

LIKE A DUCK TO WATER – BIRDS AND LIQUIDS IN THE AEGEAN BRONZE AGE

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This study examines the relationships between birds and liquids in the Minoan, Cycladic and Mycenaean cultures. Objects under investigation are bird-shaped vessels, bird figurines attached to vessels, and some special pouring vessels decorated with painted bird motifs, which are listed in an accompanying catalogue. Analysis of this material demonstrates that images of both doves and waterbirds were consistently linked to liquid-containing vessels, but there are significant chronological and regional variations regarding the preference for bird species. Another aspect fluctuating with period and place is the type of contact created between liquid and bird motif. Three categories dividable into three or two subtypes can be recognised, which mainly differ from each other by the degree of proximity that is established between the fluid and bird motif. It is argued that these differences reflect variations in the perception of birds regarding their relationship to liquids. While a direct and active participation of birds in the flow of liquids such as water and milk is observable in many Cretan and Cycladic objects, the artefacts from the Greek Mainland show a different pattern, whereby less direct contact combined with a stylised rendering suggests that the bird motif was accorded a more passive role by symbolising the positive effect of the flow of water. These findings contribute to recent scholarly debates on human–animal relationships and ontologies in the Aegean Bronze Age.

INTRODUCTION

Due to their relative frequency in Aegean Bronze Age art, bird depictions have attracted significant scholarly attention over the years.¹ Lists and typologies of such depictions, often focusing on particular species (such as swallows), media (vase-paintings, vessels or seals), or sites (Akrotiri), have been compiled by several scholars (cf. Krüger 1940; Furumark 1941, 250–5 figs 29–31; Mylonas 1969; 1970; Desborough 1972; Davis, J.L. 1976; Pollard 1977, 149–54; Vermeule and Karageorghis 1982; Immerwahr 1990; Ruuskanen 1992; Misch 1992; Foster 1995; Lenz 1995; Guggisberg 1996; Vanschoonwinkel 1996, 365–7; Russell 2006; Gesell 2006; Marthari 2009; Vlachopoulos 2012, 115–21). The associated discussions usually focused on morphological variations, chronological developments and origins of bird depictions. More recently, the question of which species are represented in the iconography has become the subject of scientific investigation.² By contrast, studies attempting to reconstruct the specific meanings and functions of particular bird depictions have only rarely been undertaken.³ Following Evans (1921, 114 and 222–4) and Nilsson (1950, 285–94, especially 285–6, 288, 294), bird images in Minoan iconography have in most cases been interpreted as avian epiphanies, i.e. divine manifestations

¹ This study is based on research undertaken for a PhD dissertation on birds in the Aegean Bronze Age (Binnberg 2018). The following abbreviations are used in the text: EM/MM/LM (Early/Middle/Late Minoan), EC/MC/LC (Early/Middle/Late Cycladic) and EH/MH/LH (Early/Middle/Late Helladic). On Crete, the Prepalatial period dates to EM I–MM IA, the Protopalatial period to MM IB–IIB, the Neopalatial period to MM III–LM IB, the Final or Late Palatial period to LM II–IIIB and the Postpalatial period to LM IIIC/Subminoan.

² Ruuskanen 1992; Warren 1995; Masseti 1997; Harte 2000. For earlier studies focusing on species identification see Benton 1961; 1972.

³ Examples are Laffineur's (1981) interpretation of owl images as apotropaic devices in Early Mycenaean tombs or Porter's (2011) interpretation of the depiction of raptors on Cycladic vases and their association with red disks as being due to a distinct sun symbolism, which he argued was adopted from Egyptian Horus imagery.

in the shape of birds.⁴ Other scholars have proposed a function as divine attributes and/or sacrificial victims (Alexiou 1958, 252–63; Lenz 1995, 93–6; Gesell 2006, 320–1; Papageorgiou 2014). However, the rather extensive iconographical record suggests that birds had many diverse roles and functions in the Aegean Bronze Age, varying with the bird species depicted and also differing between regions.

A recurring association that has not been examined before is the relation between birds and liquids. In the present study and accompanying catalogue (available online as Supplementary Material) this association is traced from its beginnings in the Early Bronze Age to its last manifestations at the end of the Bronze Age. Both changes and continuities can be observed over this long time span. Before we embark on our detailed analysis, however, it is necessary to introduce some methodological considerations.

METHODOLOGY

As already noted, the object of our investigation is the relationship between birds and liquids. But in what ways is this relationship constituted or created in the material record? It is proposed here that there must be a physical connection between a two- or three-dimensional depiction of a bird and a vessel that once contained liquid. However, not every liquid-containing vase decorated, for example, with a painting of a bird necessarily indicates an ideological relationship between bird and liquid. The bird motif could have had a completely different function, for example as a status symbol on an elite drinking set. Thus, there must also be some kind of spatial or functional link between the bird motif and the handling of the liquid. For example, bird motifs on pouring vessels such as jugs should be painted on the shoulder and/or in close proximity to the spout and the flow of liquid. Moreover, associated elements or motifs can be expected to underline the birds' connection to liquids, for example by depicting aquatic plants or wavy lines, signifying water.

When these objects are handled and used, the three nodes – 'liquids', 'vessels' and 'birds' – create a network of interaction. Such networks are studied through the field of relational archaeology, which aims to open up new perspectives by using an object-centred approach focusing on the relations between entities and aspects of performativity (Watts 2013). In the following three sections, we will use this approach and examine both the three constituent elements and the relationships created between them. In the fourth section, we will consider how the variation in these relationships can provide evidence regarding the perception of birds by the people who made and used these objects. A brief overview of recent work focusing on ontologies in the Aegean Bronze Age will situate the present study in the wider framework of research and illustrate what kind of conclusions can be drawn from the material record about human–animal relationships in the past.

Types of liquids

Vessels can hold both natural fluids such as water, oil, milk or blood, and man-made drinks such as beer, wine or herbal infusions. Sometimes, the shape, modification or decoration of the vessel can provide clues to its original content. For example, a narrow mouth could indicate a vessel that was designed to hold a viscous substance such as oil. Decoration with a grape vine could suggest that the vase was used for mixing, pouring or drinking wine. B. Davis (2008, 48–9, 53–4) suggested that vessels which possess a hole for draining liquid into the ground were used for blood offerings for chthonic deities or the dead.

