

SECONDARY CREMATION BURIALS AT KAVOUSI VRONDA, CRETE

SYMBOLIC REPRESENTATION IN MORTUARY PRACTICE

In honor of Geraldine C. Gesell

ABSTRACT

Excavations at Kavousi Vronda, Crete, recovered 107 intrusive Early Iron Age burials within the abandoned Late Minoan IIIC town. Of these, three were secondary cremation burials in amphoras deposited in stone cist graves that also contained multiple primary cremation burials. The small quantity of bone in each amphora and the recurrence of skeletal elements (bones from the cranium and right forearm) suggest that these burials represent the deliberate selection of particular skeletal parts that may have been transported to the communal graves at Vronda. The author explores the possible significance of these token burials within the larger context of funerary ritual and the representation of the dead.

INTRODUCTION

The importance of burial ritual in ancient and modern cultures has long been documented, and the present study of a small sample of cremations from the site of Kavousi Vronda in eastern Crete is intended to contribute to this ongoing discussion.¹ Many studies address the interactions of the living with the dead in the context of mortuary ritual, examining the importance of funerary practice and mortuary space in the collective memory of societies.² Burial rituals are a means of connecting living individuals with

1. Excavations at Kavousi were conducted from 1987 to 1990 by the University of Tennessee, the University of Minnesota, and Wabash College under the auspices of the American School of Classical Studies at Athens and under the direction of Leslie P. Day, Geraldine C. Gesell, and the late William D. E. Coulson. I would like to thank Gerry Gesell for her invitation to work on the Kavousi project

many years ago. All of my subsequent work in Greece developed as a result of that opportunity, and I am profoundly grateful for her influence, assistance, and support through the years.

Financial support for this project was provided by the Institute for Aegean Prehistory and the Malcolm H. Wiener Laboratory of the American School of Classical Studies at Athens.

Facilities for study were generously offered by the INSTAP Study Center for East Crete and the Wiener Laboratory. The Kavousi Excavations supplied the illustrations for Figs. 1–3.

2. E.g., van Gennep 1960; see also summaries of these issues in Metcalf and Huntington 1991, pp. 27–37; Gallou 2005, pp. 16–19, 112–114; Papadopoulos 2005, pp. 354–355.

the dead and enlisting the good will of the deceased toward the living. The location of tombs and cemeteries is an important part of this relationship, and the inclusion of the dead within particular burial spaces may convey significant messages about corporate group membership and identity.³

Burial practices involving the secondary treatment of human remains may also be closely linked to the role of the dead in society. In the ancient Aegean, although climatic variables such as air temperature and humidity would have ensured that a corpse was rapidly reduced to a stable and relatively inoffensive skeleton,⁴ it is nevertheless likely that postmortem processing would have been a difficult and unpleasant task in both an emotional and physical sense. In some cases, such practices may have been expressions of the social status and persona of the deceased.⁵ In other societies where secondary burial and postmortem processing were not common practices, however, their performance might also have accommodated the burial of individuals whose manner or location of death was atypical. The archaeological remains of such burials are not the result of random or arbitrary actions; rather, they reflect conscious decisions made by surviving members of the community about appropriate behavior and the expression of social relationships with the deceased.⁶

The Late Bronze Age village site of Vronda, located south of the modern village of Kavousi on the slopes of the Thripti range, above the Bay of Mirabello, may attest to these burial practices. The settlement was abandoned in the Late Minoan IIIC period, but it was reused as a cemetery from the Geometric (8th century B.C.) through the Early Orientalizing period (Fig. 1).⁷ Overall, 36 intrusive graves were excavated at the site, and nearly all contained multiple burials.

In this article I argue that three anomalous cremation burials at Kavousi Vronda are token representations of the deceased deposited in communal or family cist graves, possibly in the aftermath of unusual circumstances or places of death. A number of features distinguish these burials. First, they are the only amphora burials found at Vronda; other cremations at the site were either buried in the cist graves in which the burning took place or deposited without formal enclosure in abandoned buildings.⁸ In addition, the amphora burials contained only a tiny quantity of bone, less than 20 g in each case, taken from similar anatomical areas of the skeletons. These limited but carefully selected portions of the body may have been considered sufficient to represent the presence of the deceased within the grave and the community.

3. See, e.g., Morris 1987, pp. 93–96; Branigan 1998b; Murphy 1998, pp. 30–32.

4. Rodriguez and Bass 1983, pp. 426–431; Mann, Bass, and Meadows 1990, pp. 104–105.

5. Nordquist 1990, pp. 36–39; Fenton 1991, pp. 27–35; Parker Pearson 1999, pp. 45–56.

6. Wells 1990, p. 125.

7. Gesell, Day, and Coulson 1988; Gesell, Coulson, and Day 1991; Gesell, Day, and Coulson 1995; Day 1995.

8. A pithos from Vronda grave 21 contained the inhumation of a child along with the cremated remains of two adults. The form of the grave and depositional evidence suggest that the child's burial was the primary deposit. The presence of the two cremated adults is an interesting anomaly, but this does not appear to represent a case of secondary cremation urn burial comparable to the examples discussed here; see Liston 1993, pp. 137, 141.

