-1	Orenburg, Russia	inhumation	Pschenichniuk 2000, 2006

48	Filippovka 4-4	Orenburg, Russia	inhumation	Pschenichniuk 2000, 2006
49	Filippovka 7-central-III	Orenburg, Russia	inhumation	Pschenichniuk 2000, 2006
50	Filippovka 7-central-V	Orenburg, Russia	inhumation	Pschenichniuk 2000, 2006
51	Filippovka 11	Orenburg, Russia	inhumation	Pschenichniuk 2000, 2006
52	Filippovka 16-4	Orenburg, Russia	inhumation	Pschenichniuk 2000, 2006
53	Fujinoki 藤の木	Nara Prefecture, Japan	inhumation	Kidder 1987, 1989, 1990
54	Fuquan shan	Zhejiang, China	inhumation	Brashier 1995
55	Garton Slack	Yorkshire, England	inhumation	Jope 2000
56	Gibbs	unknown (England)	unknown	Smith 1909
57	Glastonbury E1	Somerset, England	settlement	Bulleid and Gray 1911
58	Glastonbury E100	Somerset, England	settlement	Bulleid and Gray 1911
59	Great Chesterford	Essex, England	unknown	Fox 1960
60	Hewang Reservoir 1	Henan, China	inhumation	Brashier 1995
61	Hewang Reservoir 2	Henan, China	inhumation	Brashier 1995
62	Hewang Reservoir 3	Henan, China	inhumation	Brashier 1995
63	Higashinomiya 東之宮	Aichi Prefecture, Japan	inhumation	Shiraishi et al 2005
64	Hochheim am Main	Hessen, Germany	unknown	Wurm 1965
65	Holcombe	Devon, England	dry deposit or settlement	Fox and Pollard 1973
66	Hwangnam 98 North	Gyeongju, Korea	inhumation	Munhwajae Yeonguso 1985
67	Hwangnam 98 South	Gyeongju, Korea	inhumation	Gyeongju Munhwajae Yeonguso 1996
68	Ilekshar I-5-1	West Kazakhstan, Kazakhstan	inhumation	Gutsalov 2007
69	Ingleton	unknown (England)	unknown	Fox 1958
70	Issyk	Almaty, Kazakhstan	inhumation	Menghin & Parzinger 2007
71	Jeongbaek-ri 127 (Wang Kuang)	Pyeongyang, North Korea	inhumation	Tsunekichi and Gayamoto 1935
72	Jordan Hill	Dorset, England	unknown	Smith 1909
73	Jounoyama 城の山	Tajima, Japan	inhumation	Fujita 1993
74	Kardaielova	south Urals area, Russia	inhumation	Hanks 2000
75	Kholodny Yar 20	Cherkasy, Ukraine	inhumation	Rolle 1989
76	King Harry Lane 9	Hertfordshire, England	cremation	Stead and Rigby 1989
77	King Harry Lane 13	Hertfordshire, England	cremation	Stead and Rigby 1989