In theory, organic residue analysis (Tzedakis, Martlew and Jones 2008) could provide more specific evidence regarding the content of these vessels, but to our knowledge no such testing

⁴ Such interpretations have also been adopted by Pollard (1977, 149–61), Morgan (1988, 65–6), Foster (1995, 413–15) and Russell (2006).

has been undertaken on any of the vases discussed here.⁵ Moreover, there are some general problems connected with this method. For example, many of the vessels under investigation in the present study are closed vessels; therefore it would be difficult and sometimes even impossible to take samples from the inside for testing. Also, results can be rather ambiguous and some types of liquids are difficult to determine because they leave no specific or long-lasting traces, for example water.⁶ All this hinders the meaningful application of residue analysis to our study.

As will become apparent when discussing the material, circumstantial evidence points to water and milk as the primary substances connected to birds. Each liquid possesses its own ideological connotations, but due to their directly observable effects on nature, notions of fertility and fecundity are ever-present in the beliefs surrounding both liquids. Whereas milk provides vital nourishment for the young of both humans and animals, water is essential for all living organisms including plants and therefore has a more general significance.

Types of vessels

Liquid-holding vessels can be pouring vases such as jugs, jars, hydriae, askoi or rhyta, but some open vessels such as bowls can also belong to this category. The type of relationship created between the bird motif and the liquid is primarily determined by the specific vessel type and also the relative spatial arrangement of the three elements 'liquid', 'vessel' and 'bird'. Here, various spectra of proximity can be observed, dividable into three categories with two or three subtypes (Table 1). These arrangements also have implications for the function of the vessels because they afford specific ways of handling these objects.

In category I, the vessel or its parts adopt the shape of a bird or bird parts. Within this category, complete vessels that are in the shape of a complete bird belong to type 1. This arrangement creates a very intimate connection between the three entities, because the whole body of the bird/vessel encloses the liquid, and if the spout is in the tail or the beak of the bird, it directly mediates the flow of liquid. In vessels belonging to category I type 2, only part of the vessel (e.g. the lug, handle or rim) is formed like a bird. In this case the relationship appears less intimate, although this is also dependent on other factors, for example whether the bird part is organically integrated into the vessel or if vessel parts visually dominate the bird parts. Category I type 3 includes objects that are formed like bird-shaped vessels, but, having no spouts, they do not actually function as vessels. In this case, the relationship of the bird to the liquid takes on a more symbolic character.

In short, the first type affords the most intimate connection between all three nodes, while the second type displays an intimate connection between the two nodes 'vessel' and 'bird' and 'vessel' and 'liquid', but a loose connection between the two nodes 'bird' and 'liquid'. In the third type, the link between 'vessel' and 'bird' is still strong, but the liquid is only present by association.

The second category (category II) includes vessels with three-dimensional bird figurines attached to them. In contrast to the first two types of category I, the bird motif is in this case not involved in the basic functioning of the vessel, but is separate from it. Within category II we can differentiate two types. In vases of type 1 the figurine comes into direct physical contact with the liquid. This can be achieved by positioning the figurine either within the vessel, actually sitting in the water or other liquid, or at the spout so that it becomes wet during the act of pouring. In vessels of type 2, the figurine is positioned near the liquid, for example sitting on the rim of the vessel, but it does not become wet when the vessel is used. Thus, in type 1 the link between all three nodes is very intimate, while in the second type the 'bird' and 'liquid' elements are further removed from each other.

Category III consists of pouring vessels that are decorated by a painting of a bird. Again, we can differentiate two types within this category. In type 1, the painted bird motif is set into a close spatial

⁵ For organic residue analysis of Cretan vases of the LM period from Mochlos and Tourloti see Evershed et al. 2000; Brogan and Koh 2008; and Koh and Birney 2019.

⁶ Milk, on the other hand, could be identified by its lipids.

Table 1 Categories and types as defined in the text, illustrated by Figs 35, 15, 31, 26, 17, 33 and 30.








	Category I	Category II	Category III
Type 1			
Type 2			
Type 3			



Fig. 1. Wood pigeon (a member of the family Columbidae). Author's photograph.

relationship to the liquid, for example by positioning it on the shoulder in immediate proximity to the spout. Type 2 includes vessels which establish a nexus between birds and liquid by the frequent association of a particular motif, e.g. waterbirds, with a special pouring vessel, e.g. conical rhyta. In this case, the relationship is more indirect, but still appears significant. In sum, in type 1 the relationship between all three nodes is a very close one, whereas in type 2 the 'liquid' and 'bird' elements display a looser connection.

In general, birds are a frequent motif in Aegean vase-painting; therefore, numerous objects could potentially fall into category III. However, many of these vase-paintings on pouring vessels also show associated motifs which indicate that the bird–liquid connection is only of secondary importance (if it is present at all). Where appropriate, we will briefly refer to these vases in the discussion, but since the present study focuses on vessels that create a direct link between birds and liquids, such vases have not been included in the catalogue.

Types of birds

In the past, some scholars have doubted whether it is possible to identify particular bird species in Bronze Age Aegean iconography, especially when they appear in colourless media such as seals or if depictions display stylised or mixed traits (e.g. Nilsson 1950, 290–2; Foster 1982, 93; Morgan 1988, 64; Vanschoonwinkel 1996, 366). However, we agree with other researchers that paying attention to the repeated combination of particular morphological features often holds sufficient clues for species identification (cf. Masseti 1997; Harte 2000). On largely monochrome objects, such as seals, the depiction of plumage patterns, upon which the zoological distinction of particular biological species is usually based, is hindered; it has been found that focusing on the silhouette usually provides enough information to at least determine the relevant family (Ruuskanen 1992; Warren 1995; Binnberg 2017). Since most of the bird-shaped objects under discussion here do not display detailed plumage patterns, identification is generally aimed at the family and genus level rather than the species level.

Only two types of birds seem to have been regularly connected to liquids in the Aegean Bronze Age. These are doves of the family Columbidae on the one hand and waterbirds of the family Anatidae (ducks, geese and swans) on the other. Doves and waterbirds differ significantly in their silhouettes, thus we can distinguish them relatively easily. Doves are characterised by a stout body shape, a rounded breast, a fan-shaped tail, a relatively short neck and a rounded head with a short conical beak (Fig. 1). In dove chicks, the knobby beak appears disproportionately large in relation to the small and plump body. Later in life, this changes profoundly and the head and beak are relatively small compared to the large and rounded body, a feature that distinguishes doves from other bird families.⁷ In adults, plumage patterns allow differentiation

⁷ Contrary to common misconception, doves do not belong to the passerines, i.e. songbirds of the order Passeriformes, but form their own order, the Columbiformes. Passerines differ from doves in a number of ways, for example by their much more slender bodies, elongated heads and longer pointed beaks.



