Wild Nature? Human–Animal Relations on Neopalatial Crete

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The Neopalatial period of Middle to Late Bronze Age Crete is marked by a dramatic increase in the depiction of non-human animals. In contrast to the domesticates listed in the Linear A documents, the animals which appear on frescoes and seals are largely wild or supernatural, or in non-domestic scenes (particularly bull-leaping). This article seeks to explore the quantitative differences between the types of animals displayed on different media, and ask why non-domestic animals appear in such significant proportions. Arthur Evans and subsequent scholars have explained this phenomenon as an expression of interest in the natural world. Instead of this modernist view, it will be argued here that it is by trying to approach these depictions as expressing specifically Bronze Age human–animal relations that the role of such animals in Cretan society can be understood. From a relational perspective, the animals depicted can be seen as active participants in prestige activities such as hunting or bull-leaping rather than the passive motifs of artistic naturalists. This perspective might also provide a more illuminating answer to the question: why depict animals?

Now inhabited by the occasional stray peacock, the remains of the House of the Frescoes lie immediately to the west of the Minoan palace of Knossos in Crete. It was on the basis of his excavations at Knossos that Arthur Evans described the Minoan civilization, the term he used for the Bronze Age of Crete. The House of the Frescoes was destroyed early in the Late Minoan period, and so was in use during what is now termed the Neopalatial period. Evans identified this period (*c.* 1700–1450 BC) with a phenomenon which he describes as 'the brilliant naturalism of the great Transitional Epoch that links the Middle Minoan with the Late Minoan Age' (Evans 1921, 28). This putative naturalism is exemplified by the frescoes which gave the House of the Frescoes its name. In one room a fresco depicted wild goats and crocuses; another contained a fresco showing monkeys and birds. Shown here as reconstructed by Cameron (Fig. 1), Evans described it as follows:

> The subject chosen for illustration may best be described as wild nature. Man is excluded, but animal forms such as monkeys and blue birds appear here and there, amidst a wilderness of grotesque rocks overgrown with flowers and creepers (Evans 1928, 446–7).

Such depictions of 'wild nature' are not restricted either to Knossos or to one medium. Evans's (1921, 314) impression of the 'naturalistic spirit' of this period has been reinforced by a century of exploration of the Minoan world, in particular by similar, contemporary, frescoes discovered at Akrotiri on the island of Thera, and an abundance of animal depictions in the sealstones of the same period. Evans's description has echoed through the literature; although cautious of the term 'naturalism', Colin Renfrew similarly noted a shift in the depiction of plants and animals in this period: 'these forms are seen rather schematically until the sudden passionate awareness of nature which grips Crete and the Cyclades at the very end of the middle bronze age' (Renfrew 1972, 438). A recent survey of Aegean wall-paintings describes the same Birds and Monkeys fresco in similar terms: 'Although not botanically accurate in all details, the individual species are recognizable, and one can appreciate the artist's delight in recording his beautiful natural surroundings' (Immerwahr 1990, 45).

Yet, as Herva (2006a) has recently pointed out, the reason for this naturalistic spirit remains unexplained. Immerwahr (1990) follows Evans in

Cambridge Archaeological Journal 19:3, 109–27 © 2009 McDonald Institute for Archaeological Research
doi:10.1017/S0959774309000077 Received 24 Jun 2008; Accepted 20 Oct 2008; Revised 3 Mar 2009

https://doi.org/10.1017/S0959774310000077 Published online by Cambridge University Press

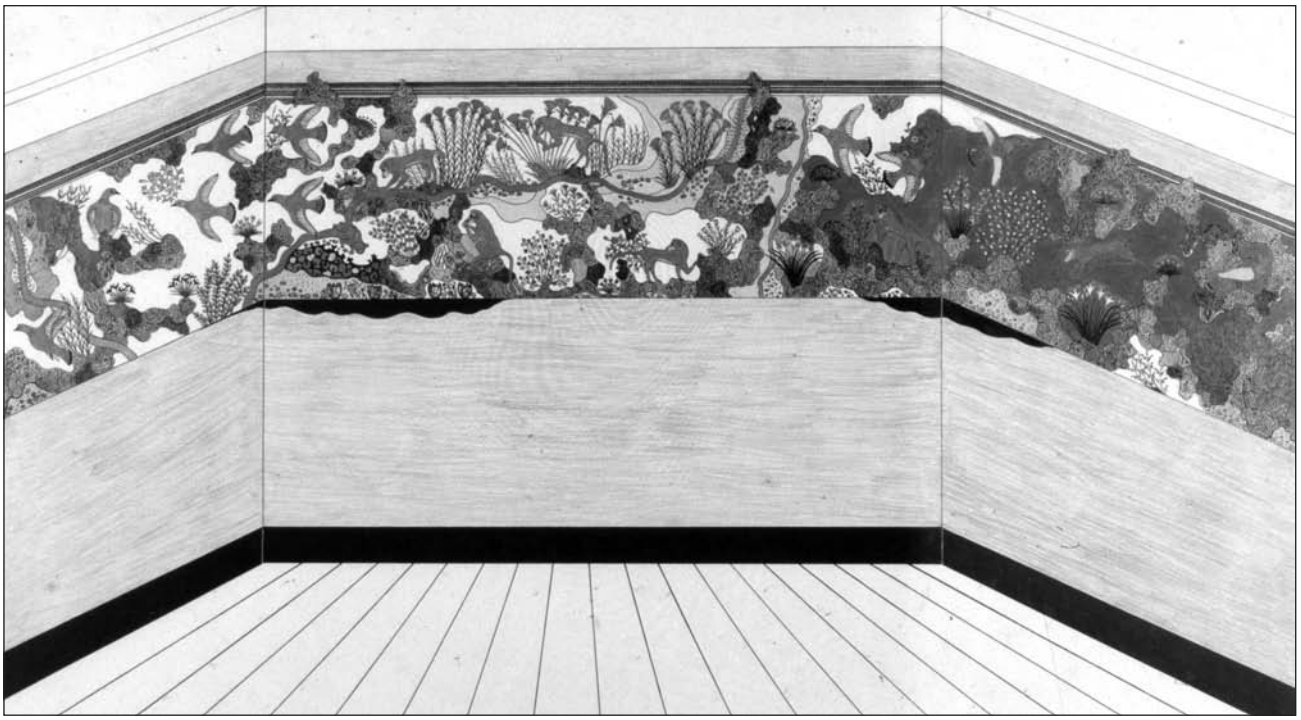


Figure 1. *Birds and Monkeys fresco from Knossos. (Reconstructed by Cameron (1968). Reproduced with permission of the British School at Athens.)*

reading these as expressions of the worship of a nature goddess but as Herva argues this still begs the question of the emphasis on nature, only shifting it to the religious domain: from 'why nature scenes?' to 'why a nature goddess?'. As he cogently suggests, a symbolic or iconographic reading of these images is not sufficient to explain why the natural world is a focus of attention.

There has been a recent movement to question the basic assumptions of Minoan scholarship, notably by Hamilakis (2002), who draws attention to the role of Evans's preconceptions in our descriptions of the Cretan Bronze Age. Others have sought to replace the term 'palace', used to describe a number of monumental buildings on Crete, with the more neutral 'court-centred building' (Schoep 2002a). This description, it is argued, refocuses attention on the salient features of such buildings, rather than being based on assumptions about their function. It is hard to avoid using terms such as Minoan or palatial, but this does not mean we should use them uncritically. Similarly, in this article I will be describing the material traces of human–animal relations rather than 'nature scenes', not in the spirit of postmodern iconoclasm, but as a way to view the undoubted phenomenon which Evans identified from a different angle.

Hamilakis has recently argued for the great potential of zooarchaeology, in the broadest sense, in the study of the Aegean Bronze Age:

> The realization of this potential, however, would require the exploration of a diverse data base from bones to iconography, but also the deployment of insights from historical, ethnographic and anthropological sources and thinking (Hamilakis 2003, 245).

This article presents data from sealstones, frescoes and textual sources, but first considers the recent anthropological approaches to the concept of nature.