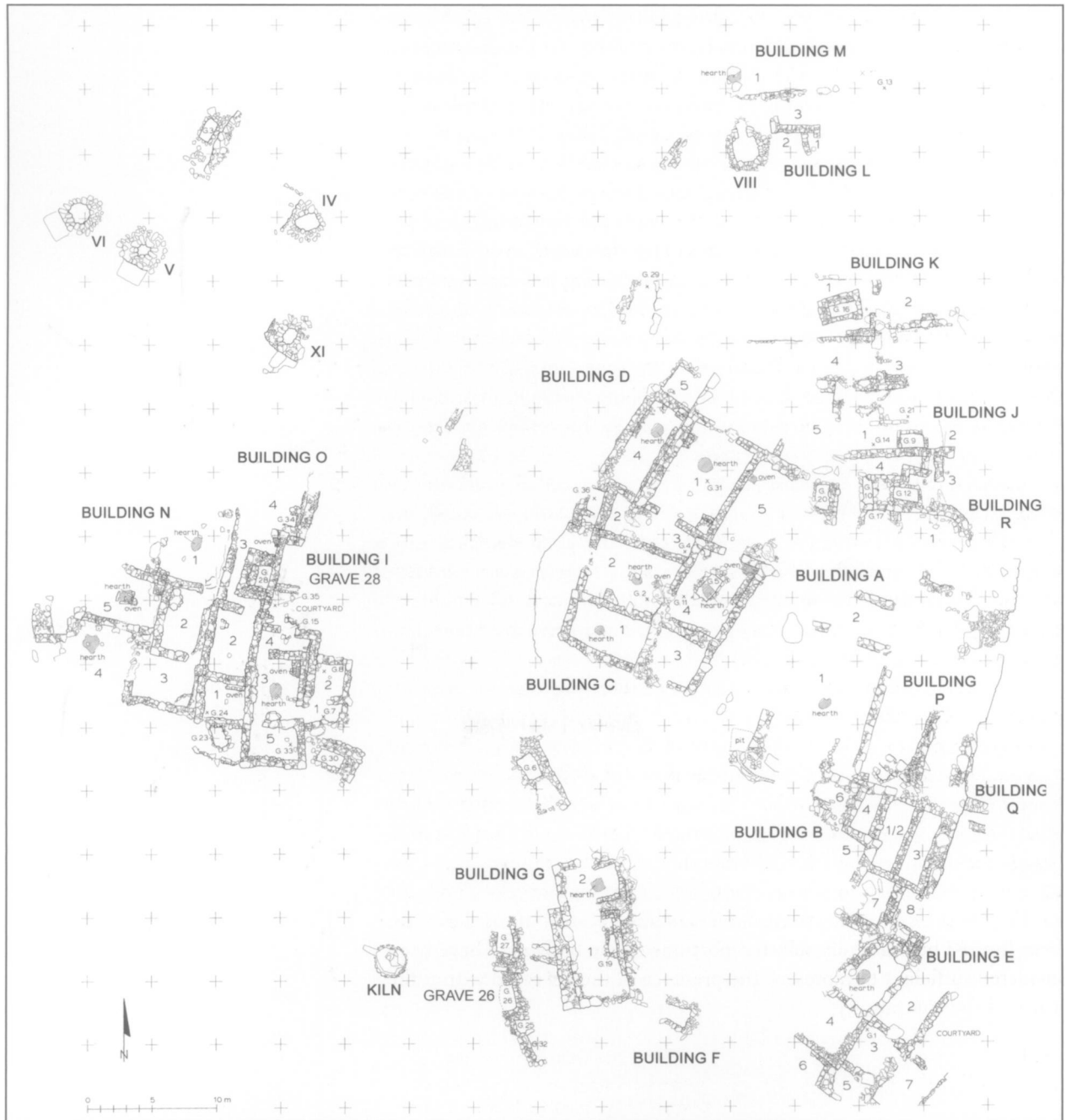


Figure 1. Plan of the village and Geometric graves of Vronda showing the locations of graves 26 and 28.
R. Docsan

THE GEOMETRIC CEMETERY AT VRONDA

When Vronda was excavated, most of the houses were found to contain intrusive Early Iron Age graves, constructed long after the Late Bronze Age village was abandoned. It is unclear as to whether the cemetery was established by the descendants of those who previously occupied the Vronda hilltop, but an analysis of cranial nonmetric traits suggests that there are concentrations of some traits in graves found within groups of houses sharing common walls.⁹ The clustering of these traits indicates a probable genetic relationship among individuals in the graves located in house clusters, suggesting that the burials represent family lineages.

A variety of Early Iron Age mortuary features were investigated, and the remains of 107 individuals (cremations and inhumations) were recovered. The most common grave structure encountered was a stone-lined cist. Other mortuary contexts included pyres, discarded collections of ash and bone, and burials in urns. Nineteen cist graves contained 76 (78%) of the 97 cremations from the village. Each cist contained multiple cremation burials, and in some cases, an inhumation, usually the last burial in the cist. Unlike the practice at many cremation cemeteries in Greece, the burned bones at Kavousi were not normally collected and stored in containers, but were left in place, along with the remains of the pyre and grave offerings.

