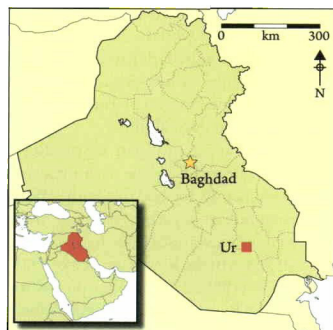


# Human sacrifice and intentional corpse preservation in the Royal Cemetery of Ur

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*The Royal Tombs at Ur have been long famous for their chilling scenario of young soldiers and courtesans who loyally took poison to die with their mistress. The authors investigate two of the original skulls with CT scans and propose a procedure no less chilling, but more enforceable. The victims were participants in an elaborate funerary ritual during which they were felled with a sharp instrument, heated, embalmed with mercury, dressed and laid ceremonially in rows.*

**Keywords:** Iraq, Ur, Bronze Age, burial rites, inhumation, cremation, ritual, human sacrifice

## Introduction

Sir Leonard Woolley's excavation of the Royal Cemetery of Ur in the 1920s and 1930s yielded thousands of human skeletons, few of which were documented in the field or preserved for later study or exhibition. The few Woolley retained, including 21 relatively well-preserved skeletons in the Natural History Museum, London, and 10 skulls, which he consolidated and lifted *en bloc*, have recently been re-examined for the insight they provide into skeletal populations, mortuary practices and the treatment of the dead in late third-millennium BC Mesopotamia (Molleson & Hodgson 2003). Two skulls from the collection of the University of Pennsylvania Museum of Archaeology and Anthropology (hereafter Penn Museum) are examined, using current analytical protocols and new technologies. They provide physical

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evidence for the sacrifice and intentional preservation of attendants buried with Ur's elites in the Royal Cemetery's late Early Dynastic phase (c. 2500 BC) and substantially revise Woolley's long-accepted reconstruction of royal funerary proceedings.

## **The Royal Cemetery of Ur**

The excavations at Tell al-Muqayyar, ancient Ur (the biblical Ur of the Chaldees), sponsored by the British Museum and Penn Museum and directed by Charles Leonard Woolley, attracted enormous public attention. Due in large part to the excavator's flare for publicity, newspapers around the world printed countless articles and *The Illustrated London News*, England's window on the world, reported the results of Woolley's work in 30 features. The Royal Cemetery, an extensive burial ground that included elite tombs dating to the mid third millennium BC, received particularly intense coverage. Woolley's discovery competed for public attention with Howard Carter's 1922 discovery of the intact tomb of Tutankhamun, and today ranks as one of the most important archaeological finds of all time.

Woolley (1923) discovered disturbed burials that were apparently part of the Royal Cemetery in his first days of digging, but was more interested in the well-preserved architecture he uncovered elsewhere on site. He consequently focused his early efforts on the ziggurat and major public buildings in close proximity to it, before returning to the cemetery in 1926–27 (Woolley 1928a). He concentrated his excavations there for five of the next seven field seasons. Woolley initially reported 1850 graves in the Royal Cemetery (1934: 33), but unearthed an additional 260 burials in 1933–34 (1955: 27–45), after publishing his monumental two-volume report. He estimated that the Royal Cemetery originally held twice the number of burials he documented, many destroyed by later interments, looting or construction. He recognised that the burials had occurred over a long period of time and divided them into distinct periods (Woolley 1934: 20–32). Most of the burials were simple inhumations consisting of a body wrapped in matting or placed in a coffin, accompanied by a few grave goods: jewellery, cosmetic shells, cylinder seals, bowls, jars, comestibles, tools and weapons. Woolley designated 16 as royal tombs, based on the wealth of their grave goods and certain '*peculiarities of structure and ritual*' evident in the tomb contents and construction (Woolley 1934: 33). He assumed that they contained the burials of Ur's kings and queens, and cylinder seals inscribed with personal names and royal titles found in a few burials seemingly confirmed his assertions (1934: 38). Although Moorey (1977) and others have challenged Woolley's assumption that the graves belonged to royalty, Marchesi's (2004) re-examination of the inscribed evidence supports their identification as royal monuments.