78	King Harry Lane 66	Hertfordshire, England	cremation	Stead and Rigby 1989
79	King Harry Lane 138	Hertfordshire, England	cremation	Stead and Rigby 1989
80	King Harry Lane 222	Hertfordshire, England	cremation	Stead and Rigby 1989
81	King Harry Lane 325	Hertfordshire, England	cremation	Stead and Rigby 1989
82	Koktepe	Samarqand Viloyati, Uzbekistan	inhumation	Rapin et al 2001
83	Kokubunji 国分寺	Houki, Japan	inhumation	Fujita 1993
84	Kurozuka 黒塚	Nara Prefecture, Japan	inhumation	Edwards 1999
85	La Motte St. Valentin	Haute-Marne, France	cremation	Déchelette 1913
86	Lambay Island	Co. Dublin, Ireland	inhumation	MacAlister 1929, Rynne 1976
87	Latchmere Green	Hampshire, England	cremation	Fulford and Creighton 1998
88	Lebedevka II-6	West Kazakhstan, Kazakhstan	inhumation	Gutsalov 2007
89	Llanwnda	Pembrokeshire, Wales	burial	Joy 2010
90	Llechwedd-du Bach	Merioneth, Wales	burial?	Fox 1958, Joy 2010
91	Lochlee Crannog	South Ayrshire, Scotland	settlement	MacGregor 1976
92	Maebashi Tenjinyama 前橋天神山	Ueno, Japan	inhumation	Fujita 1993
93	Maiden Castle	Dorset, England	settlement	Wheeler 1936
94	Matsubayashiyama 松林山	Tōnoe, Japan	inhumation	Fujita 1993
95	Mawangdui No. 1	Changsha, China	inhumation	Brashier 1995
96	Mayer	unknown (England)	unknown	Smith 1909
97	Merlesford?	unknown (Scotland)	unknown	MacGregor 1976, Joy 2010
98	Mirny Settlement Kurgan 1	Chelyabinsk, Russia	inhumation	Tairov & Bushmakin 2002
99	Nagara Ryumonji 長良龍門寺	Minou, Japan	inhumation	Fujita 1993
100	Nagatsuka 長塚	Minou, Japan	inhumation	Fujita 1993
101	Nakamichichoushitsuka 中道銚子塚	Yamashiro, Japan	inhumation	Fujita 1993
102	Nijmegen	Gelderland, Netherlands	cremation	Dunning 1928, Spratling 1972
103	Nikolayevka II-2-2	Chelyabinsk, Russia	inhumation	Tairov & Bushmakin 2002
104	Niyä 95MN1M3 female	Xinjiang, China	inhumation	Wang 1999
105	Niyä 95MN1M5	Xinjiang, China	inhumation	Wang 1999
106	Niyä 95MN1M8 female	Xinjiang, China	inhumation	Wang 1999

107	Nukutani North Mound ヌク谷北塚	Kawachi, Japan	inhumation	Fujita 1993
108	Oka 岡	Kawachi, Japan	inhumation	Fujita 1993
109	Old Warden I	Bedfordshire, England	cremation?	Spratling 1972
110	Old Warden II	Bedfordshire, England	cremation?	Dyer 1966
111	"Oxfordshire"	Oxfordshire?, England	unknown	Joy 2010
112	Pazyryk 2	Altai, Russia	inhumation	Rudenko 1970
113	Pazyryk 6	Altai, Russia	inhumation	Rudenko 1970
114	Pegsdon	Bedfordshire, England	cremation	Burleigh et al 2007
115	Pokrovka 02-3-2	Orenburg, Russia	inhumation	Davis-Kimball 1998a, 2002b
116	Pokrovka 02-7-6	Orenburg, Russia	inhumation	Davis-Kimball 1998a
117	Pokrovka 02-8-5	Orenburg, Russia	inhumation	Davis-Kimball 1998a
118	Pokrovka 08-6-1	Orenburg, Russia	inhumation	Davis-Kimball & Yablonsky 1995
119	Pokrovka 10-3-1	Orenburg, Russia	inhumation	Davis-Kimball 1998a
120	Portesham	Dorset, England	inhumation	Fitzpatrick 1996
121	Portland I (the Grange)	Dorset, England	unknown	Smith 1909
122	Portland II (the Verne)	Dorset, England	unknown	Joy 2010
123	Prokhorovka B-3	Orenburg, Russia	inhumation	Balakhvantsev & Yablonskii 2009
124	Reinheim	Saarland, Germany	inhumation	Keller 1965
125	Rickling	Essex, England	unknown	Sealey 2006
126	Rivenhall I	Essex, England	unknown	Smith 1909, Lloyd-Morgan 1993
127	Rivenhall II	Essex, England	unknown	Lloyd-Morgan 1993
128	Ruxox	Bedfordshire, England	unknown	Burleigh and Megaw 2011
129	Sanmaizuka 三昧塚	Ibaraki Prefecture, Japan	inhumation	Ibaraki-ken Kyoiku Iinkai 1960
130	Sara-ri 130	Gyeongju, Korea	inhumation	Yeongnam Institute of Cultural Properties 2001
131	Shan County 1	Henan, China	inhumation	Brashier 1995
132	Shan County 2	Henan, China	inhumation	Brashier 1995
133	Shan County 3	Henan, China	inhumation	Brashier 1995
134	Shinzawa 新沢 48	Yamato, Japan	inhumation	Fujita 1993
135	Shinzawa 新沢 213	Yamato, Japan	inhumation	Fujita 1993
136	Shumaevo II-3-6	Orenburg, Russia	inhumation	Morgunova et al 2003