The process of cremation reduces the skeleton to calcined bone rather than ashes. The organic portions of the bone structure are consolidated in a manner analogous to firing pottery. Calcined bone is quite stable and resists decay much better than unburned bone. In the absence of mechanical destruction or other physically destructive processes such as freezing, burned bone survives indefinitely, virtually unchanged from its condition when the funeral pyre cooled.¹⁰

I excavated or supervised the excavation of most of the cremation graves at Vronda, ensuring that the positions of individual fragments of bone in the graves were plotted. This plotting clearly demonstrated that many of the burials retained anatomically ordered fragments of cremated bone, indicating that the cremations took place within the cist graves, after which the remains were simply covered with stones and soil. There is no evidence in these instances of further processing or handling of the remains as a part of the funerary rites after the cremation was finished. The graves were often reused, however, and the earlier remains were sometimes pushed to the sides of the cist when the grave was reopened.¹¹ While the majority of graves contained primary and disturbed cremations, two cist graves also contained three instances of secondary burials in amphoras. One amphora was placed in grave 26, and two others in grave 28.

9. Liston 1993, pp. 151–152. I collected the data on nonmetric cranial traits, which were analyzed under my supervision for an undergraduate thesis (Swingler 2003). The statistical analysis of the data is not yet complete, but there are already clear patterns of trait clustering in these burials.

10. Toth and Liston 2006. An ongoing experiment involving repeated freezing and thawing of cremated bone by the author and Ferenc Toth, a graduate student at Trent University, is demonstrating that even one episode of freezing is a significant factor in reducing fragment size in cremated

bone. It appears that freezing may cause considerable fragmentation of bone, a condition sometimes interpreted as the result of deliberate pounding or grinding (McKinley 1994, p. 339).

11. Gesell, Day, and Coulson 1995, pp. 84–85, 88.

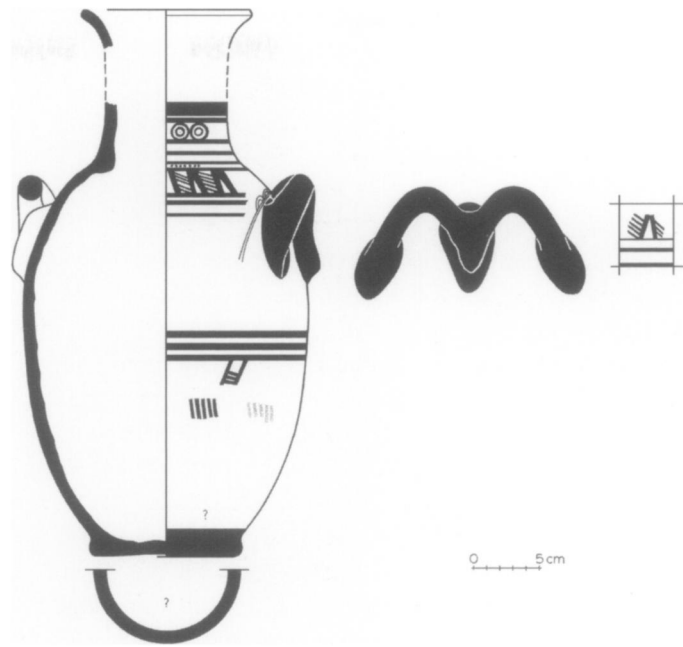


Figure 2. Belly-handled burial amphora from grave 26, burial 3.

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GRAVE 26

Grave 26 is located to the west of Building G, on the south side of the hill of Vronda.¹² It is one of a group of four graves found in a north-south line on the slope below the building (Fig. 1). Grave 26 measures approximately 2.00×1.00 m and is oriented north-south, bounded by stone walls. The long wall on the west side of the grave is now largely missing as a result of later disturbance. The cist was cut into the ground below the level of the base of the preexisting walls to the east and south. It contained the cremated bones of burials 1 and 2, a subadult less than 16–18 years old and an adult, both of indeterminate sex. These two individuals appear to have been cremated at the same time on a pyre built within the cist. Five charred logs and various grave offerings were also recovered.¹³

The cremated bone comprising burial 3 was found in a belly-handled amphora (Fig. 2) placed in the fill closing grave 26. The amphora was located in the northwest corner of the rock tumble fill of the cist. A number of other ceramic vessels may be associated with this burial, but later disturbance makes this uncertain. There are traces of paint preserved on the amphora, which probably dates to the Early Orientalizing period.¹⁴

The amphora was broken, with roughly 85% of the vessel having been preserved. It contained only 9 g of bone. Very little additional human bone was found in the associated fill even after water-sieving all of the soil and sorting the resulting residue. The absence of human bone in the associated soil suggests that most of the bone remained inside the amphora until it was recovered in excavation. The bone from the amphora is very fragmented. While the pieces are clearly recognizable as parts of the cranial vault and forearm, it was not possible to identify the portions of bone more specifically.¹⁵

12. At Kavousi, grave numbers were used to identify any deposit containing human bone, and they were assigned in the order of discovery during the excavations. Burial numbers were assigned to individual skeletons after final analysis of the skeletal material. The sequence of burial numbers indicates, as accurately as can be reconstructed, the order in which the bodies were deposited, with burial 1 being the first in the grave.

13. Gesell, Day, and Coulson 1995, p. 81.

14. Gesell, Day, and Coulson 1995, p. 81. The vessel is assigned inv. 26.22.

15. The bone fragments from this grave, unfortunately, were not photographed when they were studied. They were returned to the Ierapetra Museum and used in a reconstruction of this grave on display in the museum. As a result, the bones from the amphora in grave 26 are no longer available for photography.