The 16 royal tombs date to the Early Dynastic IIIA period, 2600–2450 BC, covering a span of about a century, their occupants possibly related by blood or marriage (Nissen 1966: 143; Reade 2001: 15–26). Some had evidence of a stone-built chamber, with one or more rooms, set at the bottom of a deep pit. The chamber was reserved for the principal royal burial, sometimes entombed with personal attendants. The bodies of other retainers were found on the floor of a pit outside the chamber or in a subsidiary pit adjacent to it. Woolley called these *death pits*, the largest of which contained the remains of 74 retainers.

The layout and construction of the 16 tombs apparently changed through time (Zimmerman 1998; Reade 2001) as did the wealth of goods, peaking with the construction of the largest death pits and falling off considerably with the latest royal tombs.

Woolley's most spectacular discoveries, made in 1927–28 and 1928–29 (Woolley 1928a, 1928b), were the intact tomb chambers of two royal women: Private Grave (PG) 800 (Woolley 1934: 73–91), belonging to a richly adorned queen (Sumerian *eresh*; Marchesi 2004: 186–89), commonly identified as Puabi (more probably, Pū-abum; Marchesi 2004: 193–94), approximately 40 years of age at the time of her death, and PG 1054 (Woolley 1934: 97–107), with an unidentified female. Two large death pits were equally prominent in Woolley's reports: PG 789, called the *King's Grave*, (Woolley 1934: 62–71) and PG 1237, the *Great Death Pit* (Woolley 1934: 113–24). PG 789's tomb chamber had been robbed in antiquity, but its death pit was intact, containing the bodies of 63 retainers: six soldiers at the entrance to the pit, two ox-drawn carts with drivers and grooms, women along the south-west wall and males and females lining a narrow passage to the tomb chamber. PG 1237, with no surviving tomb chamber, held 74 retainers: five or six males placed along the north-east wall of the pit near the entrance and 68 additional retainers, most elaborately dressed females, grouped around a set of musical instruments and in four rows across the length of the pit.

In his reports, Woolley noted that the bones of the court attendants were so '*broken and decayed*' (Woolley 1928b: 424, 1929: 59, 1934: 36), they could not yield any biological evidence bearing on mode of death. After the excavation of PG 789 and PG 800, he suggested that the court attendants were chattels and had been intentionally killed or sacrificed. He wondered whether they had been '*marshalled in order and cut down where they stood ... or whether they were slaughtered apart and then laid in the grave*' (Woolley 1928c: 1171). Following this interpretation, *The Illustrated London News*' noted illustrator, Amédée Forestier (1854–1930) produced two reconstructions of PG 789 for its 23 June 1928 report on Woolley's discoveries. An often-reproduced sepia-tone drawing showed the royal entourage standing in the death pit, awaiting its demise (Figure 1), while a black and white illustration depicted the '*grisly sequel*', after all the servants had been put to death (Figure 2).

After excavating the female attendants in PG 1237 in 1929–30, all neatly arranged in rows with their headdresses still intact, Woolley (1934: 36) changed his account. Following the suggestion of his wife, Katherine, he decided instead that the attendants had drunk some '*deadly or soporific drug*' from cups found near their bodies. After willingly taking the drug or poison, the attendants lay down and composed themselves for death, ready to continue their service to a king or queen in the netherworld. He speculated that the poison came from a large copper cauldron found in the pit.

In the years since Woolley's excavations, some have challenged his identification of the bodies as court attendants, suggesting implausible alternatives (e.g. Charvát 2002: 224–26; Sørensen 2002: 324–38; for criticism see Marchesi 2004). Most scholars, however, have accepted Woolley's revised account of the retainers' demise, and have focused on illuminating the cultural and historical conditions that might have led to their willing submission to death (Pollock 1991, 2007). Others have sought to promote Woolley's initial assertions that the royal court attendants were '*human sacrifices*', killed in a '*theatre of public cruelty*', by weak



*Figure 1. Artist's impression of the death pit of grave PG 789 before death (from The Illustrated London News, 23 June 1928, pp. 1171–2) (courtesy of the University of Pennsylvania Museum of Anthropology and Archaeology).*

and vulnerable kings intending to intimidate a restive population and reinforce their claims to rule (Dickson 2006: 123).