Fig. 2. Mallard (a member of the family Anatidae). Author's photograph.

into the rock dove (*Columba livia*), the wood pigeon (*Columba palumbus*) and the turtle dove (*Streptopelia turtur*).⁸

Waterbirds of the family Anatidae have elongated bodies, long necks and long, flat, slightly curved bills (Fig. 2). Ducks, geese and swans can primarily be differentiated according to body size and neck length. Although both doves and waterbirds belong to the order birds (Aves), there are significant differences between them regarding diet, behaviour and habitat. Also, their natural connection to liquids such as water or milk varies in intensity and also in obviousness, factors that will enable us to explain some peculiarities of their depictions.

Types of relationships

The detailed discussion of the material will show that all types of interaction between liquids, vessels and birds, as categorised above, can be found in the artistic record of the Aegean Bronze Age. But what can we conclude from these relational variations about human–bird relationships in the past? It is here argued that the repeated choice of any of these types is not a coincidence, but reflects a certain way of perceiving birds in relation to liquids.⁹

In short, if the bird motif is consistently set into very close or even direct contact with the liquid, we can deduce that this must have been deemed necessary for the vessel to function properly in its capacity of liquid-storing and/or liquid-distributing entity. In turn, this confers agency¹⁰ to the bird (motif) and allows us to speculate whether the bird and/or its effigy were thought to act upon the liquid in some way. Such a literal understanding of a bird's power is often underlined by a relatively naturalistic appearance of the bird, achieved by organically rendering its natural proportions, depicting specific avian features (e.g. the depiction of wings or plumage patterns) and abstaining from adding imaginary traits (e.g. teeth).

If, on the other hand, the bird motif is consistently further removed from the liquid spatially, it was apparently not thought or desired that the bird (motif) acted directly upon the liquid. Instead, its presence seems to refer to a more abstract notion in the context of the vessel and its function; in other words it serves as a symbol. Such an understanding is often underlined by a rather stylised rendering of the bird motif itself, including the modification of natural proportions and the addition of imaginary features, for example plants growing out of a bird's body. The two ways of

⁸ The collared dove (*Streptopelia decaocto*) which is now ubiquitous on Crete spread there only in the last century from its original habitat in India (cf. Stresemann and Nowak 1958). Therefore, it is unlikely that this species appears in Aegean Bronze Age iconography, as has occasionally been suggested, for example by Cadogan (1977–8, 71).

⁹ Of course this is not a one-way street and 'things shape the mind' as Malafouris (2013) put it.

¹⁰ Agency is here defined as the potential to act in a given environment.

utilising bird motifs seem to indicate different ways of perceiving nature, because the former view accords more agency to natural entities such as birds than the latter.

In recent years, ontologies/worldviews in general and human–animal relationships in particular have increasingly been discussed by scholars studying the Aegean Bronze Age. The topic has been approached from various different angles, focusing either on iconography (Herva 2006a; 2006b; Shapland 2009; 2010; 2013; Goodison 2012; Tully and Crooks 2015), animal remains in funerary contexts (Goodison 2011), or studying both iconographical sources and material remains such as figurines (Morris and Peatfield 2004; 2012; Crooks, Tully and Hitchcock 2016). Most studies have concentrated on the evidence from Minoan Crete, and scholars have identified a strong animist element in Cretan ontology. Thus, Herva (2006a, 592–5), Goodison (2012, 213–18), and Crooks, Tully and Hitchcock (2016) interpreted scenes of people touching plants and animals, shaking trees or hugging boulders depicted on Minoan gold rings as representing people communicating with sentient non-human beings. Animism is widely defined as the perception that non-human entities are persons with agency, able to act on the environment and communicate with humans (Tylor 1871; Hallowell 1960; Bird-David 1999; Harvey 2005).

Some scholars have also emphasised the importance of performance, action and movement observable in Minoan iconography, both in scenes involving humans and non-humans (Herva 2006b, 224; Goodison 2012, 218–19). In this context, Shapland's (2009, 230) observation about the way naturalism in Minoan art often aims to make an animal directly present during ritual performance is revealing. He mentions the bull's head rhyta, where the opening at the snout allows liquid (blood?) to be poured out of a natural opening, in a way animating the vessel by introducing an element of movement.¹¹

Morris and Peatfield (2004; 2012) and Tully and Crooks (2015) further argued for the presence of shamanic practices in Minoan cult, based on the identification of trance-inducing postures adopted by people in several Cretan depictions. This theory also received support from experimental approaches (Morris and Peatfield 2012, 240–2; also McGowan 2006). Shamanism is defined as a set of practices usually involving altered states of consciousness that enable certain people to directly interact with other-than-human beings by shedding their own physicality and adopting the perspective and abilities (e.g. flying) of animals or spirit-beings.¹²

The evidence from the Cyclades and the Greek Mainland has received much less attention from scholars interested in ontologies.¹³ A single study was undertaken by Shapland (2013), who attempted to categorise Early Mycenaean ontology based on iconographical analysis. In his view, the ontology prevalent on the Greek Mainland can be called analogical, a concept adopted from the French anthropologist Descola. According to Descola (2013, esp. 201–31, 439–58), analogism does not perceive animals as ontologically similar to humans. Rather, humans and non-humans are inherently dissimilar entities, inhabiting a hierarchical framework and being linked to each other by various conceptual analogies. Animal imagery thus serves to express abstract notions rather than reveal an active role of animals in the order of things (as in animism). Shapland (2013, 196–7) mentions the Lion Dagger from the shaft graves at Mycenae as an example, which by exchangeable relative positioning of attacker and enemy/prey on its two sides creates analogies between warriors and lions, and warfare and hunting.

Transferring the terminology of ontologies to our research into birds and their relationship with liquids, we could note that arrangements emphasising the bird's active role in the distribution of liquid would fit the animist model. By contrast, a less active and more symbolic function of the

¹¹ Despite this observation, Shapland (2009, 31–2; 2013, 193–7) hesitated to label Cretan ontology animist due to the complexity of Minoan society, something which in his opinion does not fit most animist societies which are traditional hunter-gatherers. For a similar reluctance by other scholars to call some Cretan cult practices 'shamanic', see Morris and Peatfield 2012, 236.

¹² Eliade 1964; Vitebsky 1995; Harvey 2005, 139–52; VanPool 2009. Shamanism is usually seen as an integral part of animism, but shamanic practices may occasionally be found in other contexts (cf. Tully and Crooks 2015, 130–1).

¹³ A study directly contrasting the evidence from Crete, the Cyclades and the Greek Mainland with regard to ontologies, as it is undertaken here, is hitherto lacking.