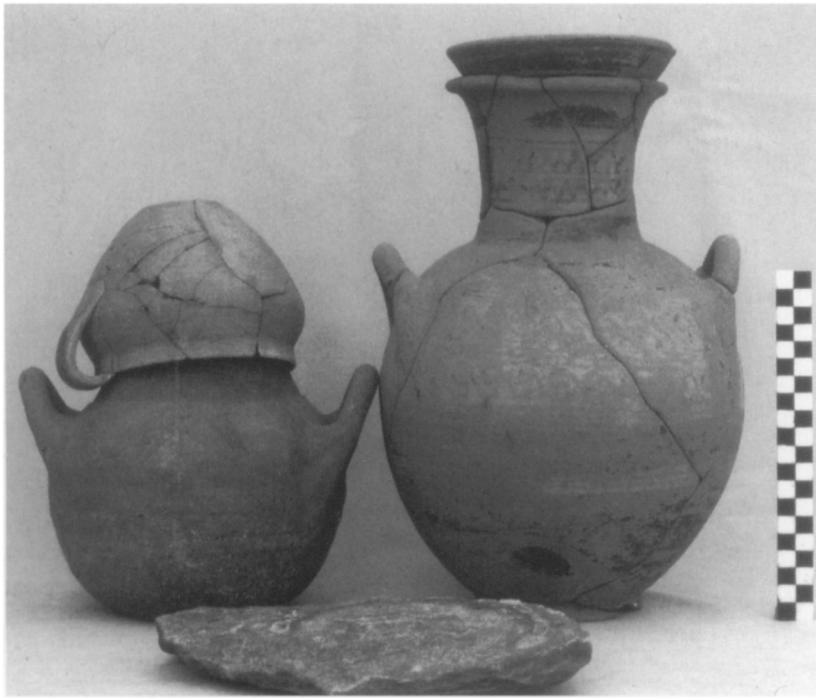


Figure 3. Finds from grave 28: (left) shoulder-handled burial amphora and cup used as a lid from burial 7; and (right) shoulder-handled amphora and lid from burial 8. The stone slab on which the amphoras were placed in the grave is shown in the foreground. Photo S. Hamilton

GRAVE 28

Grave 28 was constructed above collapsed roofing material and wall tumble in room 3 of Building O on the west terrace of Vronda (Fig. 1). It is a rectangular cist, oriented north–south, and measuring 1.80 × 1.50 m.¹⁶ The grave contained a total of eight cremation burials, six in the cist and two more in amphoras found in the southeast corner of the grave (Fig. 3). The amphoras were placed in the grave after the first five primary cremations, but before a sixth body was burned over a pit dug into the grave fill.

The amphoras were deposited at the same time, although they date to different periods.¹⁷ The vessels were placed tightly in the corner of the grave, inside the cist wall, but high up in the fill. A ring of stones held them in place, and they rested on a flat stone slab. Other than the covers of the vessels, no other artifacts were associated with these burials.¹⁸

Burial 7 was contained in a small (H. 16.6 cm) amphora with horizontal handles on the shoulders (Fig. 3, left). The mouth was closed with an inverted monochrome cup. There are no good parallels for the form or decoration of the amphora, but it has some resemblance to vessels dating to the Middle Protogeometric or Protogeometric B–Early Geometric period.¹⁹ The human remains consisted of 14 g of bone from an adult individual (Fig. 4:a).

The amphora associated with burial 8 (Fig. 3, right) dates to the Late Geometric period and was closed with a lid similar to examples from Fortetsa that date to the Late Geometric through Early Orientalizing periods.²⁰ It contained 19 g of bone, also from an adult (Fig. 4:b). In both burials the bodies of the amphoras were cracked, but remained intact. It is unlikely that any bone was lost from the vessels after they were deposited in the grave, and none was found when the associated soil was water-sieved.

16. Gesell, Day, and Coulson 1995, pp. 84–85.

17. Gesell, Day, and Coulson 1995, pp. 86–87.

18. Gesell, Day, and Coulson 1995, p. 87.

19. L. P. Day (pers. comm.). The amphora is assigned inv. 28.3, and the cup inv. 28.4.

20. Gesell, Day, and Coulson 1995, p. 87; L. P. Day (pers. comm.). The vessel is assigned inv. 28.22, and the lid inv. 28.19.