### **Death of the attendants**

The best opportunity for scientifically investigating the mode of death of the court retainers lies in the skeletal remains surviving in the Natural History Museum, London. These were initially analysed by Sir Arthur Keith (1934), with Theya Molleson and Dawn Hodgson (2003) providing a more recent examination. In addition to scattered bones, they include the remains of only four presumed royal attendants, all from grave PG 1648, a small royal tomb on the periphery of the cemetery (Molleson & Hodgson 2003: 100–105). The remains included one late adolescent or young adult female (PG 1648a), one mature female (PG 1648b), one adolescent male, around 17 years old (PG 1648c) and one robust adult male (PG 1648d). Some of the bones had been heated; a few from body PG 1648a show discolouration, and the bones of the spine, shoulder and hip of PG 1648d are blackened from burning. Some bones have marks of occupational stress, but no evidence bearing on the mode of death.

Other than the remains from PG 1648, the only skeletal material of presumed court retainers are the skulls of soldiers or bodyguards from grave PG 789's death pit and young females from PG 1237. Woolley consolidated the skulls, including the cranium and



Figure 2. Artist's impression of the death pit of grave PG 789 after death of royal attendants by poisoning (from *The Illustrated London News*, 23 June 1928, pp. 1173–4) (courtesy of the University of Pennsylvania Museum of Anthropology and Archaeology).

mandible, and sometimes cervical vertebrae and other bones, together with any attached helmets or jewellery worn on the head and neck, with wax and lifted them *en bloc* for exhibition. He noted that their display would not only be of interest in and of itself, but would prove the accuracy of his reconstruction of the headdresses worn by young women in PG 1237 (1929: 61–62). Two skulls, a soldier (PG 789, Body 46) and a young woman (PG 1237, Body 53), are currently on exhibition in the British Museum (Irving & Ambers 2002: 211; Molleson & Hodgson 2003: 106–107, 111); others, kept in storerooms, are encased in packets of wax and are less well preserved (Fletcher *et al.* 2008). Two are in the Penn Museum (see below) and two skulls of young women from PG 1237 are in the Iraq Museum (U. 12395, PG 1237, Body 19 and U. 12381, PG 1237, Body 48, see Woolley 1934: pl. 148b and Strommenger 1964: pl. XVIII). Since these skulls were long considered artefacts for exhibition, they were not subjected to scientific analysis until recently.

Janet Ambers (Department of Conservation and Scientific Research, British Museum) took radiographs of the two skulls on display in the British Museum, as well as those in storage, and Penn Museum did the same for two skulls at the Hospital of the University of Pennsylvania (HUP) in July 2004. The radiographs revealed age and sex, as well as previously unknown details of the female head ornaments and male helmets. The Penn Museum's skulls were subsequently subjected to CT scans in April 2007, using a Sieman's Sensation 64 Slice CT Scanner in the Department of Radiology at HUP, in order to glimpse the entirety of the surviving bone of the skull, including the parts encased in wax or obscured by helmets and ornaments (see below). The CT scans provide evidence for the apparent mode of death of royal attendants as well as insight into the postmortem treatment of their remains.

## **The CT scans and forensic analysis**

The Penn Museum's two skulls belong to a young female from grave PG 1237 and a young, mature male from PG 789. The female skull was identified as Body 52 by her head ornaments (Figure 3). They include a silver comb with three inlaid flowers (only one preserved), gold ribbon, two gold stylised flowers in the shape of rosettes, a wreath of gold leaves with lapis lazuli and carnelian beads, large, double-lunate gold earrings and two necklaces of gold and lapis lazuli beads.

The identification of the leaves from the wreath is an ongoing concern. Woolley suggested they represented beech leaves, however, Miller (2000: 150–51) argues that since beech was not native to Iraq and grew in the cooler and more moist climate of the Black and Caspian Seas, the native Euphrates poplar (*Populus euphratica*) was a more plausible alternative. Tengberg *et al.* 2008 claim the leaves resemble the Pakistani rosewood (*Dalbergia sissoo*), particularly in the rendition of venation. Miller (*pers. comm.* 2010) considers shape the more critical consideration. Sissoo leaves are widest in the centre, while poplar leaves are widest in the lower third, closer in form to the gold leaf forms of the female head wreaths worn at Ur.