Perspectives on naturalism

The culture–nature dichotomy has come under considerable scrutiny in recent archaeological literature and elsewhere, recognized as a product of post-Enlightenment thought and rejected by phenomenological approaches (Thomas 2000, 82–4; Tilley 2004, 23–4). Yet while it is easy to criticize Evans's assumptions as modernist, epitomized by the word 'naturalism', his use of the term had been questioned by Henrietta Groenewegen-Frankfort long before the current debates. Discussing the same Neopalatial frescoes she suggests:

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> To speak of naturalism, for instance — that is, of a conscious interest in, and respect for, the appearance of the phenomenal world — may be tempting in the face of forms so buoyant with life, yet it means ignoring the fact that several of these forms cannot have been observed at all; blossoms and leaves of different plants have been high-handedly combined, birds' plumage altered (Groenewegen-Frankfort 1951, 196).

It was obvious to her that the Minoan frescoes were not nature painting in the same mould as the landscapes of the nineteenth-century Romantics since these ancient depictions lack both realism and perspective. While it is rather anachronistic to point out the lack of perspective, her reading of the spatial orientation of the frescoes in its absence is informative:

> Such separable entities as occur in the form of single beasts, plants and stones — though plants frequently seem to merge into one another — are caught in a web of a living world that has indefinite orientation and indefinite multiple relations (Groenewegen-Frankfort 1951, 201).

She also stresses the 'absolute mobility' of human and animal figures, moving as if weightless and not tied to geometrical space. Nevertheless she describes the scenes as imbued with life, even suggesting that there was a sacredness to this which replaced the need for the personification of deities: the depictions can be understood in themselves rather than with reference to a nature goddess. Despite her implicit comparisons with later art Groenewegen-Frankfort offers a reading of the Minoan frescoes and sealstones which stresses their difference from Renaissance art and challenges us to appreciate them in a very different, almost ecological way. In doing so one is invited to consider the different worldview of which the Birds and Monkeys fresco is a product, and it is here that anthropology offers a different set of perspectives on human-environment relations with which to think about the depictions of plants and animals in the Neopalatial period.

As Descola & Palsson (1996, 7) note, many anthropologists have abandoned notions of a dichotomy between society and nature as a result of their interaction with societies for whom there is no such distinction. Following his work with the Amazonian Jivaro, a horticultural society, Descola (1992; 1996) constructed a framework for understanding how different societies might conceptualize and interact with their environment. In response to criticism that his scheme rendered human–environment relations as socially determined, he has more recently centred it on the way in which the perception of the properties of nonhuman entities determines their place in a set of relations (Descola 2006, 139).

The primary interest of Descola's work here is his isolation of 'naturalism' as only one of the possible ways of identifying the environment. Based on the premise that humans perceive others (human or non-human) in terms of their own 'physicality' and 'interiority', roughly body and mind, he has argued that there are four possible 'modes of identification'. In this scheme 'totemism' rests on the sharing of both, 'animism' on the perception of a shared interiority but different physicality, and 'analogism' on the sharing of neither (Descola 2005, 176; 2006, 140–41). Naturalism is predicated on the relatedness of all life forms which is fundamental to biology (shared physicality), and the use of features such as culture to set humans apart from other animals (distinct interiority). His definition echoes the descriptions of the Birds and Monkeys fresco above, defining naturalism as 'simply the belief that nature does exist, that certain things owe their existence and development to a principle extraneous both to chance and the effects of the human will' (Descola 1996, 88; 2006, 146). This mode of identification he sees as the modern Western one, which sees nature as a domain separate from culture.

As Brian Morris (2000, 6) points out, Descola's definition of 'naturalism' is an oversimplification of modern Western human–environment relations, and in his own ethnography of a Malawian farming society suggests that there are diverse human–environment relations in any one society. Although accepting this in principle, Descola argues for the primacy of a mode of identification in any one culture, which provides the dominant ontology within which relations between humans and nonhumans (including animals and plants, but also spirits or what we might perceive as inanimate objects) are enacted. These ontologies are realized in what Descola (2006, 147) terms 'collectives', 'a way of assembling humans and non-humans in a network of specific relations'. In a naturalist ontology this equates with human society, but other ontologies result in different collectives. Descola has focused on the way in which modes of identification are articulated by characteristic 'modes of relation' such as predation or protection, but suggests that other dimensions of experience such as spatiality, temporality and figuration are also important (Descola 2005, 166–7).

In general, scholars of pre-modern farming societies need to develop different ways to conceptualize human–environment relations which reflect the particular circumstances which result from farming,

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and the consequent relationships with wild animals. As hunting becomes less significant in subsistence, it can acquire particular associations: in pre-modern Europe wild animals were, among other things, the companions of holy people and the sport of the aristocracy (Cartmill 1993, 52–75). As Pluskowski (2007, 32) suggests, 'animals — particularly wild terrestrial mammals, were employed as key elements in the medieval semiotics of power, the symbolic system that communicated the separation of the seignurial class from the other 'orders' of society'. This situation can be seen within Descola's analogism: 'the analogic collective is always divided into interdependent constitutive units which are structured according to a logic of segmentary nesting' (Descola 2006, 152). The medieval European Great Chain of Being is one example of analogism, in which order is imposed on a multitude of distinct entities (Descola 2005, 282–7). As will be suggested, analogism also best fits the situation of Neopalatial Crete. In any case Descola's symbolic ecology usefully broadens the debate, describing other ways of identifying the world than 'naturalism' and makes the important point that it is the relations between people and their environment that determine how they conceptualize 'nature'.

An ecological approach

Herva (2005; 2006a,b) and Knappett (2005) have recently applied a different type of ecological perspective to the Minoan past, partly derived from J.J. Gibson's ecological psychology. This relational perspective encompasses not only humans, animals and plants, but also material culture. A key concept is the notion of affordances, defined as follows: 'Affordances are properties taken with reference to the observer. They are neither physical nor phenomenal' (Gibson 1979, 143). From this perspective the properties of the environment, whether of animals or plants or art objects, emerge from the interaction between entities. One could suggest that Cretan wild goats, *agrimi*a, currently afford visual experiences for tourists, but are not eaten because they are a protected species. In the Minoan world they did afford hunting and eating as remains from Late Bronze Age Khania in Western Crete show (Hallager & Hallager 2000, 108), but they were also depicted on various media including frescoes and seals.

Gibson did discuss pictures and texts in his work on visual perception, but his prime concern was to establish a theory of the direct perception of the affordances of environmental objects, in which perception is the result of the interaction between observer and environment rather than a primarily mental process. Mediated perception, of art objects or texts, he saw in similar terms, in which the depiction replicates some of the information available in the world, allowing for something akin to direct perception (Gibson 1979, 262). Following this account Ingold (2000, 111–31) rejects the term 'art' for understanding the depictions of certain hunter-gatherers, suggesting that we should not think of these paintings or carvings as necessarily representational. Instead, he argues, their production is part of gaining a deeper knowledge of the environment.

Knappett (2004, 58) emphasizes the role of the agent's social knowledge in their perception of certain affordances, and not just depictions: one can drink tea out of a beer mug, but one would only use it in this way as a matter of last resort. Like Ingold, he sees the distinction between artefact and artwork as unhelpful, but whereas Ingold argues that the hunter-gatherer 'artwork' is like a tool for directly perceiving the world, Knappett suggests that we should seek to study the indirect enculturated knowledge drawn upon in perception alongside the information available in the environment. In this way the artwork should be understood in its cultural and historical context, as well as its environmental one. This would seem to be a useful approach to animal depictions of the Neopalatial period which balances the affordances of animals in the environment, such as the amount of meat they yield or difficulty to hunt, with the sort of culturally specific knowledge about them conveyed in Minoan material culture. The focus here is on the linkages between material culture and human relationships with animals: as such purely symbolic readings of animals in Neopalatial art, often grouped around ideas of a nature goddess, will not be discussed in detail. As Herva (2006b) has suggested, a focus on divinities has obscured the complex relationships between human and environment in Minoan Crete manifested in what are usually taken as straightforwardly 'religious' images.