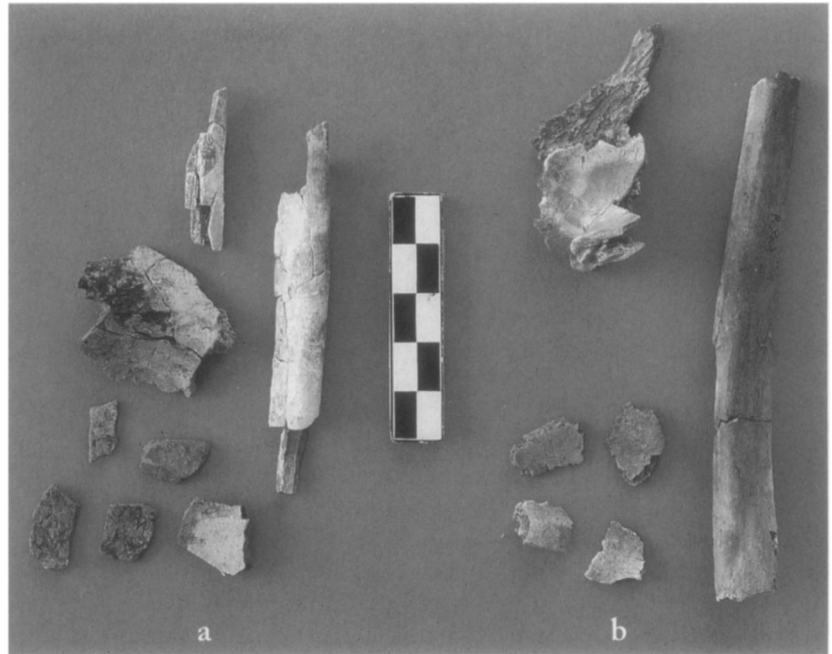


Figure 4. Cremated human bone from grave 28: (a) burial 7; and (b) burial 8. Photo J. Smith

THE SKELETONS

Although the very small quantities of bone found in these three amphoras limit the analysis, some information can still be gleaned from the skeletal remains. All of the bone in the amphoras was cremated; the fragments exhibit the texture and color of thoroughly calcined remains, indicating a lengthy burning process and high temperatures (Fig. 4).²¹ The morphology, size, and structure of the bone indicate that all three individuals were adults, but there were no features preserved that would allow an estimation of age at death. None of the bones were complete, but the recovered fragments included some that could be reassembled into major pieces, along with a few other unidentifiable fragments.

The small amount of bone in the Vronda amphora burials contrasts strongly with the amount that typically survives a cremation. For example, a study of 306 modern skeletons weighed after crematory processing found that, on average, 3,379 g of bone were preserved from males and 2,350 g from females.²² Even within an archaeological context, between 1,102 and 2,134 g of bone were recovered from the primary, undisturbed cremation burials at Vronda. In light of these data, the tiny amount of bone—9 g, 14 g, and 19 g—found in the Vronda amphora burials must represent the deliberate choice, not merely the careless collection, of the cremated remains. Even a single handful of bone taken from the pyre would weigh much more than the bone found in the amphoras.

The inventory of skeletal elements from the amphoras also suggests deliberate patterning both in the bones selected for burial and with regard to the side of the body from which they were taken. In each amphora, a portion of the cranial vault and one of the bones of the forearm, either the radius or ulna, were selected for burial (Fig. 5). In grave 26, burial 3, the bone consisted of a segment of the right radius and fragments of the cranial vault from the frontal and right temporal squamas. In grave 28, burial 7,

21. Shipman, Foster, and Schoeninger 1984; Holck 1986.

22. Bass and Jantz 2004, pp. 901–902.

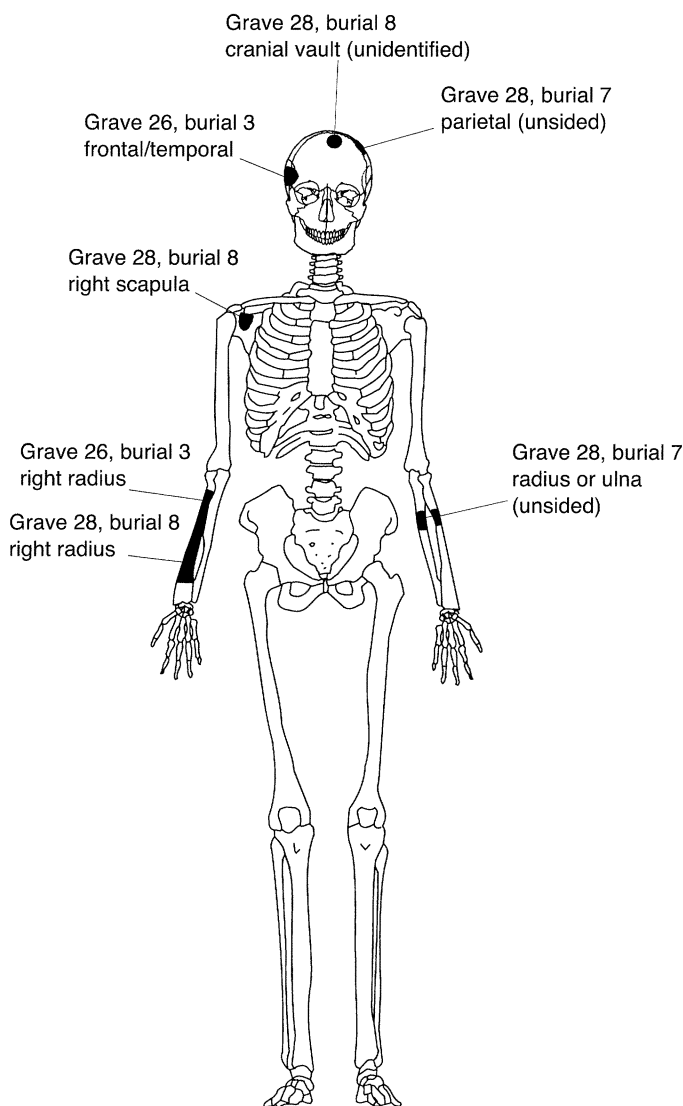


Figure 5. Portions of the skeleton deposited in the Vronda amphora burials. M. A. Liston

the identifiable bone included cranial vault fragments, probably from the parietal, and pieces of a radius or ulna shaft. It was not possible, however, to determine if this bone was from the right or left arm. The amphora of grave 28, burial 8, contained small cranial fragments, a right radius shaft segment, and a small piece of the right scapula.