Fig. 3. Pyxis from Lebena (1). Image courtesy of Archaeological Museum of Heraklion – Hellenic Ministry of Culture and Sports – TAP Service.

bird–liquid connection would tally with the analogical perception. The following discussion investigates what type of relationship, and hence what kind of ontology, was more prevalent in what periods and regions. The study is divided into three sections, beginning with an analysis of objects from Crete, then continuing with artefacts from the Cyclades, and finishing with a discussion of depictions from the Greek Mainland. First, the objects under consideration are described, then the bird family or, if possible, species is identified and the type of relationship that is created between bird, vessel and liquid is examined.

DISCUSSION

Crete

EM I–MM II

The earliest vessels featuring birds come from the tholos tombs at Lebena in southern Crete and they date to EM I (1–7). These seven vessels have either two or four lugs, which terminate in rather simple birds' heads (Fig. 3). Possibly, these heads are meant to represent those of doves, because they are rounded with very short conical beaks.¹⁴

These vessels are storage containers and they could in theory have contained either liquid or solid substances. Yet the excavators Alexiou and Warren (2004, 122) think that they were designed for valuable liquids because of their rather narrow openings and their lids which have holes so that they could be tied securely by strings. Double axes are painted onto two of these vessels (1, 4), but it is unknown whether this motif already had the cultic connections it possessed in later periods (Haysom 2010).

These objects belong to our category I type 2 because only some vessel elements are in the shape of bird parts. It needs to be emphasised, though, that the lugs with bird heads grow rather organically from the body so that the relationship between bird motifs and content appears quite intimate. Although the bird protomes can be interpreted as decorative embellishments of the lugs, the orientation of the multiple bird heads to the outside lends a certain protective attitude to them. Possibly, they were supposed to safeguard the contents in the belly of the vase.

In EM II, the vessel shapes change and we find actual bird-shaped vases with handles and spouts, thus belonging to our category I type 1. Some spherical askoi (cf. Misch 1992, 82) are given a general avian appearance by the addition of a small tail, as in a vessel from Platanos (8). A less stylised vase comes from Lebena (9) – it has a rather large spout modelled in the middle of the back and probably had bird protomes at each end, which are now lost (Fig. 4). The overall design is still similar to the EM I storage vessels described above, but the spout shows

¹⁴ The length of the 'necks' varies significantly, while the shape of the heads stays the same, probably indicating differing functions rather than differing bird species.



Fig. 4. Juglet from Lebena (9). Image courtesy of Archaeological Museum of Heraklion – Hellenic Ministry of Culture and Sports – TAP Service.

that it is a pouring vessel. Comparable is also a triple vessel from east Crete (10).¹⁵ Three hollow bird-shaped vases are linked together, but a rather prominent handle and spout are attached only to the bird in the middle (Fig. 5). In contrast to the Lebena vessel, the direction of the spout corresponds with the orientation of the birds, resulting in a more natural appearance. Since the heads are lost on the vessel from Lebena (9), we cannot determine the bird species, but the rounded heads, short conical beaks and fan-shaped tails of the birds in the triple vessel are all characteristics of doves.¹⁶

A further vessel from Lebena resembles in its body shape the triple vessel from east Crete, but it consists of only one bird (11). It has a handle, but the spout is reduced to an opening in the tail opposite the – now lost – head (Fig. 6). This arrangement means that conspicuous vessel parts such as handles and spouts are more organically integrated into the natural bird shape. Such bird-shaped vases became relatively frequent in EM II–MM I. Four vessels have been found at Koumasa (12–15), two vessels at Platanos (16, 17) and one vessel at Myrtos Pyrgos (18). In MM I–II, similar vases appear at some palaces. One vessel comes from Knossos (19) and another one from Mallia (20). Four have been found at Phaistos (21–24).¹⁷ The plump shape of these bird vessels and the round heads with short conical beaks make them resemble doves (Branigan 1970, 119; Cadogan 1977–8, 71). One of the vessels from Platanos (17) has wings decorated with impressed dots, possibly alluding to the plumage patterns of turtle doves.¹⁸

These pouring vessels all belong to our category I type 1, because the bird's body completely encloses the liquid. Some vases (14–18) can be called rhyta because the beak serves as another (hidden) spout in addition to the opening in the back, as seen in an example from Koumasa (Fig. 7). In these vases, the dove's tail or head/beak directly mediates the flow of liquid. The attachment of rudimentary wings and added details such as pellet eyes and plumage patterns combined with the reduction of spout visibility means that the vessel is no longer recognisably separate from the bird features. Rather, the vessel becomes the bird and the bird becomes the vessel; the boundaries between entities are dissolved.¹⁹

In MM I–II, some other objects also create a connection between birds and liquids. These are both open and closed vessels with bird figurines attached to them. For example, a fragment of a jug, whose spout and body are dotted with small bird figurines, comes from Phaistos (25) (Fig. 8).

¹⁵ Guggisberg (1998) dated this vessel to the Early Iron Age, but the similarities to the vessel from Lebena suggest a date that is even earlier than EM III (as proposed in Marinatos and Hirmer 1973, III, cat. no. 9).

¹⁶ Marinatos and Hirmer (1973, III, cat. no. 9), Vanschoonwinkel (1996, 379, list no. 39) and Guggisberg (1998) all identified the birds on this vessel as doves.

¹⁷ According to D. Evely (personal communication), a similar vase was found at Monastiraki in the Amari Valley.

¹⁸ A MM II rectangular stone object from Phaistos (Pernier 1935, 235–8 with fig. 113a, b; Zervos 1956, 267 with fig. 381; Hood 1978, 141 with fig. 133a; Gesell 1985, 120, 202 fig. 125; Vanschoonwinkel 1996, 379 list no. 42; Gesell 2006, 316–17) also shows turtle doves, identifiable because of their three parallel neck markings and the dotted plumage.

¹⁹ As Koehl (2016) has noted, ambiguity and fluid transformations can also be observed in other Cretan imagery of this period.



Fig. 5. Triple vessel from east Crete (10). Image courtesy of Bildarchiv Foto Marburg.



Fig. 6. Askos from Lebena (11). Image courtesy of Archaeological Museum of Heraklion – Hellenic Ministry of Culture and Sports – TAP Service.

Another bird figurine is attached to a fragmentary double jug from Kamilari (26) (Fig. 9). Double jugs were first deposited in EM–MM I tombs, e.g. at Koumasa and Archanes, but the vase from Kamilari is the earliest known one with a dove (Karayiannis 1984, 31; Levi and Carinci 1988, 107).