137	Shumaevo II-3-9	Orenburg, Russia	inhumation	Morgunova et al 2003
138	Shumaevo II-9-11	Orenburg, Russia	inhumation	Morgunova et al 2003
139	Shumaevo II-9-12	Orenburg, Russia	inhumation	Morgunova et al 2003
140	Songsan-ri 7 male	Orenburg, Russia	inhumation	Kim 1971
141	Songsan-ri 7 female	Orenburg, Russia	inhumation	Kim 1971
142	Sonobekaichi 園部垣内	Yamashiro, Japan	inhumation	Fujita 1993
143	St. Keverne (Trelan Bahow)	Cornwall, England	inhumation	Johns 2002-3
144	Stamford Hill I	Devon, England	inhumation	Bulleid and Gray 1911
145	Stamford Hill II	Devon, England	inhumation	Bulleid and Gray 1911
146	Stamford Hill III	Devon, England	inhumation	Bulleid and Gray 1911
147	Stanway CF115	Essex, England	cremation	Crummy et al 2007
148	Stoneyford	Co. Kilkenny, Ireland	cremation	Bourke 1989
149	Taniguchi East 谷口東	Hizen, Japan	inhumation	Fujita 1993
150	Teikawashi 6512	Japan	inhumation	Higuchi 1986
151	Terado Ōtsuka 寺戸大塚	Yamashiro, Japan	inhumation	Fujita 1993
152	Thetford (Fison Way)	Norfolk, England	unknown	Gregory 1991
153	Tillya Tepe II	Jowzjan, Afghanistan	inhumation	Schiltz 2008
154	Tillya Tepe III	Jowzjan, Afghanistan	inhumation	Schiltz 2008
155	Tillya Tepe V	Jowzjan, Afghanistan	inhumation	Schiltz 2008
156	Tillya Tepe VI	Jowzjan, Afghanistan	inhumation	Schiltz 2008
157	Tsemdolina 9	Krasnodar, Russia	inhumation	Malyshev & Treister 1994
158	Umanoyama 馬ノ山	Houki, Japan	inhumation	Fujita 1993
159	Ust'-Al'ma	Crimea, Ukraine	inhumation	Zaitsev 2008
160	Vani 24	Imreti, Republic of Georgia	inhumation	Joy 2010
161	Wederath 2370	Rheinland-Pfalz, Germany	cremation	Abegg 1989
162	Wetwang Slack 2	Yorkshire, England	inhumation	Joy 2010
163	Wetwang Village	Yorkshire, England	inhumation	Hill 2003, Joy 2010
164	Yakovlevsky I Separated Kurgan, Secondary Burial 3	Bashkortostan, Russia	inhumation	Tairov & Bushmakin 2002
165	Yoshinogari	Saga Prefecture, Japan	inhumation	Shichida 2006

166	Yoshitake-Takagi 吉武高木 M3	Fukuoka Prefecture, Japan	inhumation	Mizoguchi 2002b
167	Yukinoyama 雪の山	Shiga Prefecture, Japan	inhumation	Yukinoyama Kofun Hakkutsu Chousadan 1990-93

Appendix B – Mirror Position in Inhumation Burials

This table lists all inhumation burials in the extended sample, with the position of mirrors relative to the body of the deceased.