The bone fragments from the amphoras are not sufficiently distinctive to establish the duplication of elements that would prove unquestionably that the remains were not derived from the other primary cremations in graves 26 and 28. Despite considerable effort to find joins among the bone fragments, however, I was unable to associate any of the bone from the amphoras with fragments from other individuals buried in graves 26 and 28. I also checked for joins with individuals in nearby cist graves located in the same clusters of houses, and here again I found no associations. Therefore, given the absence of joins, the amphoras almost certainly contained distinct individuals, represented by a deliberate selection of skeletal elements not taken from the individuals in the same cist or nearby graves.

REGIONAL PERSPECTIVES ON SELECTIVE BURIAL

Burial ritual is a powerful mnemonic device, a means of linking the living with the past. Although inanimate, the dead may be seen to participate in the social actions of the living, affecting survivors through memory and expected social behavior. The burial is a focus of this memory and an anchor linking individual and collective identity both to ancestry and locality.²³ In some cultures, locating graves near fields and within the remains of previous habitations, as seen at Vronda, may have been a way of invoking an apotropaic function of the dead.²⁴

In this context it could be considered vital to transport a deceased relative from the place of death to a family grave. A society that practices complex rituals such as cremation and collective burial might go to considerable lengths to reunite some or all of an individual's remains with those of other members of the family.²⁵ The practical problems of transporting a corpse, however, make it unlikely that bodies could be moved intact. The construction of a cenotaph was one solution sometimes practiced in Greece when burial of the physical remains was not possible.²⁶ As cremation was the customary practice at Kavousi,²⁷ cremating the corpse abroad and transporting the transformed and stable bones would have been another eminently practical solution. The Vronda amphora burials are not collections of entire cremated skeletons, but rather a sampled representation of the body that would have been even easier to transport.

While definitive parallels are lacking, there are indications of similar patterns elsewhere in Greece. Detailed inventories of the selected bones from these sites are not available, unfortunately. In most cases a very small quantity of bone in an amphora was noted, but the material was not analyzed. The Early Iron Age cemetery at Torone provides the best comparison. There, 19 of 60 undisturbed cremation burials were found in urns with less than 100 g of bone; thus, formal burial of small quantities of bone was relatively common. Two of these tombs were described by Jonathan Musgrave as containing token quantities of bone.²⁸ The skeletal remains in five other tombs, each holding even less bone, were not studied, but Papadopoulos notes that the contents of the urns were undisturbed, and in three cases the fragments observed would appear to constitute all the bone deposited in the urns.²⁹

23. See, e.g., Gallou 2005, pp. 24–25; Papadopoulos 2005, pp. 354–355.

24. Kaliff 1998, pp. 181–182.

25. Kurtz and Boardman 1971, p. 193; Humphreys 1980, p. 101.

26. Kurtz and Boardman 1971, pp. 257–258.

27. Of the 107 Early Iron Age burials, 97 were cremations; Liston 1993, pp. 185–189.

28. Musgrave 2005, pp. 246, 291,

300, 312, pl. 504; see also Papadopoulos 2005, pp. 134, 150–151, 189.

Tombs 62 and 106 each contained 52 g of cremated human bone, including cranial and postcranial fragments. The published descriptions and photograph indicate that the postcranial material is an assortment of various skeletal elements.

29. Papadopoulos 2005, pp. 150–151, 154, 165–166, 214–215; see also Musgrave 2005, pp. 294, 303. The

unanalyzed bone from tombs 79, 82, 94, 95, and 117 was described as a few scraps or fragments. The identified token burials (tombs 62 and 106) contain at least five times the quantity of bone found in the Vronda urn burials. The tombs with unanalyzed remains from Torone would appear to be better parallels, but it is unknown if they too were the result of patterned selections of bone fragments.

Other Aegean mortuary complexes also attest to the selection of specific body parts, not necessarily in conjunction with cremation rituals. For example, in the Neolithic deposits at Alepotrypa Cave in the Mani peninsula of the Peloponnese, secondary burials in ossuaries included significantly high percentages of skull and limb bones when compared to the expected distribution of elements.³⁰ At Franchthi Cave in the Argolid, a similar pattern has been observed in the sample of scattered bone, although the secondary remains were not unequivocally deliberate depositions.³¹ These Neolithic cave sites may indicate a ritualized selection of elements for transport to the residential areas of the site, beginning at a very early time period. Early Minoan house tombs at Kalo Chorio near Kavousi exhibit the practice of secondary burial focusing upon large skeletal elements. The skull and major long bones were placed in larnakes, while hands, feet, vertebrae, and rib fragments remained on the floor surface, where the body apparently remained until the flesh decayed.³²