Better preserved is a bowl from Palaikastro, which displays a bird with spread wings in the middle of the vessel (27) (Fig. 10). This vessel belongs to a group of bowls that are turned into miniature dioramas by the addition of small three-dimensional figurines to their interior, for example a bull, a weasel or sheep tended by a shepherd (Evans 1921, 180–1; Foster 1982, 80, 85–6, 111). Foster furthermore mentions a cup from Palaikastro, dating to MM I, which features two birds attached to the rim (28). In addition to these vessels, there are several single bird figurines, for example from Archanes (Sakellarakis and Sapouna-Sakellaraki 1997, 2.519–20) and Mallia (Detournay, Poursat and Vandenabeele 1980, 113–14, cat. nos 164–7; Foster 1982, 93), which are broken off from their original supports. Although we do not know the type of objects they were once attached to, it seems likely that at least some of them came from vessels. All these birds can, if they are sufficiently preserved, be identified as doves because they have rounded bodies, fan-shaped tails, curved wings and round heads with short beaks.²⁰ According to Foster (1982, 93), the bird inside the Palaikastro bowl has eyes painted in red. It may therefore be identified as a rock dove.

These vessels with doves attached to them belong to our category II. While Foster's cup (28) belongs to type 2, the bird figurines on the Phaistos jug (25) and the Kamilari double vase (26) are positioned at the spouts (type 1). They would have come into direct contact with the liquid. In the case of the Palaikastro bowl (27), it seems that the dove figurine inside prevents a

²⁰ For the identification of the bird in the Palaikastro bowl as a dove see Evans 1921, 180. For the description of the birds on the Phaistos jug as 'probably doves' see Levi 1976, 574.



Fig. 7. Rhyton from Koumasa (14). Image courtesy of Archaeological Museum of Heraklion – Hellenic Ministry of Culture and Sports – TAP Service.

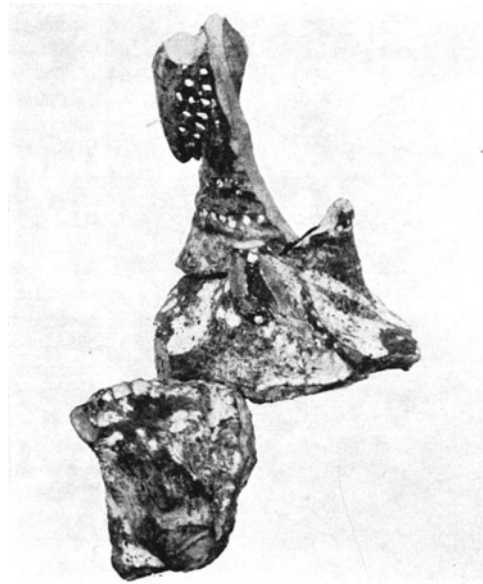


Fig. 8. Fragmentary jug from Phaistos (25). Levi 1976, 576 fig. 926.

practical use of the vessel for drinking. This seems plausible but the bowl-shape means that the vessel can still hold a liquid substance. If for instance water was poured into it, the bird would have appeared as if landing on the surface of the water and the vessel would have been turned into a bird bath. Thus, we would have a similarly close relationship between the liquid element and the bird as observed in other vessels dating to the Pre- and Protopalatial periods.

At this point, we need to pause and consider the place of the above described objects in the wider context of Cretan cultic activity at this time. In addition to the vessels featuring birds, other figural vessels both from tombs and settlements attest to the general importance of rituals centring on liquids.²¹ There are, for example, vases in the shape of women holding what are

²¹ Peatfield 1995, especially 223. River pebbles that were deliberately brought to the Protopalatial peak sanctuaries may also attest to the cultic significance of fresh water and rain in this period (cf. Morris and Peatfield 2012, 232 fig.

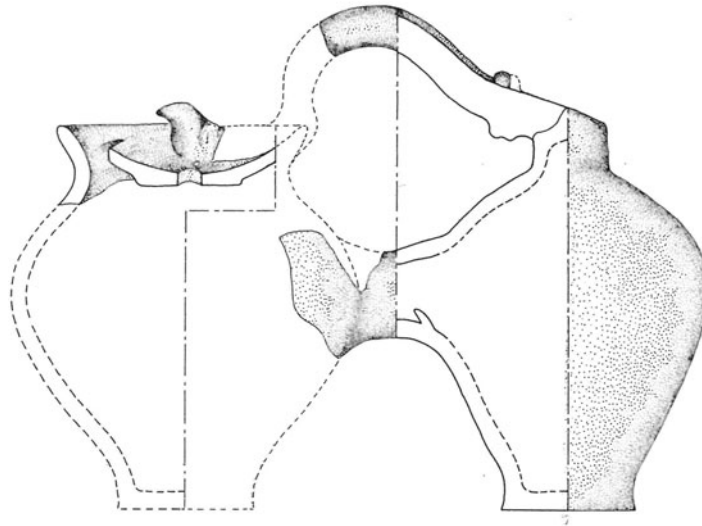


Fig. 9. Double jug from Kamilari (26). Levi and Carinci 1988, pl. 48c.



Fig. 10. Bowl from Palaikastro (27). Image courtesy of Bildarchiv Foto Marburg.

commonly identified as water jugs.²² Among them is the so-called Goddess of Myrtos, dating to EM II (Warren 1972, 209–10; Gesell 1983, 93–4; Fowden 1990, 16–17; Cadogan 2010). This figural vase also has a pubic triangle painted onto her rounded body, and several scholars have drawn attention to the way she is holding her jug, cradling it like a baby (Fowden 1990, 17; Cadogan 2010, 42). It seems plausible to suggest that this vessel connects the two themes of water and female fertility (Gesell 1983, 94; Fowden 1990, 17; Peatfield 1995, 223). In a similar context belong two figural vessels in the shape of women from Mallia and Mochlos (Warren 1973, 138–9; Marinatos and Hirmer 1973, III cat. no. 10; Gesell 1983, 94; Branigan 1988, 101–2; Jones 2008, 42–3). Their breasts are pierced so that the liquid which was poured out appeared like milk. Both Fowden (1990, 17) and Yiannouli (1998, 68) have drawn attention to

11.2). Single dove figurines were also found at some peak sanctuary sites, most notably at Petsophas and Vrysinas (Evans 1921, 153; Rutkowski 1991, 110–11 pl. XLVII, 4.5.8; Andreadaki-Vlazaki, Rethemiotakis and Dimopoulou-Rethemiotaki 2008, 230 cat. no. 188).