I will now turn to the material culture of the Neopalatial period, starting with Linear A documents. These can be usefully discussed in terms of the affordance concept, and can illustrate how objects can be an integral part of human–animal relations. The same logic will then be applied to seals and frescoes, which need not be seen as an entirely different category of material culture, even though they depict a different range of animals. These are not the only other media on which animals appear: zoomorphic vessels in various materials, Marine Style pottery, jewellery and figurines are other

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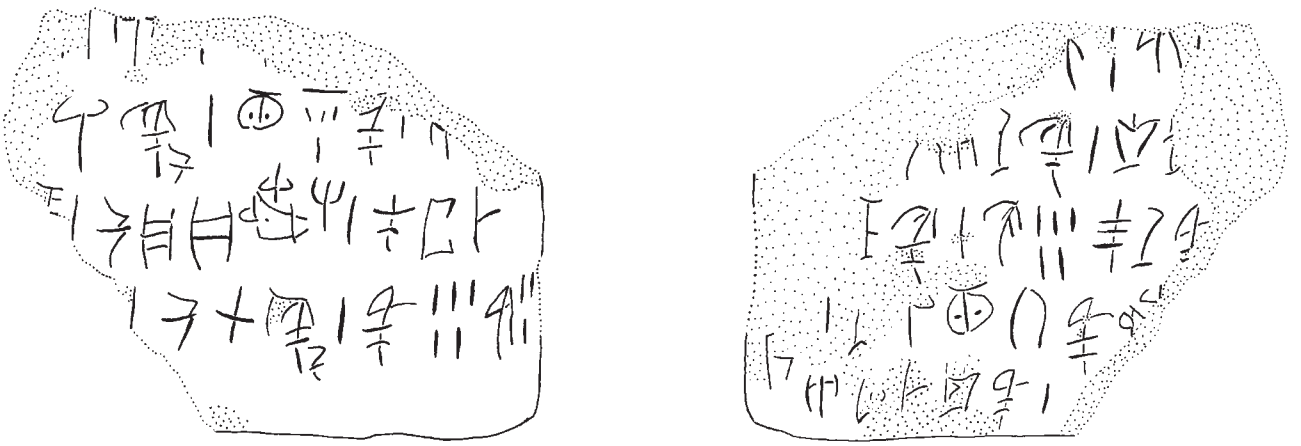


Figure 2. *Tablet PH (?) 31 (Reproduced from Godart & Olivier 1976a: 318, with permission from L'École Française d'Athènes)*

examples (Vanschoonwinkel 1996). The aim here, however, is to provide a comparison of the range of animals depicted in different media to illustrate that different types of material culture are implicated in different human–animal relationships. The Linear A tablets, seals and frescoes offer well-published data sets with which to explore this idea.

Linear A

Figure 2 illustrates tablet PH (?) 31, almost certainly from Ayia Triada in southern Crete (Godart & Olivier 1976a, xx, 318–19; Schoep 2002b, 121). The first point to make about Linear A is that it is yet to be deciphered. This illustrates how the cultural knowledge of the observer in part affects the affordance of an object; it has been argued that the physical appearance of different document types, as well as the inscribed signs, also conveyed information about their content (Schoep 1998, 403). At the same time the tablet has certain physical affordances which do make it useful to archaeologists: the fact that the signs were incised in clay, rather than written on parchment, has resulted in its survival with the writing legible. The use of clay also points to the fact that it was meant as a temporary artefact, useful for preserving a certain amount of information for a limited period of time. Only its accidental burning has allowed its survival, transforming the hard clay into a durable artefact.

At first glance it appears to be a set of arbitrary signs, but at the centre of the first side, in the middle line, is a form which one might recognize as an animal's head, from the shape and the position of the eye and the ear. That we can describe it as the logogram for 'pig' with any confidence is the result of a certain amount of cultural knowledge which the archaeologist is able to bring to the tablet. Based on the later animal logograms of Linear B, which has been deciphered, we can be confident in identifying not only pig, but goats and sheep and understanding the number system; Linear B tablets also offer a related archiving system and set of concerns which can be useful in interpreting the Linear A archives (Schoep 2002b, 9). Male and female sheep and goats are distinguished by lines added to the basic form of the logogram: on the same side as the pig, at the right of the bottom line, five male, and three female sheep are recorded.

These logograms are not purely symbolic in semiotic terms because they show some resemblance to the animals: they are iconic (Knappett 2008 considers the implications of this for the Linear A vase logograms). Yet compared with the depictions of animals in other media they are highly abbreviated: they hardly show the features which characterize the animal. Gibson (1979, 269, 310–11) used the term invariant to describe the formal qualities which define an object as such, suggesting that a picture can only ever convey some of them, since invariants become apparent as one views an object from a number of different angles. However, it is useful to think of the animal form in terms of invariants since drawings consisting of a few lines can still be linked with a real world animal form, as long as they convey something characteristic, such as a giraffe's long neck in relation to its body. The shape of the pig's head makes the logogram recognizable, while the sheep and goat logograms could suggest their characteristic horns but require contextual knowledge for identification. It is informative to compare them with the Linear B logograms for horse and deer which require only

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knowledge of the animal's form to recognize, and focus on the invariants of the head.

The numbers associated with each animal logogram suggest that this tablet is to be understood in relation to a transaction of domestic animals in the real world. In a sequence of signs, without numbers, they can be read as elements in the syllabic script, but there are clear examples of logograms, as identified by Godart & Olivier (1985) and further analysed by Schoep (2002b). Animal logograms occur both on tablets and another type of clay document termed a 'roundel'. Roundels are clay disks which are often marked with a logogram, and are stamped around the edge with a seal. The number of impressions has been convincingly argued to refer to the number of units (Hallager 1996a, 100–101), and this has been accepted for the totals below. There are 44 logograms in the corpus which correspond straightforwardly to the Linear B logograms for sheep, goat, cattle, pig, totalling approximately 284 individual animals (although numbers are not always preserved and there are other problems of interpretation). Two more signs have been identified as animal logograms: Schoep (2002b, 125) has argued that sign 306 is 'cow', but these logograms have not been included here since uncertainty remains. The other sign, 336, is in the shape of an animal head, but Schoep (2002b, 126–7) disagrees with its identification as 'dog' (Godart & Tzedakis 1992, 139). A further group of logograms is the result of the combination of one sign with another. Most of these 'ligatured' signs probably specify a certain type of animal, but others could be referring to animal fodder for example, and so these are excluded from the totals below.

The use of Linear A is mainly a feature of the Neopalatial period, and documents are found at a number of Cretan sites, with the largest assemblages found in destruction horizons characterizing the end of the period at Ayia Triada, Khania and Zakros (Hallager 1996a, 39–77). These episodes of burning account for the survival of the clay documents. Half of the animal logograms refer to sheep, with 22 logograms accounting for 214 animals. Of these 187 are ewes: tablet ZA 22 (from Zakros) accounts for 102, while two from Ayia Triada refer to 27 and 30 animals. These numbers are exceptional, and apart from another tablet detailing 13 ewes and a problematic tablet referring to 30 pigs (Schoep 2002b, 121), the remainder of the logograms are associated with fewer than 10 animals. The number of ewes is difficult to explain because the later fourteenth-century BC Knossos wool industry revealed in the Linear B 'D series' tablets was based on wethers which, although castrated males, were denoted by the ram logogram. There were ewes in the wool flocks and separate breeding flocks, but these were hugely outnumbered by wethers, which yielded more wool (Halstead 1993; Killen 1964). The problem for interpreting the Linear A tablets is that the concomitant evidence for wool flocks is missing and, as Schoep (2002b, 191) points out, there is also a low frequency of textiles recorded in the Linear A tablets. These large quantities of sheep have been seen as indicating an interest other than meat and dairy, and there are almost certainly gaps in the evidence (Palmer 1995, 148; Schoep 2002b, 121, 186). At the same time there is a rationale for building up flocks of ewes as a risk buffer and for disposal when needed (Halstead 1993, 362–3).

Of the 10 rams listed in the Linear A archives, 9 appear on the illustrated tablet: PH (?) 31 which is inscribed with 13 animal logograms (Fig. 2). The number of animals represented is small: 9 rams, 5 ewes, 7 she-goats, 2 he-goats, 2 pigs and the only 3 occurrences of 513 (a ligatured sign of male goat). This distribution is paralleled not by the 'D series' but several later Linear B tablets from Pylos on the Greek mainland, including Un 138, which lists 16 sheep, 13 goats, 13 pigs and 3 cattle (Killen 1994, 72). Killen argues that this is a list of contributions for a sacrifice and banquet, arguing that the high proportion of sheep and goats, and the greater number of male animals, which are generally less useful, except for wool production, point to consumption. He also notes comparable proportions of animals found in a Knossos faunal assemblage (Killen 1994, 80–81).