Archaeological evidence and literary references to ancient societies outside of the Aegean indicate that it was not always necessary to include the entire body in a burial. It could be represented instead with an osseous synecdoche.³³ In Britain during the Neolithic period, portions of skeletons, most frequently the skull and major leg bones, were removed during the process of secondary burial.³⁴ In northern Europe, cremation burials from the Bronze Age onward seem regularly to have held only a small percentage of the bone expected to survive cremation.³⁵ During the Iron Age in central Europe, there are also partial or symbolic urn burials of cremated bone at a number of sites, although no inventories of the skeletal elements are reported.³⁶ Much later, there are further incidences of selective collection of cremated elements in early Anglo-Saxon burials. Still other examples may be seen in contemporary cultures of India.³⁷

Textual sources indicate that Roman officers who died abroad might sometimes be cremated, with a portion of their ashes subsequently being returned for burial in the family tomb (Cic. *Leg.* 2.24.60).³⁸ It is clear from this and other passages in *De Legibus* (2.22.55; 2.23.58), in which Cicero discusses the older legal traditions of the Laws of the Twelve Tables, that a distinction was made between the act of cremation, which does not constitute a form of burial, and the covering of the remains with earth, which completes the act of interment.³⁹ Roman law directed that a cremated body receive a token burial, either by sprinkling soil over the cremated skeleton, or by reserving a small portion of the corpse unburned for later burial, the *os resectum* (Varro *Ling.* 5.23).⁴⁰ While the Vronda bones were cremated, which was apparently not the case for the *os resectum*, it is clear that there was a long tradition of selecting elements for special treatment, either to complete the process of burial or to incorporate those who died abroad with other burials in the family tomb.

30. Papathanasiou 2001, p. 3;

A. Papathanasiou (pers. comm.).

31. Cullen 1999, pp. 168–169.

32. Haggis 1996; Liston, in prep.

33. Kurtz and Boardman 1971, pp. 257–258; Cook 1999, pp. 43–45.

34. Baxter 1999.

35. E.g., Kaliff 1998, p. 183; Oestigaard 1999, pp. 352–353; Williams 2004b, pp. 418–419, 422.

36. Holnerova 1978, p. 127.

37. Williams 2004a, p. 278.

38. Webster 1969, pp. 271–273.

39. Dyck 2004, p. 394. My thanks to Edward M. Harris for directing me to the legal aspects of ancient burial.

40. Lindsay 2000, p. 168; Dyck 2004, p. 394.

SELECTIVE BURIAL PRACTICES AT VRONDA

The amphora burials at Vronda would seem to exemplify a practice of selection similar to those discussed above. The reasons for the differential treatment of these bodies and the use of only a small portion of the cremated bone cannot be determined with certainty, but the most obvious possibility is that the individuals represented died away from their home and family tombs. The importance later Greeks placed on at least a symbolic burial of the dead is well documented (e.g., Hom. *Od.* 11.72; Soph. *Ant.*).⁴¹ If these individuals died locally, it is difficult to explain why their burials were so different in form from others in the cemetery.

Unfortunately, the amphoras themselves offer little evidence for the origin or transport of the bodies. They are much larger than needed for the remains contained within them. They may perhaps have been chosen as suitable vessels only when the grave was prepared at the site. The amphora from grave 28, burial 8 (Fig. 3, right), is similar to shapes imported from the Cyclades, but it is an Early Geometric form, apparently an heirloom preserved until its use in the Late Geometric burial.⁴² The other amphoras appear to be of local manufacture, similar to other ceramics from the site.

It is clear that there is a repeated pattern of selection of skeletal parts in the Vronda amphora burials. In other cultural contexts, it has been argued that the act of selecting elements for use in the burial rites is an important step in establishing social memory. After the transformation of the deceased from a recognizable body to burned bone, the handling, cleaning, and selection of portions of the remains may serve to reestablish contact between the living and the dead. If the selected elements were themselves imbued with specific meaning, the end result could be a tangible representation of the deceased reconstructed in a culturally significant, yet compact and stable form. In this process, the amphora may have represented the body of the deceased, receiving this identity through the incorporation of a portion of the physical remains of the dead.⁴³

Although secondary handling of human remains has sometimes been interpreted as evidence for lack of respect for the body once it is no longer recognizable as an individual,⁴⁴ closer examination of the evidence often indicates quite the reverse.⁴⁵ Particular symbolic importance may be ascribed to the specific elements selected from a pyre.⁴⁶ Crania frequently receive special attention and are an obvious choice for representing the deceased, as is evident in the practice of displaying the head of a dispatched enemy.⁴⁷ The head is often regarded as the locus of the personality, as well as the focal point of personal recognition in the living. Cranial bones are among the largest and most recognizable fragments to survive cremation, offering those participating in the funeral ritual a visual link to the human form of the deceased.⁴⁸ The arms and hands also represent the individual in many cultures, and they are important trophies in both warfare and hunting.⁴⁹

The selection of human remains made by funerary participants at Vronda may attest to a similar complex of beliefs and practices. The consistent choice of elements (skull and forearm) and the choice of the right arm in the two burials in which the side is identifiable, along with the

41. For discussion of the critical need for at least a token burial, see also Vermeule 1979, pp. 3, 12; Garland 1985, pp. 7–8.

42. Gesell, Day, and Coulson 1995, p. 86, n. 49. Similar Cycladic-style pottery has been found in large quantities in the Prepalatial cemetery at Ayia Photia, Siteia (Day, Wilson, and Kiriatzi 1998).