²² Warren 1973; Gesell 1983, 94; Fowden 1990, 15–16; Peatfield 1995, 223. Jones (2008) mentions one such vessel from the Pyrgos Cave, one from Koumasa, one from Myrtos and another one from Archanes. Cadogan (2010, 43–4) mentions two more from Ayios Myron and Trapeza.

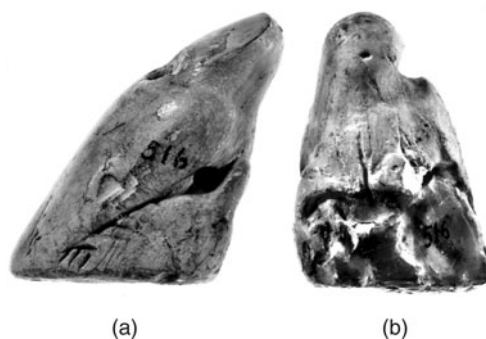


Fig. 11. Figural seal from Koumasa (*CMS* II,1 133). (a) Side view; (b) Front view. Image courtesy of the *CMS* Heidelberg.

the literal element observable in these depictions, an aspect that can also be sensed in the objects featuring birds.

Some vessels, for example from Koumasa, Platanos and Lebena, adopt the shape of animals other than birds (Branigan 1970, 80–2). Familiar are the bull-vessels from the tholoi at Koumasa and Porti with people suspended from their horns, possibly an early depiction of bull-leaping (Xanthoudides 1924, 40 cat. no. 4126 and 62 cat. no. 5052; Younger 1995, 525 cat. nos 7 and 9). While there may be some relationship between bulls and water, possibly inspired by their natural habitat in marshy areas, bulls are very rarely associated with wetlands in Minoan iconography; other contexts such as bull-games, hunting and possibly sacrifice predominate (Younger 1995).

By contrast, birds and, more specifically, doves are frequently connected to pouring vessels, either in bird-shaped vases or as dove figurines attached to (the spouts of) vessels. What is it then that links birds, and especially doves, to liquids? We may find an explanation when we look at behaviour that is unique to the dove family. Usually, birds drink by regularly stopping and raising their heads to swallow, but doves are different in this respect. Unlike all other birds, doves are able to take up water in a continuous motion (Svensson, Mullarney and Zetterström 2009, 214). Therefore, they seem to ingest much more water when drinking than other birds and may thus have been viewed as the birds which are most capable of both storing and distributing liquids. Moreover, doves, unlike most other birds, produce a semi-liquid secretion from their crop (Svensson, Mullarney and Zetterström 2009, 214). During the first week, chicks are entirely fed with this highly nutritious liquid, called crop milk, which is produced by both adults. A figural seal from Koumasa (*CMS* II,1 133), dating to EM III–MM IA, may illustrate this feeding of young doves (Evans 1921, 117; 1935, 487; Xanthoudides 1924, 30 cat. no. 516). It shows a large dove flanked by two smaller birds, apparently an adult bird with chicks (Fig. 11 (a) and (b)). The adult dove is turning its head sharply towards one of the chicks as if about to feed it.

Some of the dove-shaped vessels can also be connected to this special feeding behaviour. Two vessels from Koumasa (12, 13) are rather odd-looking because the heads and beaks appear too large in comparison to the small bodies (Fig. 12).²³ A bird-shaped vessel from Knossos (19) has thin wings and shows a long beak growing from a relatively small head (Fig. 13). The same anatomical features are found in dove chicks (Fig. 14).²⁴ We can therefore agree with Evans' proposition that the vessels from Koumasa (12, 13) show young birds begging for food with their wide open beaks (Evans 1921, 115; Branigan 1988, 144). When liquid was poured into their

²³ A similarly shaped dove with a large head and a small round body, albeit in the form of a stone pendant, comes from Mochlos and is dated to EM II–III (Seager 1912, 48 cat. no. IV.7, fig. 20; Evans 1921, 102; Nilsson 1950, 290; Zervos 1956, 174 with fig. 201; Vanschoonwinkel 1996, 379 list no. 44).

²⁴ Evans (1921, 146) also identified the bird of this vessel as showing a dove, but he did not call it a chick.



Fig. 12. Askos from Koumasa (12). Image courtesy of Archaeological Museum of Heraklion – Hellenic Ministry of Culture and Sports – TAP Service.



Fig. 13. Askos from Knossos (19). Image courtesy of Archaeological Museum of Heraklion – Hellenic Ministry of Culture and Sports – TAP Service.

beaks, the bird-shaped vessels would have conveyed the impression of being fed. Significantly, the person distributing the liquid would then have adopted the role of an adult dove. Thus, there is a remarkably complex physical interplay at work between the dove, the liquid and a human being.²⁵ In the vessel from Knossos (19) there is a similarly close interaction between different elements because the beak of the dove is positioned directly above the spout so that it seems as if the dove is drinking from the liquid poured out from its own body.²⁶

²⁵ An observation by Misch (1992, 108, 139–42, 155) may also be relevant in this context: he noted that some of the MM bird-shaped askoi from Crete (21–24) are typological predecessors of the later LH II–III feeding askoi. These Mycenaean vessels, which bear no more than a passing resemblance to birds, have in almost all cases been associated with burials of infants and were probably used for the feeding of small children. If this typological connection also suggests a functional link, one could propose that some of the Cretan dove-shaped vessels could also have been used as feeding bottles for children. Thus, the ideological and performative connection between doves, milk and the rearing of young appears reinforced.

²⁶ The vessel from Mallia (20) seems to have been identically constructed, but the head which was once positioned behind the spout is now lost (Detournay, Poursat and Vandenaabeele 1980, 59 n. 1).



Fig. 14. Dove chick. Photograph by Bjørn Christian Tørrissen, bjornfree.com.

Such objects seem to suggest that doves were believed to possess certain powers in relation to liquids that could also be utilised to the advantage of people's lives. We may wonder whether some of these vessels were also used in rituals aimed at regeneration, maybe to ensure the continuing flow of water/rain or milk.²⁷ Significantly, they assign an active role to the birds in the order of things. Next, it will be analysed whether such a view survived beyond the Pre- and Protopalatial periods.