The listing of small numbers of animals on PH (?) 31, and also the roundels, allows a similar conclusion (Schoep 2002b, 186–7), and zooarchaeology can again be used to support the idea of consumption. Figure 3 shows a comparison of the number of identified specimens (NISP) at Neopalatial Ayia Triada (N = 200) (Wilkens 1996a) and nearby Kommos (N = 438) (Reese 1995, 166) with the animals detailed in the Ayia Triada documents (including Ph (?) 31). The proportions of cattle and pig are broadly comparable, as are sheep and goat taken together, since they are often difficult to separate zooarchaeologically. The entry for 27 ewes comes from what Schoep categorizes as a 'mixed commodity tablet', a format she compares with the Pylos 'banqueting' tablet mentioned above (Schoep 2002b, 169). The sheep in Linear B archives tend to be recorded on tablets detailing only sheep, part of a palatial wool industry. Halstead (2002) has separated such Linear B 'management' texts from 'consumption' texts: he calculates that at Knossos the latter are still dominated

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by sheep (81.1 per cent compared to 97.9 per cent in the management texts), but at Pylos pigs are attested most frequently for consumption (55 per cent); the consumption texts also show a lower ratio of sheep: goat (at Pylos 3:1 rather than 6:1). Halstead makes the point that the tablets record livestock as opposed to the deadstock recovered in excavations, among other biases, but advocates a comparative approach. As a crude comparison the proportions in Figure 3 are consistent with the idea that the animals recorded in Linear A documents could be mainly destined for consumption, both in the ratio of sheep: goat (4:1) and the high proportion of pigs. Further investigation of consumption practices would necessitate the sort of contextual zooarchaeological data which are lacking for most Neopalatial sites, particularly administrative centres such as Ayia Triada. Kommos is an exception, but the fragmentation of the faunal remains from what has been seen as the central building almost entirely precluded species identification (Ruscillo 2006). As a result those reported here are from the surrounding buildings (Reese 1995); nor have Linear A tablets been found at Kommos. Future publication of the Khania Neopalatial levels will facilitate a more fine-grained analysis.

Other human–animal relations can be read from the Linear A documents. Tablet HT 34 from Ayia Triada possibly lists 100 oxen, depending on how the ligatured sign is read. Again by analogy with Linear B archives such oxen could be centrally-owned plough animals (Schoep 2002b, 187). The Ch series from Knossos even lists the names, or at least descriptions, of pairs of oxen. Killen (1992) argues that this close scrutiny might have guarded against fraud by ensuring that the same animals were returned when loaned out for ploughing. It also serves to underline that even those at the centre could have close relations with individual animals. The large number of oxherds in the Pylos Linear B documents could also mean that each animal gained individual attention, further suggesting that these were valuable and carefully looked after (Halstead 1999, 323–4). There is also zooarchaeological evidence for ploughing, with traction pathologies found on a small number of cattle bones from Bronze Age Knossos (Isaakidou 2006, 104–8). Apart from HT 34, the Linear A documents deal with small numbers of cattle: the bulls appearing on mixed commodity tablets from Ayia Triada (8 on 3 tablets) could potentially be offerings (Palaima 1992, 467). Overall the Linear A documents, despite their scarcity, do seem to provide a partial snapshot of the Neopalatial economy, particularly the animals being consumed at the centre.

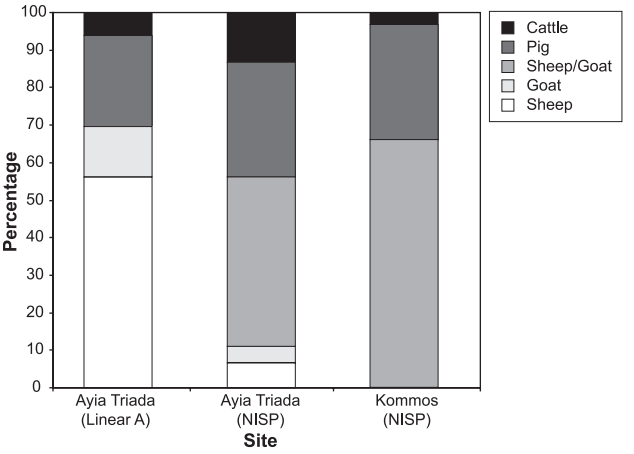


Figure 3. *Proportions of domesticates in Linear A documents compared with faunal assemblages (NISP).*

Material traces of human–animal relations

Figure 4 shows how the proportion of animals depicted on seals and frescoes differs from those in the Linear A documents (for comparison the proportions are based on presence of an animal type on an artefact rather than number). While there is overlap for cattle and goats, a different range of animals is shown on the artistic media compared to the documents discussed above. Before examining how the distributions differ, it is worth considering the continuities between Tablet PH (?) 31 and animal depictions on other media.

The clay document is a constituent part of the human–animal relation. The inscription of the signs is part of the set of relations which brought the animals to be consumed, and each logogram refers to one or more individual animals in the real world. These tablets can be called material traces of human–animal relations. Summers (2004, 687) defines trace as 'an indication of former presence and contact', which is the same as an index in semiotic terms. The logogram makes the animal present in the transaction, standing for a specific animal. It is part of a network of relations between a central administration, those involved in transactions with it, the animals and the documents which record the transactions.

Perhaps the most striking evidence for continuity between media is in the form of a roundel, for instance Wc 2063 inscribed with a sheep logogram from Khania (Godart & Olivier 1976b, 138; Hallager 1996b, 101). On the same roundel are nine of the same seal impression depicting two lions, which is also published in a volume of the *Corpus der minoischen und mykenischen Siegel* [CMS] (Pini 1992) (Fig. 5a). The view that roundels are

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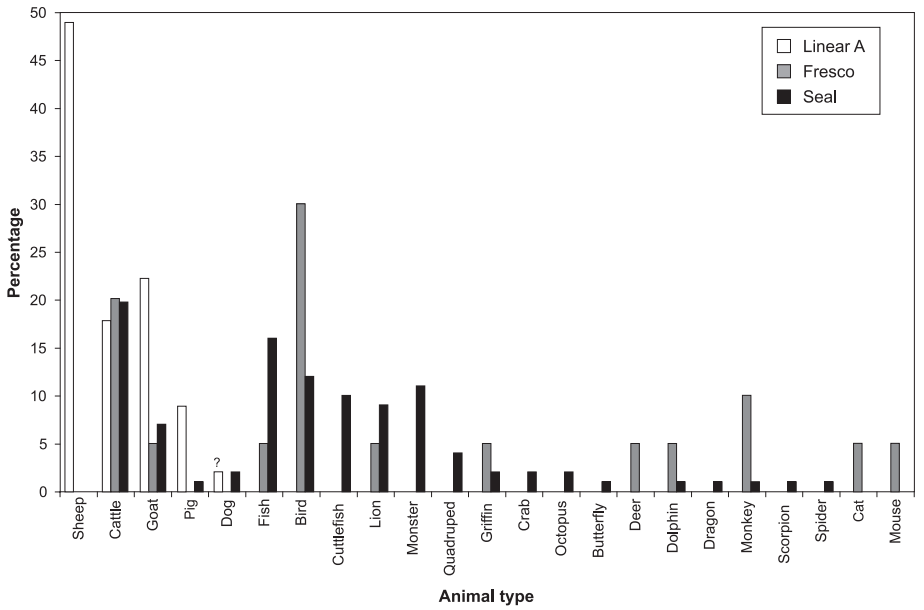