43. Cf. Williams 2004a, pp. 277–280.

44. E.g., Hope 2000, pp. 120–126.

45. Wells 1990, p. 135; Gallou 2005, pp. 117–119.

46. Baby 1954, pp. 1–2; Fenton 1991, p. 30; Williams 2004a, p. 282. Baby's (1954) work on cremation burials from four Hopewell sites in Ohio is the first serious attempt to analyze cremated remains from archaeological sites. In it he notes that the 40 burials examined were incomplete, with only portions of the skulls and long bones represented.

47. Hope 2000, pp. 113–114; Gallou 2005, p. 119.

48. Liston 1993, pp. 89–92, 102–104; McKinley 1993, pp. 285–286.

49. Andrushko et al. 2005, pp. 377–381.

absence of any other bone pieces large enough to be identified, support the notion of a patterned cultural practice. It is unlikely in the extreme that the random selection of skeletal elements would result in the patterning seen in these three burials. The head and right arm appear to have had specific significance, and it is possible that these body parts were considered the critical elements for representing the deceased in the burial context.

SIDE SELECTION IN SACRIFICE AND BURIAL

The importance of side selection in the ritual activities of the ancient world has received relatively little study. The classic essay by Robert Hertz on the significance of right and left in so-called primitive religions forms the starting point for most subsequent studies.⁵⁰

G. E. R. Lloyd summarizes the symbolism of the side from Homer and Hesiod's works through the major schools of philosophy.⁵¹ He outlines the Pythagorean observation of pairs of opposites, for example, sky and earth, light and dark (Arist. *Metaph.* 1.5), to apply meaning and distinction to natural and supernatural phenomena. He then examines Aristotle's arguments concerning the dominance of the right side throughout the animal kingdom (*Part. an.* 3), along with the assertion that the right side is more auspicious than and superior to the left (*LA* 4).

Although there are exceptions, it is rare for side selection to be identified in archaeological reports of cemeteries.⁵² Burials with very small amounts of bone have often been discarded by excavators or ignored by skeletal biologists. Although cranial and long bone elements are often found in secondary burials, specific elements, much less the sides, are seldom identified in reports. The incomplete representation of body parts is often simply interpreted as a process of collecting the larger skeletal elements while ignoring or discarding smaller fragments, despite the evident care with which the process was performed.⁵³

Zooarchaeologists, however, have observed that side selection of front or back limbs appears to have been important both in sacrificial offerings of animal portions to the gods or heroes and in mortuary offerings, supporting the contention that the choice of side was significant in ancient Greek rituals. The special significance of the right forelimb in ritual offerings in eastern Mediterranean cultures has also been noted.⁵⁴

In the Early Iron Age tombs from the Kastri settlement on Thasos, animal remains among the grave offerings show a distinct preference for side and specific element; almost all of the bovine and equine remains in the tombs are right femora.⁵⁵ In the Athenian Agora, Hellenistic pyre deposits—small sacrificial offerings found in industrial contexts—contain the burned remains of the left forelimbs of sheep only.⁵⁶ At the hero shrine of Opheltes at Nemea, sheep and goat carcasses burned at the heroon reveal a distinct preference for elements from the left side. This preference is distinguished from other contexts at Nemea where the distribution of elements is random or balanced with respect to side.⁵⁷ At other sites with shrines to the gods, particularly Apollo, there are indications of a preference for offering portions from the right side of the body of sacrificial animals.⁵⁸

50. Hertz 1909.

51. Lloyd 1962, pp. 59, 61–62, 64–65.

52. For a useful summary of a number of North American sites where postmortem processing of human remains and element selection has been noted, see Fenton 1991, pp. 201–211, 220–229.

53. E.g., Nordquist 1990, p. 40; Munson and Cook 2001.

54. Karageorghis 1977, pp. 78–79.

55. Halstead and Jones 1992.

56. Snyder and Rotroff 2002; Rotroff and Snyder 2003; L. M. Snyder (pers. comm.).

57. MacKinnon 2006.

58. Jameson 1988, p. 93; Davis 1996; Forstenpointner 2003, p. 211.

The evidence from Vronda indicates that element side selection may also have relevance in mortuary ritual involving human remains, and not only in animal offerings as has been documented elsewhere. The practice may have involved a choice of side as well as specific elements, similar to the pattern found in the sacrificial offerings of animals to gods and heroes.

CONCLUSIONS

Among the 107 Early Iron Age burials at Kavousi Vronda, most of which were primary cremations burned in situ in cist graves, three secondary cremation burials were found in amphoras. As discussed above, this unusual form of burial may indicate the inclusion in the cemetery of individuals whose death was different in some way from the norm, perhaps because it occurred away from home.

Although the sample is small, the consistent choice of cranial and forearm elements and the indication of preference for the right side suggest that the funeral participants practiced a meaningful pattern of representing the dead at Vronda. The selection of particular elements for burial indicates that a special significance was ascribed to the head and forearm; these portions may have been deemed sufficient to represent the body as a whole.

This phenomenon has not been documented in other published cremation cemeteries in Greece, possibly because small quantities of cremated bone have seldom been saved or studied. In order to elucidate the meaning of this practice more extensively, additional token or symbolic cremation burials need to be recovered and fully analyzed in future excavations. The reconstruction of complex rituals involving the consistent selection of skeletal elements, possibly transported from the place of death to a communal or family gravesite, offers much potential for understanding patterns of geographic movement, social behavior, and cultural beliefs.

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