The female skull (cranium and mandible), together with ornaments, is compressed in three-quarter profile facing left, with the right mandible exposed. Also visible are parts of the right shoulder (clavicle), the right and left cheek bones (zygomatic arches) and the shattered remains of the face (maxilla and nasal bones) and neurocranium (see Table 1 for a complete list of preserved bones). Her lower and upper third molars (M3s) are fully



Figure 3. Head of a young woman, Body 52, from grave PG 1237 at Ur (exhibited in Penn Museum, no. 30-12-551) (photograph: A. Baadsgaard).

Table 1. List of complete and fragmented bones from crushed Penn Museum specimens.

**Maiden (30-12-551)**

*Complete bones:* cranium, mandible, complete dentition (32 teeth)

*Fragmented bones:* hyoid, one tubular long bone (radius or ulna), ribs, clavicle

**Soldier (B17312)**

*Complete bones:* cranium, mandible, complete dentition (32 teeth), humerus, humerus (left and right), left scapula

*Fragmented bones:* cervical vertebrae, scapula, ribs, clavicle

erupted and unworn with the root complete and apex open, indicating she was in her late teens or early twenties at death (aging according to Moores *et al.* 1963: 1490–502; White 2000).

The male skull (Figure 4) belongs to Body 50, the first of six soldiers or guards on the ramp leading into PG 789, the *King's Grave*. He wore a copper helmet and two lance heads were associated with the body. Woolley (1934: pl. 149a) shows the skull *in situ* (Figure 5).

The male skull (cranium and mandible) is flattened in profile, facing left, and waxed together with the remains of his helmet. The left side of the face (maxilla, mandible, teeth and base of the cranial vault) is visible; the copper helmet covers the eye orbits and the whole



*Figure 4. Skull of a young soldier, Body 50, from the King's Grave, PG 789, at Ur (Penn Museum, B17312) (photograph: A. Baadsgaard).*

of the neurocranium. Directly below the skull are the left humerus, scapula and fragments of cervical vertebrae (Table 1). Behind the cranium and over the crown of the helmet are the fragmentary remains of the right humerus. The position of the humerus, flung over the top of the head, suggests the body was dumped in place rather than carefully positioned. The large brow ridges (superciliary arches), visible on CT scans, bilobate chin, the heavily muscled mastoid process, as well as the lower part of the nuchal area of the occipital, suggests that the soldier is male. His dentition, including moderate wear on the lower first molars (M1s) and virtually no wear on the third molars (M3s), indicates he died between 25 and 30 years of age. All cranial sutures appear open on the CT scan, though the basi-occipital suture is not intact (aging with reference to Moores *et al.* 1963: 1490–502; White 2000).

Both skulls are extensively fragmented due to the deep overburden of dirt used to fill the burial pit. The female's skull was more fragmented than the male, and her gold ornaments



*Figure 5. Photograph of a soldier, Body 50 of PG 789, in situ (courtesy of the University of Pennsylvania Museum of Anthropology and Archaeology Archives).*

resulted in streaking in some CT images. The copper helmet which encased the male's skull largely protected it from the effects of postmortem fragmentation and, since the copper was fully oxidised, the helmet did not interfere with the CT scan.

This study relied almost exclusively on the analysis of CT imaging as a consequence of the condition of the remains and in consideration of their proper handling and care in accordance with museum protocols (Cassman *et al.* 2008). Analysis of the CT images involved observing and locating different types of bone breakage patterns with distinct morphological signatures. Two distinct varieties were noted on the cranial bones of both specimens: one pattern reflects perimortem and the other, postmortem bone change.

The perimortem damage might have occurred at or around the time of death or have been caused by depositional changes occurring close to death, and therefore be taphonomic (post-depositional) in origin. This uncertainty is compounded by a lack of experimental studies considering the longer-term effects of taphonomic alterations to the skull and trauma or breakage morphology, although some recent studies consider taphonomic changes related to blunt force trauma (Calce & Rogers 2007; Wieberg & Wescott 2008). The perimortem damage, however, shows bone bevelling from the inner to outer table and endocranial displacement, smooth edges and a preponderance of non-right-angle breaks, with obtuse angles predominating, while postmortem damage shows characteristic jagged edges in a regular pattern with a high frequency of right-angle breaks (Calce & Rogers 2007). Therefore, it is unlikely that the perimortem damage occurred as part of the depositional process, and more probable that the intact skull bones would undergo plastic deformation first as part of the late-phase perimortem change, which later precipitated a postmortem-like pattern of breakage.