Figure 4. *Proportion of animals in each medium (>1 per cent).*

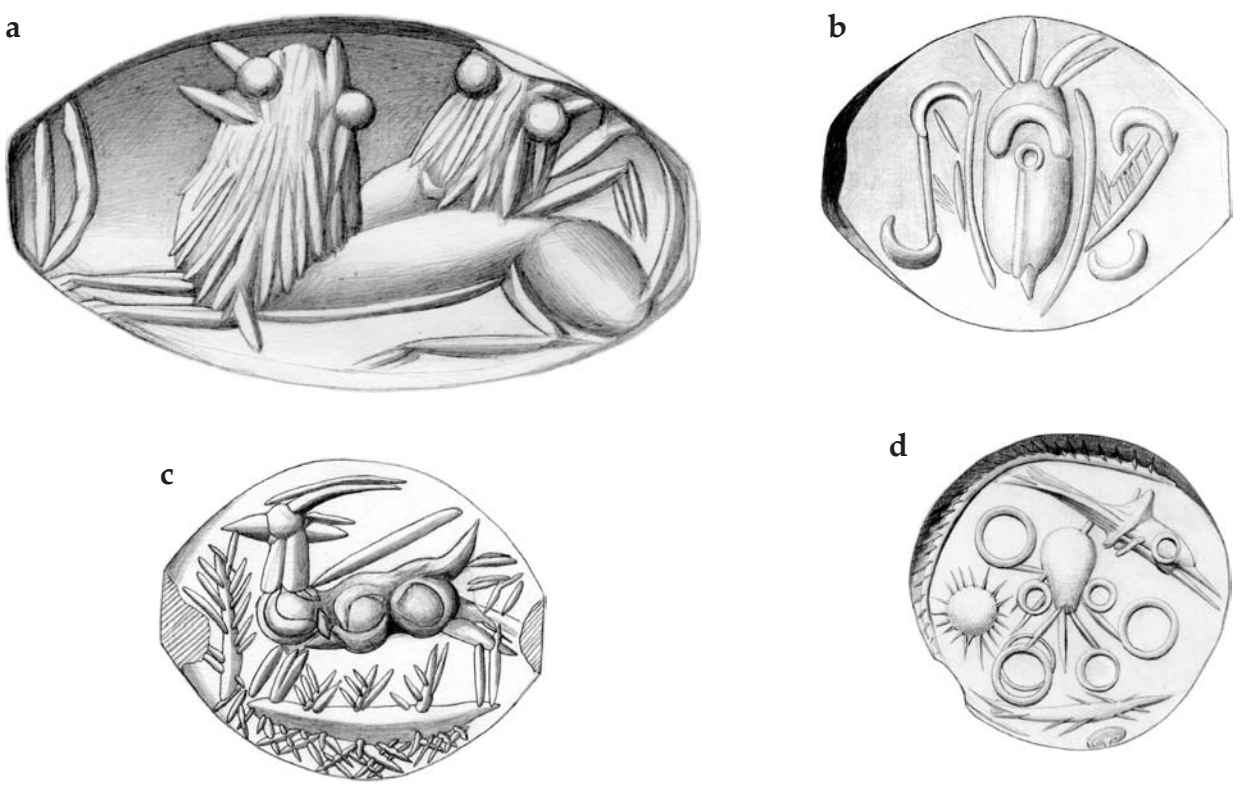


Figure 5. *Drawings of seal impressions depicting: a) two lions (Pini 1992: no. 163; courtesy of CMS); b) a cuttlefish (Platon & Pini 1984: no. 244; courtesy of CMS); c) a goat and spear (Platon & Pini 1984: no. 258; courtesy of CMS; d) marine animals (Platon & Pini 1984: no. 251; courtesy of CMS).*

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receipts for goods provided, rather than received, by a central authority has been questioned by Schoep, but it is agreed that they record transactions (Hallager 1996a, 116–17; Schoep 1998, 405). If this is a transaction materialized in a piece of clay, and the inscribed sign indexes the sheep, presumably nine in number, what is the seal impression? Summers (2004, 284) uses the term 'effigy' to describe an image which is caused by contact with an object, like a death mask or here a seal impression; in other words it is a trace. Here the trace is also an image of two lions: what place do these occupy in the network of relations?

Seals

Metaphor and metonym have been advocated by Baker (2001) as an extremely useful way to think through the different ways in which people identify themselves with, or in opposition to, animals. Knappett (2005) also allies metaphor and metonym with the semiotic icon and index respectively, to describe types of connections in a material culture network. The seal whose impression is shown in Figure 5a is known from a number of objects from Khania, and Hallager (1996a, 91–2) has argued that the consistent way in which such seals are used from document to document suggests their use by a single person; others have argued that a seal could have been used by a number of people in an official capacity (Krzyszkowska 2005, 177). The two lions on this seal could be seen metaphorically, suggesting that this individual was like a lion. Alternatively it could be seen metonymically, implying a connection with lions: indeed it could be a metonym for group membership, so connecting the individual with a group whose members saw themselves as lions, which would be a mixture of metonym and metaphor. As I suggest below the depiction could be a metonym in terms of a biographical connection with real lions, connecting its user with hunting trips outside Crete.

The lions are one of 505 seal designs (the term seal, as opposed to sealstone, includes metal rings) analysed here which are preserved on clay sealings. They are from assemblages which are dated contextually to the Neopalatial, and found largely in elite buildings (as published in CMS: Pini 1992; 1998; 1999; 2002). The advantage of these sealing deposits is that they give an idea of the seals in use at one particular location at the end of the Neopalatial period, allowing an insight into the proportion of seals depicting animals. Of the 150 sealings from Ayia Triada, 62 per cent show animals alone and a further 11 per cent show animals with humans. The other significant category shows only humans, mostly in enigmatic 'cult' scenes, accounting for 17 per cent. The remainder depict objects, including a boar's tusk helmet, or are patterned. The detailed depiction of animals on sealings of this period makes identification of animals comparatively unproblematic; the identifications in CMS have been accepted.

A major group of seals, referred to as the 'talismanic' stylistic group (no longer thought of as talismans or amulets), is easily recognizable because of its prominent drill marks and is datable to the Neopalatial period (see Krzyszkowska 2005, 133–7 for a fuller account) (Figs. 5b–d). It has been suggested that the designs on these seals are inherently ambiguous and authors' identifications inconsistent (Morgan 1989). Identifications here are based on a comprehensive typology which includes almost all of the 451 talismanic seals analysed below (Onassoglou 1985). Arguing that her identifications were based on the consistent combination of particular shapes, Onassoglou (1995) defended her work against suggestions of ambiguity. She suggests, for instance, that there is a basic 'Sepia' design consisting of an oval body and tentacles at the top and sides which is distinguishable as a cuttlefish even if it is executed in different ways or elaborated (Fig. 5b). Like the Linear A signs above, these can be seen as its invariants. Figure 6 shows a breakdown of the animals represented on talismanic seals and the sealings mentioned above, making the prevalence of marine animals in the talismanic seals apparent, although birds, mostly shown in flight, are another popular subject. It illustrates that a greater range of animals appears in the sealings compared to the talismanic seals, which would have been quick to manufacture and are highly repetitive. One could suggest that they are sub-elite since they are also rarely found used for sealings in the elite buildings containing sealing deposits. Another group of seals can be dated stylistically to the Neopalatial period, but these are not considered here since their subjects overlap with the sealings.

To return to the question of identity, there are reasons to suggest that these talismanic seals are metonymic, referring particularly to encounters with wild animals. The goats are often shown speared, suggesting that these are hunting scenes rather than depictions of domestic animals (Bloedow 1992; Fig. 5c). A variety of bird species, including sea birds, were recovered from the faunal assemblage at Kommos (Reese 1995, 194–204), and one can suggest that these were hunted and consumed. Powell (1996, 108–9) has argued that some of the talismanic fish depictions show nets, and again fishing can be seen as one possible rationale for the depiction of marine

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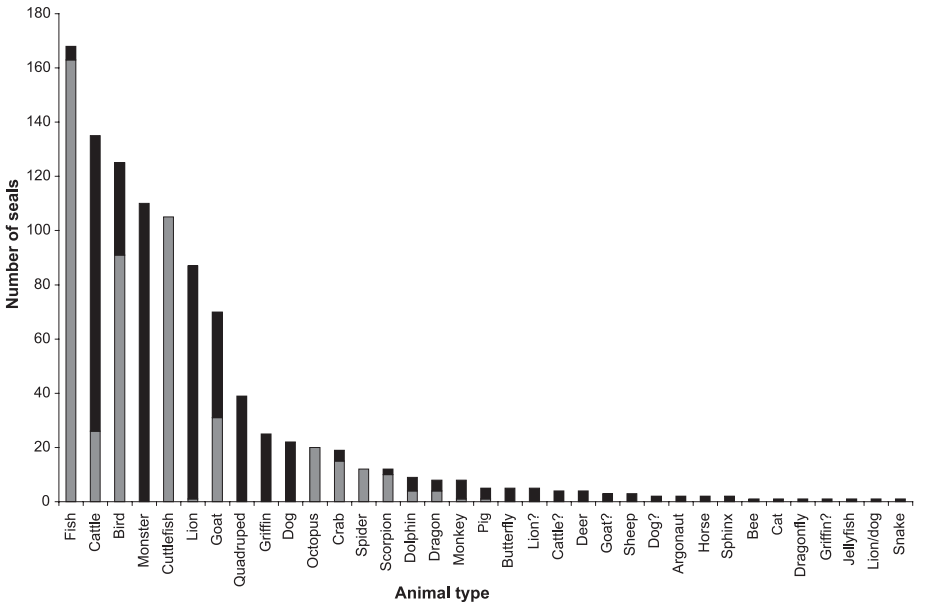