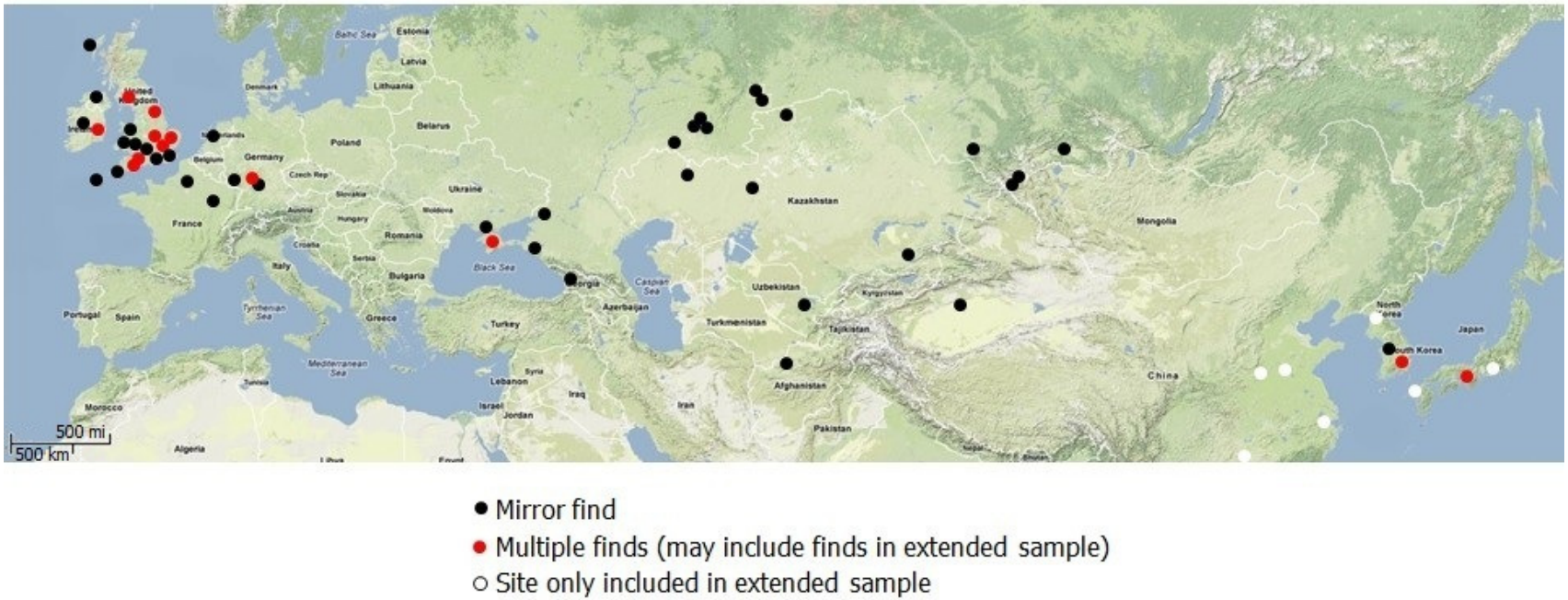
	MIRROR	HEAD	HAND	CHEST	WAIST	LEGS	FEET	OTHER	UNKN	*n* MRS
1	Ak-Alakha				1					1
2	Ak-Alakha 3					1				1
3	Aksai 1-1								2	2
4	Aksai 2-2								1	1
5	Aksai 6-1/2								1	1
6	Aksai 8-13	1								1
7	Aksai 8-15					1				1
8	Arras 10								1	1
9	Arras 28	1								1
10	Arzhan 2-5 male	1								1
11	Arzhan 2-5 female	1								1
12	Atagotsuka 愛宕塚	2						1		3
13	Bekteniz Kurgan 1	1								1
14	Beverley								1	1
15	Bike III Kurgan 1		1							1
16	Bike III Kurgan 8		1							1
17	Bitak 155-XX	1								1
18	Birdlip								1	1
19	Bryher	1								1
20	Chertomlyk "queen"		1							1
21	Changsha Western Han	2								2
22	Choubouji Minamihara 長法寺南原	1						5		6
23	Filippovka 3-1		1							1
24	Filippovka 4-4						1			1