In three separate cases, blunt force trauma appears to have damaged the skulls, producing circular holes in flat neurocranial bones — each injury resulting in a hole about 30mm in diameter. Two instances of such trauma are visible on the male skull and one traumatic injury on the female. In one case (Figure 6), radiating fractures bind the depressed and detached bone area; in the other two cases, cranial bone is depressed but attached (a hinge fracture) with radiating fracture lines visible (Berryman & Symes 1998; Arbour 2008). The morphology of these depressed bone areas is dissimilar to the other types of ubiquitous breaks on the skull bones and therefore is probably of a separate origin.

While it is difficult to determine with precision the types and varieties of weapons used to produce either blunt or sharp force trauma on archaeological specimens (Lovell 1997), the trauma evident on the Penn Museum's skulls was probably inflicted using a hafted instrument with a small pointed striking end and sufficient weight to have penetrated the skull. Thrusting weapons, such as daggers, swords, spears or lances, could not have been effective at close range, axeheads from the cemetery have flat horizontal ends or rounded edges ineffective for penetrating the skull, and pear-shaped stone maces, recovered from other contemporary archaeological contexts, such as at the site of Khafajah in the Diyala region of Iraq, would probably have left a crushing blow. The weapon would have been similar to a copper battleaxe with a long spike on one end (Figure 7), recovered from an Akkadian (2334–2154 BC) grave (PG 689) in the Royal Cemetery (Woolley 1934: pl. 224, Type A16, U. 9680). This battleaxe is *c.* 210mm long and 77mm high and is a unique find

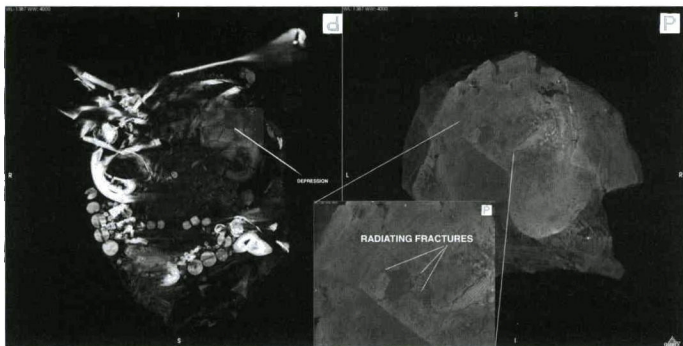


Figure 6. CT scan images of both skulls showing depressed areas, perhaps caused by blunt force trauma (courtesy of the University of Pennsylvania Museum of Anthropology and Archaeology).

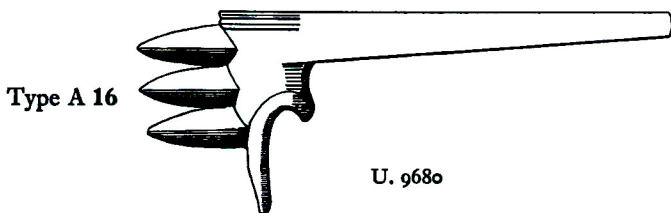


Figure 7. Line drawing of a battleaxe from Ur, grave PG 689 (Woolley 1934: pl. 224, reproduced courtesy of the University of Pennsylvania Museum of Anthropology and Archaeology).

in the Royal Cemetery. It resembles weapons depicted on Akkadian cylinder seals (Frankfort 1955: no. 670; Moortgat 1988: no. 243) and recovered from contemporary sites in Tell Ahmar, Syria, and Luristan, Iran (Muscarella 1988: 388).