Figure 6. *Animals depicted on talismanic seals (grey) and Neopalatial sealings (black).*

animals. One cannot ignore the depictions of marine animals on Marine Style pottery at the end of this period, or on slightly earlier stone vessels, pointing to an interest in the sea in an elite context which is difficult to explain in terms of fishing; cultic associations have been proposed (Mountjoy 1985). As argued above, however, this does not explain why marine animals should have such associations; the disruption to the marine environment caused by the eruption of Thera has been used to explain the subject matter of Marine Style pottery (Müller 1997, 322; Bicknell 2000), but a variety of marine imagery, including the seal shown in Figure 5d, predates this. Morris (1995, 193) suggests that marine depictions potentially had a number of meanings, but acted as 'iconographic reinforcement' of the function of vessels as containers of liquid. Details of the depictions on Marine Style vessels of octopuses with open eyes and argonauts with curling tentacles amidst rocks and seaweed also serve to locate them underwater. This could indicate that these animals are important because of where they came from, and how they were encountered. There are almost no depictions of farming activities in Neopalatial iconography, so those who used talismanic and other seals displaying animals wanted to be identified with the animals encountered beyond the domestic sphere. Other talismanic seals show masted ships, suggesting that travel was important in the formation of (individual or group) identity; their first appearance on seals coincides with the emergence of the Cretan palaces, linking such ships with the social strategies of newly formed elites (Broodbank in press).

Another argument for the metonymic role of seals is their colour. Figure 7 shows a breakdown of the colour of talismanic seals where recorded against the animal depicted. Of the 469 morphologically different types of animal depicted on 451 talismanic seals, 34 per cent occur on clear/green/blue stones while 49 per cent occur on red/orange/brown stones. Yet marine animals account for 81 per cent of clear/green/blue sealstones, but only 64 per cent of the total. Individual colours show even starker results: of the 26 clear rock-crystal seals in the sample, 25 depict marine animals (including Fig. 5d). The results for blue chalcedony and amethyst (38 seals) and green seals (85) also show an over-representation of marine animals, statistically significant at <0.05 significance level in a chi-squared test: the overall distribution of marine versus non-marine animals against stone colour has a chi-squared value of 0. What is interesting about this pattern is that the clear/green/blue seals seem to be reinforcing a link with water, while other colours can be associated perhaps with land. This is further evidence that marine animals are important as inhabitants of a particular environment, reinforced by the choice of material for the seal. Incidental support for this colour association comes from the descriptions of materials used to inlay furniture detailed in Linear B tablets from mainland Pylos. That colour was significant can be illustrated by the term for one material, *kuwanos*, whose etymological associations with dark blue leave

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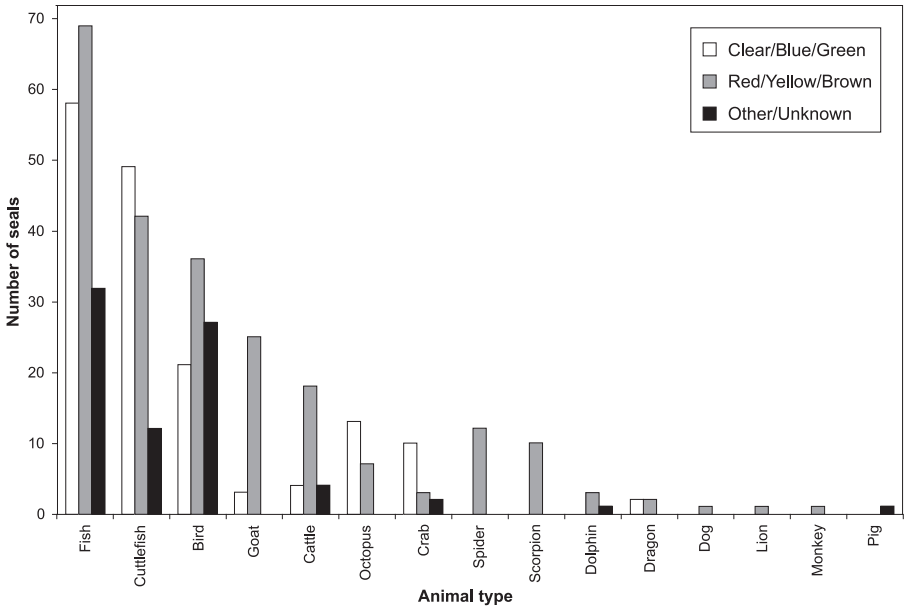


Figure 7. *Seal colour of animals in talismanic style.*

some uncertainty over whether the material is glass or lapis lazuli (Bennet 2008, 160–61). The description of a table on tablet Ta 642, 'a-ja-me-na a_2-ro[ ]u-do-pi', is literally translated as 'inlaid with water of the sea' (Ventris & Chadwick 1973, 339–40; Aura Jorro 1985, 130). One accepted translation is 'aquamarine', and so it is worth considering whether this is another piece of evidence, albeit in a later context, linking the stones mentioned above and the sea.

Among the sealings shown in Figure 6 there are large numbers of lions, cattle and monsters (mostly a variety of animal hybrids particular to the site of Zakros — discussed more fully by Weingarten (1983)). One of them is the seal impression of the lions on the roundel mentioned above (Fig. 5a), which is an effigy of a seal: it indexed the seal, and by extension the seal-user, which is why it was used in an economic transaction. The talismanic seals, which as suggested above are metonyms of encounters with animals, lead to a similar interpretation for this design. Summers (2004, 289) argues that while a seal impression is an effigy, the same logic is extended to 'images with the value of effigies'. These are images which operate as if they are directly connected with what they depict, like the statue of a ruler which is treated as if it is the absent person. Summers (2004, 291) argues that 'effigies derive from absolutely particular things and events', and following the example of the talismanic seals, it can be suggested that the sealing with the lions refers to an encounter with lions. Lions have never been indigenous to Crete, and so such encounters would have taken place overseas. It is impossible to say whether the seal impression shown in Figure 5a refers to an encounter or creates one; it does, however, establish a connection between a seal-user and lions. Indeed a close examination of this image suggests that the seal engraver did not have a clear idea of lion anatomy: in common with other Cretan depictions of lions the eyes and mouth are imprecisely rendered, although the way in which these relate to the detailed mane is consistent with the observation of a lion pelt. Further evidence for trophies will be discussed below.

In her discussion of the lions on contemporary frescoes at Akrotiri, Morgan discusses lions in terms of human–animal relations: 'the relationship between men and lions is one of mutual strength. If the lion conquers all other beasts, the ultimate test of a man's courage must be to conquer the lion' (Morgan 1988, 46). Later Mycenaean depictions, including those on daggers, do show warriors hunting lions, suggesting that this activity was part of a warrior ideology. Yet while Morgan suggests that animal depictions do result from observation of real animals, for her the depiction becomes part of the iconographic repertoire and takes on a symbolic meaning. Referring to the animals painted on the ships in the Thera miniature fresco she argues, 'the image is then no longer a literal statement (any more than those are real lions on the ships) but one which has been used to evoke a particular scene or meaning' (Morgan 1988, 45). Yet this is to separate the meaning of a lion from a real lion:

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the lions on ships, she argues, are symbols of strength. Yet as Philo and Wilbert (2000, 5) suggest:

> If we concentrate solely on how animals are represented, the impression is that animals are merely passive surfaces on to which human groups inscribe imaginings and orderings of all kinds. In our view, it is also vital to give credence to the practices that are folded into the making of representations, and — at the core of the matter — to ask how animals themselves may figure in these practices.