MM III–LM IIIA₂

Associations between birds and liquids can also be observed in the Neopalatial and Final Palatial periods. There is one vessel from Nirou Khani (29), dated to LM IIIA₁, which to date seems to be the sole survivor of the earlier Cretan tradition of bird-shaped vessels. The missing head means that it is not possible to identify the species, but the naturalistic rendering of the plumage and feathers is remarkable. More characteristic of this period are double vases which were continually used from LM I until LM IIIA₂. Several of these have bird figurines attached to them (Figs 15 and 16), an arrangement which first appeared in the MM II double vase from Kamilari (26) described above. Similar vases have been found at Poros (30), Palaikastro (31), Knossos (32), Katsamba (33), Vathypetro (34), Chania (35) and Myrsini (36). In addition to these jugs, there is an unusual vessel from Zakros, dating to LM I (37) (Fig. 17). It consists of multiple hollow rings, two of which have bird figurines attached.²⁸ Many more single bird figurines have been found, which were apparently broken from their original supports.²⁹ Therefore, it is possible that only a small fraction of the original number of such composite vessels have survived intact. The figurines all have round heads, small beaks, rounded wings and fan-shaped tails, features which correspond to the anatomical characteristics of doves.

With the exception of the vessel from Nirou Khani (29), which falls into category I type 1, all the other objects listed above belong to our category II because bird figurines are attached to them. Double jugs usually consist of two vases connected merely by a narrow tube. The vessel from Myrsini (36), which is composed of three vases, is the only exception to this. Multiple small openings are present on only one of the jugs of such composite vessels, while the other ones are closed. All the double jugs and the triple jug from Myrsini belong to type 1 because the bird figurines are consistently positioned on the jug with the 'strainer' section. When the jugs were

²⁷ The vessel from Knossos (19) comes from the early pillar room, apparently a forerunner of the later pillar crypts, which occasionally had a cultic function (Evans 1921, 146).

²⁸ Another such vase is most likely represented by the ring-shaped fragment with a cup and plastic decoration (a bull or birds?) from tomb Δ at Myrsini on Crete, dating to LM IIIA–IIIB (Smith 2011).

²⁹ For a bird figurine from Psychro see Boardman 1961, 59 cat. no. 251 and Foster 1982, 94. For a figurine from the Isopata tomb at Knossos found together with a double vase see Evans 1914, 30–3 and Karayiannis 1984, 96 cat. no. 29. For several dove figurines, some of which were once attached to an object and were found together with anthropomorphic figurines and a double vase at Palaikastro see Dawkins and Currelly 1903–4, 216–25; Bosanquet and Dawkins 1923, 88–94; Nilsson 1950, 289; and Gesell 2006, 319–20.

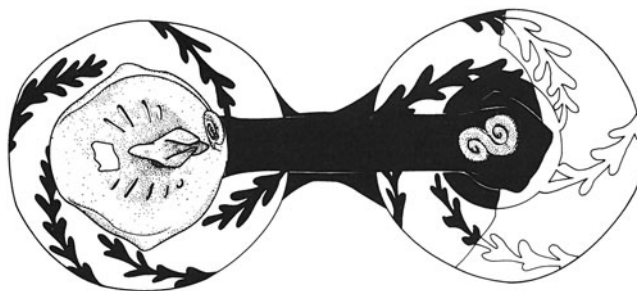


Fig. 15. Double vase from Palaikastro (31). Knappett and Cunningham 2012, 196 fig. 6.6 (cat. no. 736).



Fig. 16. Triple vase from Myrsini (36). Andreadaki-Vlazaki, Rethemiotakis and Dimopoulou-Rethemiotaki 2008, 273 cat. no. 224.

used, the birds' beaks would have become wet and the doves would have appeared as if drinking from the content of the vase. In the Zakros vessel (37) (belonging to type 2), the dove figurines are attached to the rings which served as conduits for the liquid. Although the birds would not have become wet when the vessel was in use, they are still set into close proximity to the flow of liquid.

In addition to the doves, some of the vases have other animal images attached to or painted onto them. For example, the double vase from Chania (35) has a large waterbird amid foliage painted on its body and a hare modelled in relief on the handle. Bulls' heads are attached to the Myrsini jugs (36), and fish, papyrus, a double axe and a quadruped (a bull?) are painted and modelled onto the Zakros ring-vessel (37). While the hare may indicate a general concern with fertility because these animals bear multiple litters per year, the depiction of aquatic species such as waterbirds, fish or papyrus may suggest that these vessels were originally filled with water.

The peculiar design of double and triple jugs has prompted some scholars to consider a practical purpose of this construction, e.g. to strain oil or to prevent flies from entering the vase (Bosanquet and Dawkins 1923, 40; Knappett and Cunningham 2012, 99), while others have suggested a rather vague ritual function (Karayiannis 1984, 33; Andreadaki-Vlazaki, Rethemiotakis and Dimopoulou-Rethemiotaki 2008, 264 cat. no. 218). Apart from these considerations, we can observe that the design of both the composite jugs (30–36) and the Zakros ring-vessel (37) serves to complicate and lengthen the act of distributing the liquid. Moreover, the multiple small openings further separate the liquid into numerous single strands and drops – comparable to the function of a spray rose on a watering can. In the Zakros vessel (37) the liquid would have been separated into several streams by the hollow rings.



Fig. 17. Ring-shaped vessel from Zakros (37). Image courtesy of Archaeological Museum of Heraklion – Hellenic Ministry of Culture and Sports – TAP Service.

Such a physical separation of water would have resulted in a visual multiplication. This may have been desirable in rituals aimed at ensuring the abundant supply of this life-giving element.³⁰ The number of doves, which ranges from one to six figurines, adds another repetitious aspect to these vessels. Combined, the multiplication of both the liquid and the doves may have served to maximise direct physical contact between two elements that were thought to benefit from the presence of each other. Again, we can sense a rather literal understanding of the inner workings of nature, bestowing a decisive role to other-than-human phenomena.

LM IIIB–IIIC/Subminoan

After LM IIIA2, composite vases with bird figurines attached ceased to be made.³¹ Only a ring-shaped vessel (38) dating to LM IIIB–IIIC could be a remnant of this Minoan tradition. Two small bird figurines, a bull's head and miniature vases are attached to the vessel. In contrast to the double vases discussed above, the birds which sit on the handle are no longer directly associated with the pouring of liquid (category II type 2).

In LM IIIC and the Subminoan phase, bird-shaped vessels reappeared on Crete.³² Four vessels come from Kavousi Vronda (39–42), two vessels each from Vrokastro (43, 44) and Karphi (45, 46), and one each from Chamaizi (47), Axios (48), Adele (49), Adromyloi (50), Mazichortia (51), Knossos (52) and Episkopi (53). As with LM IIIC pottery in general, these vessels display a remarkable uniformity in their appearance, despite their varied provenances.³³ They are slender askoi with a round spout instead of a bird's head (Fig. 18). This hinders species identification and prevents us from telling whether these were also meant to be doves. The rather elongated shape of the bodies, however, could also allude to waterbirds, which were primarily connected to liquids on the Greek Mainland (see below).³⁴

³⁰ The double vase from Knossos (32) was found in a context that yielded numerous ritual paraphernalia such as horns of consecration, parts of a stone animal head rhyton, several other rhyta, and libation tables.