Another feature observed on the female, with both the external and internal skull table visible in CT cross-section, are ectocranial areas of the skull bone that appear delaminated or peeling of the uppermost layers of dense bone (not present on the endocranial surface). This feature is reminiscent of heating or burning damage to fresh bone (Pope & Smith 2004: 1–10). It is possible the Ur specimens were heated (or smoked) to reduce putrefaction and enhance preservation. The results of the analysis of heat applied to the bone, using the microstructure of bone crystals, are inconclusive (Cabo-Perez *et al.* 2008; see also Hanson & Cain 2007 for a discussion of histological and micro-structural methods used to distinguish burned from unburned bone in archaeological samples). This is in part due

to the lack of standards to interpret both microscopic and chemical analyses applied to archaeological specimens, where the effect of diagenetic processes are difficult to control (Koon *et al.* 2003 discussing transmission electron microscopy (TEM) and Thompson *et al.* 2009 using Fourier transform infrared (FTIR) spectroscopy). Evidence for heating, resulting in the discoloration and singeing or charring of some bones was previously noted on bone specimens from Early Dynastic burials housed in the Natural History Museum, London, including a probable royal male in grave PG 755 and the attendants in the royal grave PG 1648 (Molleson & Hodgson 2003). Woolley (1934: 142) also noted some charring on skulls from simple burials contemporary with the Royal Cemetery (some 2 per cent of the total) and the following First Dynasty cemetery, seemingly from fires lit *in situ* that also burnt other artefacts (see also Hall 1928: 59). Heating a corpse for preservation is also known from later periods in the ancient Near East, e.g. Late Bronze Age Qatna (Tell Mishrife), near Homs, Syria (Pfälzner 2007: 29–64; Witzel & Kreutz 2007: 173–88) and Nimrud, ancient Calah, where the corpse of a Neo-Assyrian queen, possibly Atalia, wife of Sargon II (721–705 BC), had apparently been heated to a temperature of 150–250°C for many hours (Schultz & Kunter 1998: 119).

The CT scans also showed small, globular deposits of a radio-opaque, probably metallic substance surrounding the hard tissues of the female skull (Figure 8). These particles form a halo-like dusting around the skull and are probably composed of mercury sulphide (HgS) or cinnabar, a known preservative used in other ancient cultures. The area surrounding the cranial vault of the female was tested for the presence of mercury vapour using an energy dispersive X-ray fluorescence (EDXRF) analyser (tests performed by Environmental Health and Radiation Safety, University of Pennsylvania; Bacharach Instrument, MV-1 Mercury Sniffer). This technique produced a small, but positive result probably dampened by the heavy layers of paraffin and plaster used to consolidate and mount the skull.

HgS and other minerals such as arsenic act as preservatives by delaying the putrefaction process. The oldest documented use of mercury for preserving corpses dates to roughly 2000 years ago in China (Aufderheide 2003: 52–4, 264). The Ur specimens may represent the earliest known use of mercury in western Eurasia. Locally available sources existed in recent volcanic exposures in Turkey and Iran (Borisenko *et al.* 2004) and could have been transported to southern Mesopotamia along well-established trade routes. The application of heat and mercury to the Ur skulls might be considered an early attempt at embalming without arterial infusion — a temporary method to reduce decay while elaborate and lengthy funerary rights were performed before burying deceased bodies.

### **Human sacrifice in the Royal Cemetery: a revised perspective**

Radiographs, CT scans and forensic analyses of the skulls of two attendants from Ur's royal tombs seemingly overturn Woolley's long-standing account of the burial proceedings accompanying the deaths of the city state's Early Dynastic kings and queens. Rather than willingly drinking some deadly or soporific drug, court retainers were violently killed by means of blunt force trauma. Since the two specimens in the Penn Museum