Rather than concentrate on the iconographic significance of lions as motifs, one can suggest that there is a set of practices linking lions, hunting, warfare and travel. This network of relations comes together in the paddled boats, which are the vessels shown with lions on their prows on the Thera frescoes, rather than the sail boats, decorated with birds. The affordances of the lion, the top predator and dangerous to humans, give it a prominent place in the warrior's identity. As Morgan suggests, it is the ultimate test of the hunter in the East Mediterranean, and it is no coincidence that it also features in depictions of rulers in the Near East. Without denying possible iconographic meanings associated with lions, for instance as metaphors of power, it is the encounter with the real lion which underpins these meanings. If the lion does become a metaphor for the warrior, or for the Mesopotamian ruler, it is the practice of lion-hunting which establishes the connection between the two. The lion is simultaneously exotic and dangerous: never seen by those unable to travel beyond Crete, and frequently depicted attacking other animals (a quarter of lion depictions in the sample). In these depictions its affordances as a dangerous animal can be directly perceived; its associations with warriors may have been added by the observer. Pressing a seal or ring into clay, thereby creating an effigy, also creates an image with the value of an effigy, ostensibly the trace of an encounter between lion and seal-user, animal and human connected in a network of practices which stretch over the horizon.

Frescoes

The volcanic eruption which buried Akrotiri on the island of Thera resulted in the almost complete preservation of Neopalatial frescoes, in contrast to Crete. Of the fragmentary Neopalatial Cretan frescoes depicting animals that have been recovered and reconstructed, all but one are from the area of Knossos. The dating of frescoes can be contentious. However, for the dating and identifications here Immerwahr's (1990) catalogue, which differs in some details but has a wider coverage than Hood's (2005), has been used. Some of the identifications of animals are debateable as they are based on highly fragmentary material: the only fragment identified as a lion's mane could show the hair of a bull (Shaw 1995, 115). Of these 16 frescoes or collections of fragments, half come from the palace at Knossos, six from surrounding houses or the Northwest Fresco Heaps, and another from nearby Katsamba. The only exception is the 'Park Fresco' from Ayia Triada, which is also one of the best preserved; even so Cameron has reconstructed the leaping animals as wild goats rather than the deer which Immerwahr suggests (Fig. 8). All of the four cattle frescoes are found at Knossos, associated with the palace, and at least three are likely to be bull-leaping scenes, echoing their prominence on sealings.

Monkeys and cats appear in two frescoes each. The 'Saffron Gatherer' from the palace is seemingly wearing a harness and walking through a rocky landscape, shown above and below, with crocuses growing in pots and from the rocks. While the rocks point away from a domestic setting, the harness and pots suggest that the monkey is under human control. The Birds and Monkeys Fresco as restored by Cameron (1968) shows six monkeys and eight rock doves in a riverine landscape with a variety of plants including crocuses, lilies and papyrus (Fig. 1). It has been suggested that this shows a garden or 'nature sanctuary' because of the presence of monkeys (Shaw 1993, 669). It is fair to suggest that monkeys could have been kept in captivity but the fresco links these exotic imports with the Cretan landscape. As Chapin (2004, 57) points out, however, this is not a literal depiction of Cretan flora because of the way the spring and autumn plants bloom simultaneously, alongside hybrid plants. As she suggests, this manipulation of reality would have had a powerful impact on non-elite visitors. Frescoes at contemporary Thera also depict monkeys: a monkey at Xeste 3 is shown presenting something to the 'Mistress of the Animals'. Morgan (1990, 261) argues that monkeys are just one part of an iconographic cycle linking crocuses, cloth, women and presentation. Other monkeys from Thera are shown playing a musical instrument and brandishing a sword, stressing their human-like qualities. That the Saffron Gatherer was originally reconstructed as a 'Blue Boy' (Evely 1999, 121) indicates the possibility of confusion, at least on the part of the restorers, between human and monkey depictions: this similarity between human and monkey is emphasized by the Theran monkeys' activities.

The other major landscape fresco adorns the south wall of Room 14 of the 'Royal Villa' at Ayia

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Figure 8. *Sketch of part of the Ayia Triada 'Park Fresco' by Mark Cameron (Evely 1999, 111; reproduced with permission of the British School at Athens.)*

Triada. As restored, the north and east walls show a woman kneeling among crocuses and lilies and another dancing, interpreted by some as a goddess and adorant (Militello 2000, 78). The landscape on the south wall depicts a cat stalking birds in a rocky landscape. Militello argues that depictions of cats hunting originated in Egypt, but that in Crete 'the Cat Fresco would have exalted with its luxuriant landscape the power of the nature goddess whose epiphany was depicted in the adjacent east wall' (Militello 2000, 85). Phillips (1995) however argues against an Egyptian inspiration since the cat has a long history of depiction in Crete which need not be derived from Egyptian iconography. Rather, she suggests that the fresco painters are just as likely to have observed cats first hand, engaged in typical hunting behaviour (Phillips 2008, 205–6).

Given the detailed depictions it is likely that both animals were brought to Crete: Jarman (1996, 214) did identify *Felis* at Knossos, but in a mixed Minoan/Roman context. No monkey remains have been identified from the Aegean Bronze Age, but the frescoes are almost certainly the result of observation; in contrast the Prepalatial seals shaped like seated monkeys have close eastern Mediterranean parallels, and so need not suggest observation of monkeys on Crete in this earlier period (Phillips 2008, 180–81). Both animals were likely to have been rare imports and are prominent on three of the best-preserved Cretan frescoes. The monkey is shown in careful detail, spelling it out to those who have never seen one, and illustrating the amazing things it can do, including, in Thera at least, playing musical instruments.

From a phenomenological point of view the fresco is the ideal medium to use to depict an unfamiliar animal because of the detail that it allows. And it is the difference of the animal bodies that makes them ideal markers of distance: whether the frescoes were meant to be seen alongside real monkeys and cats, or as a substitute, they highlight a form which is similar to human and non-human animal bodies familiar in Bronze Age Crete but different: in the case of the monkey it is the similarity but difference from the human body that is seemingly important. The fresco provides information about the monkey, causing viewers to see the animal not just as unfamiliar, but as acting

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in certain ways. This ties in with Herva's ecological approach to scenes of humans interacting with trees and rocks, also traditionally seen as epiphanies of the nature goddess. Herva denies that one needs to interpret these in terms of a goddess, but suggests instead that the depictions guided people's perception of certain rocks and trees in the real world, revealing them as animate. As he suggests,

> the exotic and fantastic character of Minoan art can be taken to imply that the everyday world was full of marvels to be discovered. Nature scenes extended or 'fine-tuned' the perceptual system for the reception of those marvels by offering visual clues about the richness and complexity of the lived in world, its 'deep structure'. (Herva 2006a, 233)

Yet in the case of monkeys, and arguably for certain of the environmental features which Herva discusses, there is also a social dimension, determining who is allowed to control and interact with these animals (and frescoes: Chapin 2004). The frescoes become part of the interaction between those who were allowed to see them and the animals they depict, guiding the perception of animals which were already exotic by virtue of their difference from the Cretan fauna.

Human–animal relations

Returning to Figure 4, two animals appear on all three media discussed: cattle and goats. Different media are clearly part of different types of human–animal relations. The Linear A logograms are part of transactions involving domestic animals. Meanwhile seals frequently refer to goats being hunted, as on the talismanic sealstones, or in other seemingly non-domestic scenes. One ring impression from Ayia Triada (Pini 1999, no. 30) shows a seated female and goat with such detailed horns that an *agrimi* is undoubtedly being shown. If Cameron's reconstruction is accepted, the Ayia Triada Fresco shows goats in a rocky landscape, but apparently not being hunted (neither are the goats in his reconstruction of the House of the Frescoes). In both cases the goats seem to be distinguished as non-domestic animals, and the women associated with the wild goats have been interpreted as deities, explaining why the goats have been depicted. Yet one can reverse the human–animal relationship: it is the goats and landscape which define the women. The animal body acts as a marker of difference from the familiar domestic world: in association with a human body it creates a context in which one could interpret the females as deities. Rather than invoking a nature goddess, however, this article has sought to examine the human–animal relations which are implicated in these depictions, as part of the wider recognition of Aegean art as evidence for human-environment relations (Herva 2006b; Zeimbekis 2005). In a thorough examination of Minoan goat depictions, which he regards as exclusively wild, Bloedow (2003) plays down religious interpretations in favour of an iconography of hunting, and possibly observation in captivity.