25	Filippovka 7-central-III	1								1
26	Filippovka 7-central-V	1			1					2
27	Filippovka 11								1	1
28	Filippovka 16-4								1	1
29	Fujinoki 藤の木	4								4
30	Fuquan shan	1								1
31	Garton Slack				1					1
32	Hewang Reservoir 1	1								1
33	Hewang Reservoir 2	1								1
34	Hewang Reservoir 3	1								1
35	Higashinomiya 東之宮	11								11
36	Hwangnam 98 North							1		1
37	Hwangnam 98 South						1			1
38	Ilekshar I-5-1	1								1
39	Issyk	1								1
40	Jeongbaek-ri 127 (Wang Kuang)							2		2
41	Jounoyama 城の山	3					3			6
42	Kardaielova		1							1
43	Kholodny Yar 20		1							1
44	Koktepe		1							1
45	Kokubunji 国分寺	3								3
46	Kurozuka 黒塚	6	5	10	1	5			7	34
47	Lambay Island								1	1
48	Lebedevka II-6	1								1
49	Maebashi Tenjinyama 前橋天神山	5								5
50	Matsubayashiyama 松林山	3					1			4
51	Mawangdui No. 1							1		1
52	Mirny Settlement Kurgan 1	1								1
53	Nagara Ryumonji 長良龍門寺	2						1		3
54	Nagatsuka 長塚	3								3

55	Nakamichichoushitsuka 中道銚子塚	3					2			5
56	Nikolayevka II-2-2				1					1
57	Niyä 95MN1M3 female				1					1
58	Niyä 95MN1M5				1					1
59	Niyä 95MN1M8 female				1					1
60	Nukutani North Mound ヌク谷北塚	3								3
61	Oka 岡	3								3
62	Pazyryk 2	1						1		2
63	Pazyryk 6								1	1
64	Pokrovka 02-3-2							1		1
65	Pokrovka 02-7-6							1		1
66	Pokrovka 02-8-5	1								1
67	Pokrovka 08-6-1	1								1
68	Pokrovka 10-3-1		1							1
69	Portesham				1					1
70	Prokhorovka B-3	1								1
71	Reinheim							1		1
72	Sanmaizuka 三昧塚	1								1
73	Sara-ri 130								4	4
74	Shan County 1	1								1
75	Shan County 2	1								1
76	Shan County 3	1								1
77	Shinzawa 新沢 48	1					2			3
78	Shinzawa 新沢 213	3						1		4
79	Shumaevo II-3-6	1								1
80	Shumaevo II-3-9					1				1
81	Shumaevo II-9-11	1								1
82	Shumaevo II-9-12						1			1
83	Songsan-ri 7 male	1					1			2
84	Songsan-ri 7 female	1								1
85	Sonobekaichi 園部垣内	1						5		6

86	St. Keverne (Trelan Bahow)								1	1
87	Stamford Hill I								1	1
88	Stamford Hill II								1	1
89	Stamford Hill III								1	1
90	Taniguchi East 谷口東	5								5
91	Teikawashi 6512	1		1	1	2		4		9
92	Terado Ōtsuka 寺戸大塚	1					2			3
93	Tillya Tepe II			1						1
94	Tillya Tepe III			1				1		2
95	Tillya Tepe V		1							1
96	Tillya Tepe VI			1						1
97	Tsemdolina 9	1								1
98	Umanoyama 馬ノ山	2					3			5
99	Ust'-Al'ma	1								1
100	Vani 24	1								1
101	Wetwang Slack 2	1								1
102	Wetwang Village				1					1
103	Yakovlevsky I Separated Kurgan, Secondary Burial 3	1								1
104	Yoshinogari							1		1
105	Yoshitake-Takagi 吉武高木 M3							1		1
106	Yukinoyama 雪の山	3					2			5

Appendix C – Map of Mirror Finds Included in Analysis



Map of Temperate Eurasia showing mirror finds discussed in text (modified from Google Maps). This map is intended to demonstrate the distribution of sites included in the analysis; due to its scale, multiple finds must sometimes be represented by a single dot. The individual sites are shown on the more detailed regional maps included in the text.