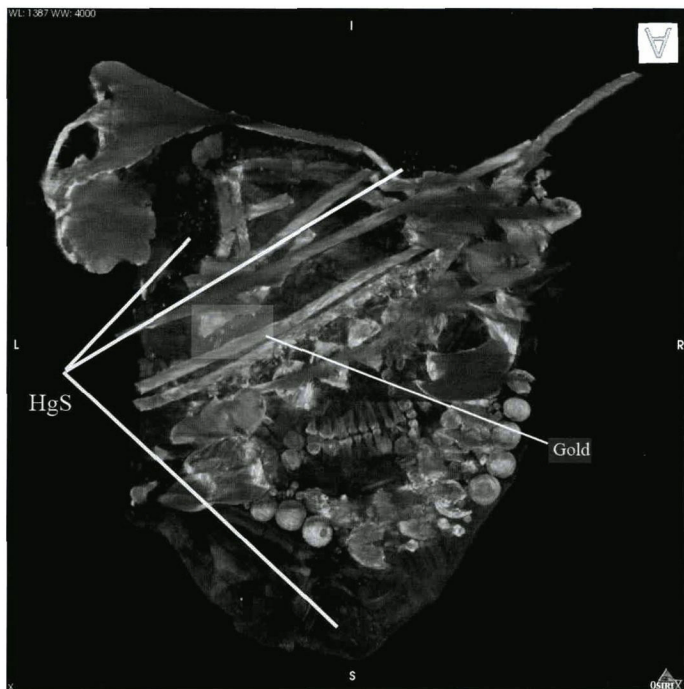


Figure 8. CT image of female showing crystals of mercury sulphide (HgS), distinguished from irregularly shaped gold fragments (courtesy of the University of Pennsylvania Museum of Anthropology and Archaeology).

come from two different royal tombs, it is reasonable to assume a similar cause of death for the majority of attendants buried in other graves. CT scans of skulls currently in the British Museum and the Iraq Museum might provide further evidence of such practices.

The attempt to preserve royal attendants' bodies using heat and chemicals also revises Woolley's account of the burial proceedings. Elite funerary ceremonies were lengthy staged events with music, wailing and feasting (Pollock 2003: 17–38; Cohen 2005: 82–93), as documented in roughly contemporary textual sources (Jagersma 2007: 291–4; Katz 2007: 167–88), in the imagery of cylinder seals and inlays on the front of sound boxes of lyres

depicting banqueting and musicians, and in the abundant drinking and serving vessels, food remains (Woolley 1934: 68, 104) and musical instruments recovered from Ur's death pits. It is possible that royal attendants took part in those ceremonies, but the entourage probably did not descend down the passage leading to the royal tomb chamber on foot, as Woolley envisioned. Instead, at some time following the death of Ur's king or queen, perhaps days or weeks after the royal entombment, which probably took place on the third day after death (Katz 2007: 174–82), the attendants were killed, preserved and dressed, and their bodies purposefully arranged in a *tableau mort* in the royal tomb to continue their service in the netherworld.

## **Discussion and conclusion**

New evidence from skeletal remains from the Royal Cemetery of Ur strongly points to the practice of human sacrifice in the early city-states of the southern Mesopotamian floodplain. While funerary rituals involving feasting and mourning for the deceased are attested in texts, the incorporation of human sacrifice as part of elite funerals is a phenomenon seemingly unique to Ur, although some poorly excavated and recorded burials with carts in the Y-Cemetery at Kish in the north (Moorey 1978: 106–11) suggest human sacrifice, possibly on a restricted scale, at other sites.

Ur was located on the Euphrates at the head of the Persian Gulf and was an important entrepôt for raw materials, such as metallic ores, lapis lazuli and carnelian, and finished products that arrived in resource-poor Mesopotamia almost exclusively by sea in the later third millennium BC (Potts 1994). The elaborate spectacle of Ur's royal funerals perhaps reflects the city-state's elites' newfound power and wealth enabling their control of subjects, including an extended number of household servants and slaves, known participants in royal funeral ceremonies for the widow of Lugalanda, ruler of the nearby city-state of Lagash (Cohen 2005: 56–8). Sacrificed court attendants together with luxury objects and the remains of feasting showcased the wealth of Ur's elites and their ability to continue their privileged existence in the netherworld.

The social results of such elaborate and enigmatic royal funeral rituals seem mixed at best. Like other early centres of civilisation, i.e. First Dynasty Egypt (Morris 2007), the phenomenon of human sacrifice at Ur was short-lived, evident in only 16 royal tombs, with the latest tombs showing a considerable decline in wealth and numbers of sacrificial victims buried with elite figures. Perhaps such extravagant funerals were a social and ideological experiment too costly in terms of material wealth and human life to achieve symbolic efficacy or longstanding legitimacy, leaving the Ur Royal Cemetery as an exceptional case of funerary ritual in early Mesopotamian civilisation.

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