Both cattle and goats were introduced to the island by Neolithic colonizers, as were most of the other mammalian fauna: there is a continuum from domestic animals under human control to those whose ancestors had been introduced by humans, but now lived beyond their control in the landscape (Isaakidou 2007, 15–16). A recent genetic study has suggested that imported wild goats rather than feral domesticated goats were the ancestors of the *agrimia*, but that interbreeding has occurred (Horwitz & Bar-Gal 2006). The identification of indigenous wild cattle (aurochs) on Bronze Age Crete by Nobis (1996) has been questioned on metric and biogeographical grounds (Vigne 1999, 300). Yet despite the fact that cattle were largely under human control, the milking scene on a single sealing (Pini 2002, no. 232) is the exception: sealings and frescos show cattle in non-domestic activities, of which the most frequent show a particular type of human–animal relation, bull-leaping. That a third of the less frequent metal ring impressions in the sample show cattle suggests that these are activities associated with high status people. In these, one or more humans is shown with what is often clearly a bull, in the process of vaulting over its horns (Younger 1995). Whereas one can explain the popularity of goats in depictions in terms of a wild population, the frequent depiction of cattle is anomalous since these are almost certainly domesticates. Zeimbekis (2006) points out that Crete's environmental history shows an unbroken tradition of keeping cattle from the time of the first settlers, leading her to suggest that they had more than just an economic significance.

From this perspective one can suggest that different practices reinforced the multiple identities of cattle and their users. Bull-leaping can be seen as a performance placing the bull outside of everyday activities and so changing the human-cattle relation into a prestige activity rather than a mundane one. At the same time bulls have different affordances from oxen, whose docility makes them suitable traction animals, and it could be this particular distinction that is being drawn. Isaakidou (2006) reports a shift from using cows for ploughing in the Neolithic to male animals in the Bronze Age, suggesting specialization. The oxherds who used cattle would be far more knowledgeable

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about them, and so the elite were arguably trying to reclaim them with a different type of activity, or define a particular relationship with bulls. The rings (whose detailing make it easier to show the sex of the animal) with these depictions helped to distribute this image around Crete on sealings, so that the impressions are part of the human–animal relations which serve to differentiate the elite. Through the frescoes and seals the cattle are seen in terms of this event rather than pulling the plough. The possible Linear A evidence for the consumption of cattle could also provide the basis for differentiation.

Hunting is a key human–animal relation, attested in depictions of a variety of animals and particularly connected here with seal depictions. Its absence in Cretan Neopalatial fresco painting could be an accident of survival, but it is worth pointing out that goats and cattle are both shown speared in seal depictions, but not frescoes (Shaw 1997, 495). Zooarchaeology provides further evidence for hunting of animals not native to Crete, whether the live animals were brought to Crete or not: although no lion bones have been found in Crete, the few red deer remains have been suggested to be trophies (Vigne 1999, 301; see Trantalidou 2000 for lion and deer remains in the Bronze Age Aegean). Both red deer and fallow deer remains were found at Neopalatial Ayia Triada (Wilkens 1996a, 1516; 1996b, fig. 20.4). At Knossos Isaakidou (2007, 16) contrasts the sporadic occurrence of red deer remains with the more abundant fallow deer; the latter, occurring from the Neopalatial period onwards, she sees as part of elite consumption practices rather than trophies since more of the carcase is represented. Roe deer antlers were found in the Neopalatial Temple Repositories in the palace, along with the well-known 'snake goddesses' (Panagiotaki 1999, 118). The few remains identified as 'deer' from Kommos have been suggested as coming from skins (Reese 1995, 190). As suggested above, seal depictions could provide indirect evidence for lion pelts, which, like the deer remains, could have been used as a trace of an encounter with an unfamiliar animal. Boar-tusk helmets, depicted on a Zakros sealing (Pini 1998, no. 168 shows a boar's tusk helmet, a possible *agrimi* horn and two dog's heads), are another artefact which acts as a material trace of successful hunting: 'Possession of such a helmet implies the bravery and hunting skills need to acquire the tusks' (Morris 1990, 155). In Late Bronze Age mainland Greece hunting has been seen as 'an important ideological resource for aspiring as well as established Mycenaean elites' (Hamilakis 2003, 244). As Hamilakis suggests, drawing on Helms (1993), encountering animals inhabiting a different temporality was a rite of passage which imbued its participants with authority: certainly the location of Crete means that overseas travel was integral to hunting lions, and obtaining or hunting deer.

The prominence of bull-leaping in Neopalatial frescoes could indicate that at Knossos at least it fulfilled a parallel function to hunting, perhaps more suited to the self-expression of a palatial elite than the individual achievements of hunters. The suggestion that bull-leaping was part of a seasonal festival would similarly imply a temporal distinction (Younger 1995, 521). Hunting and bull-leaping are just two of the more apparent human–animal relations. In Neopalatial Crete the majority of the animals depicted are from the remote or unfamiliar world, whether found overseas like lions, underwater like cuttlefish, or in the mountains of Crete like the wild goats. The spatial and temporal dimensions are a key part of what Descola (1996; 2005, 166–7) terms 'the mode of relation' between animals and humans in Neopalatial Crete. The distinction between Linear A descriptions and glyptic or fresco depictions is between the familiar and the unfamiliar, the local and the distant. The material culture largely preserves the human–animal relations of the elite: one can suggest that this was one means through which to differentiate themselves from those whose relations with animals were based on agricultural use and husbandry.

The 'mode of identification' is more difficult to interpret in a prehistoric context. Herva (2006a,b) argues for a form of animism in Minoan Crete in which elements of the Cretan landscape are perceived as other beings. Descola's scheme is useful for identifying 'naturalism' as the mode of identification which our own society has applied to the archaeological record, and offers a different way of thinking about human–animal relations in a premodern farming society. Certainly the different status of domesticated animals is reflected in the choices of what is depicted: the exclusion of domesticates suggests that they were identified as separate from the animals inhabiting places beyond human control. This would fit with Descola's analogism, and its segmentary collective of humans and non-humans. The main division is between, on the one hand, domestic animals and those associated with them and, on the other, a variety of non-domestic animals and those who sought to encounter them as a means of social distinction. Indeed the proportional differences between the animals depicted on talismanic seals, sealings and frescoes could point to further hierarchical differentiations.

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Conclusion

John Berger (1980, 4), in his famous essay, 'Why Look at Animals' asked how animals were viewed before the Industrial Revolution. He suggested that 'animals came from over the horizon. They belonged there and here'. Animals are both part of human society, and beyond it, over the horizon. For Berger the animals over the horizon are immortal: existing beyond human society, the species living on even when an individual dies. By going in search of animals over the horizon, seeking relations with them, the inhabitants of Neopalatial Crete sought to bring the enduring qualities of animals to play in their own fluid social strategies. Whereas the Linear A documents show a relocation of domestic animals to or from the centre, seals and frescoes show a set of relations with non-domestic animals. In the case of bull-leaping, the animal might become non-domestic through the distinct set of practices it is involved in, but in the case of lions or wild goats, the animal's life beyond domestication affords a different set of relations which will set the human participants apart.

Animals had a variety of affordances in the Neopalatial period: some afforded hunting and status; others were markers of exotic places. Depictions of these bodies had affordances too: linked by the distinct animal form to a particular place or type of activity. Something as fleeting as a hunt or leap requires material reinforcement to become socially useful. In the fluid social relations of Neopalatial Crete such objects would help to materialize the encounter in the social sphere. Just like the Linear A tablets, frescoes and seals acted as connections between people and the animals of the environment, affording social status or recognition. These objects acted to locate an individual or group identity, whether in relation to the animals of the sea, or from across the sea. Rather than reflections of Minoan beliefs or an appreciation of the natural world they are the material traces of human–animal relations. The 'nature-loving Minoans' did not simply observe the world but inscribed, carved and painted the animals they encountered into the fabric of society.

Acknowledgements

Funding from the then-AHRB enabled me to study for an MA at the UCL Institute of Archaeology, during which I completed the dissertation on which this paper is based; it was written in the course of AHRC-funded PhD research at UCL. It has benefited from discussions with John Bennet, David Orton, Jacke Phillips, Helena Tomas, Marika Zeimbekis and particularly Olga Krzyszkowska. My thanks too to the anonymous reviewers for their useful and stimulating comments, and to Walter Müller of the CMS project for supplying the images used in Figure 5. I am indebted to Cyprian Broodbank, Louise Martin, Jeremy Tanner and Todd Whitelaw for their advice, patience and encouragement during the supervision of my MA and PhD. Shortcomings in the paper, interpretative or otherwise, remain mine.

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