³¹ In LM IIIB–IIIC dove figurines were much more frequently attached to objects other than vessels such as a 'snake tube' (a stand for a bowl) from Kommos (Shaw 1977, 227–31 pl. 54c, d) and several large-scale female figures, the so-called 'Goddesses with Upraised Arms', from Knossos, Kannia, Gourmia, Gazi and Karphi (Alexiou 1958).

³² Seiradaki 1960, 27; Desborough 1972, 252; Lemos 1994, 232; Hallager 2010, 150. According to Hallager (2010), Subminoan seems to be identical with late LM IIIC.

³³ Warren (2007, 333–4) emphasised the notable homogeneity of pottery production on Crete in LM IIIC.

³⁴ The vessel from Knossos (52) shares some features with contemporary bird-shaped vases from the Greek Mainland (see below). Similarities include the high legs and the low opening instead of the more common raised spout.



Fig. 18. Askos from Karphi (45). Seiradaki 1960, 27 fig. 20.



Fig. 19. Bowl from the Cyclades (55). Hattler 2011, 98 cat. no. 35. Courtesy of Badisches Landesmuseum Karlsruhe.

These objects belong to our category I type I of bird-shaped vessels because, despite the missing heads, the vases emulate a bird's body and often show schematic wings outlined in paint. Nevertheless, vessel parts, such as spouts, handles and round pedestals which can substitute the more frequent stubby feet, visually dominate the bird parts. Moreover, the vases are decorated with geometric and abstract patterns of the LM IIIC and Subminoan period which do not have much in common with the natural plumage patterns of birds. Although the vases visually refer to some morphological features of birds, they clearly remain man-made containers of liquids. Therefore, it seems that the notion of an active and direct involvement of birds in the distribution of liquids was no longer entertained by this time.

Cyclades

EC I-II

Ideological links created between birds and liquids can also be observed in the material culture from the Cyclades. In the EC period, there are important cultural interconnections between the Cyclades and Crete. A bird-shaped flask comes from the Cycladic-style cemetery of Ayia Photia on Crete (54). It has a plump body and a long neck, which makes it resemble the EM I storage vessels from Lebena (1-7). Another vase that is similar to the Lebena vessels is a Cycladic bowl (55) in the shape of a two-headed dove dating to EC I-II (Fig. 19). The duplication of bird parts also reminds one of the EM triple-vessel from east Crete (9).

A further bird-shaped vessel was found on the Cycladic island of Ano Kouphonisi (56). In contrast to the two vases mentioned above, it is a pouring vessel. Formed to imitate the plump figure of a dove, the spout of the vase is hidden in the tail. It is directly comparable to the EM II-MM I dove-shaped vessels found at Koumasa and Platanos (14-17).³⁵ These figural vases

³⁵ According to Warren (1984, 56-7), the vase was probably imported from Crete.



Fig. 20. Marble tray from Keros (?) (57). © Museum of Cycladic Art/G. Fafalis.

could indicate that similar beliefs surrounding doves and liquids were entertained both on Crete and the Cyclades.

The Cyclades have also yielded a group of marble trays that do not have direct parallels on Crete. The round trays display a row of several sitting birds carved across the middle (Fig. 20). To date we know of two nearly complete ones (57, 58) and fragments of five more (59–63). They are dated to EC II. Most of them seem to come from Dhaskalio Kavos on Keros, a site that has been found to be unusual for a number of reasons, such as the amount of deliberate breakage of special artefacts brought there (Renfrew et al. 2007, 430–42). The small birds have triangular bodies, flat tails and round heads with short conical beaks, suggesting doves.³⁶

The trays belong to our category II because the bird figurines are not an integral part of the vessels. Instead, the carved row of birds seems to hinder a practical use of the vessels for drinking or eating (Doumas 1968, 174). Doumas (1968, 173) observed a formal resemblance of the dove trays to the Cycladic frying pans. These are flat round trays with handles, which are decorated on one side with incised images of boats, stars, spirals (waves?) and female genitalia.³⁷ Some scholars, for example Davaras (1982, 8) or Goodison (2006, 377), believe that they held water, possibly to serve as mirrors (to reflect the sun or the stars?). If the dove trays were also filled with water, this would have conveyed the impression that the doves are drinking and/or sitting in a bird bath.³⁸ In this case, the numerous – on the one complete vessel up to 16 – birds would have been brought into direct physical contact with the liquid (type 1). Comparable to the later dove figurines attached to Cretan composite vessels, such an arrangement may have been desirable in a ritual context.³⁹

From the same site, Dhaskalio Kavos, comes another object which possibly connects a bird with a vessel. It is a terracotta fragment in the shape of the head and neck of a bird (64) (Fig. 21). The excavators think that it was originally part of an EC sauceboat, whose spout had been substituted by a bird's head. In contrast to the other bird images which we have seen before, the bird from the sauceboat has a long curved beak, a characteristic feature of a duck. This association is repeated on the design of an EC II sealing from Ayia Irini on Kea (CMS V 478), where a duck is set next to a sauceboat.

³⁶ Doumas 1968; Getz-Preziosi 1996, 124–6. In addition to the birds on the trays, there are some more figurines and jewellery in the shape of doves from the Cyclades. As examples can be mentioned: four stone figurines from tombs on Siphnos (Tsountas 1899, 1.73–5 with pls 10.27 10.28; Rambach 2000, 61 pls 23.7, 158.2a, b, c, 158.4); a marble figurine from the Cyclades, its exact provenance unknown (Thimme 1977, 540 cat. no. 433); a bird on the lid of a marble pyxis, possibly from Naxos (Thimme 1977, 517 cat. no. 343; Getz-Preziosi 1988, 313, cat. no. 134); and three stone pendants from tombs on Paros and Despotiko (Tsountas 1899, 1.164–5, 187–8 with pls 8.16, 8.17, 8.23; Rambach 2000, 37–8, 56–7 pls 14.18, 178.10a).

³⁷ See Yiannouli 1998, 69, for their link to fertility (rituals).

³⁸ Goodison (2008, 423) remarked that in this case 'the birds would seem to float.'

³⁹ A ritual use of the dove trays was also proposed by Doumas 1968, 174; Branigan 1988, 101–2; Getz-Preziosi 1996, 124–5; and Renfrew et al. 2007, 327.

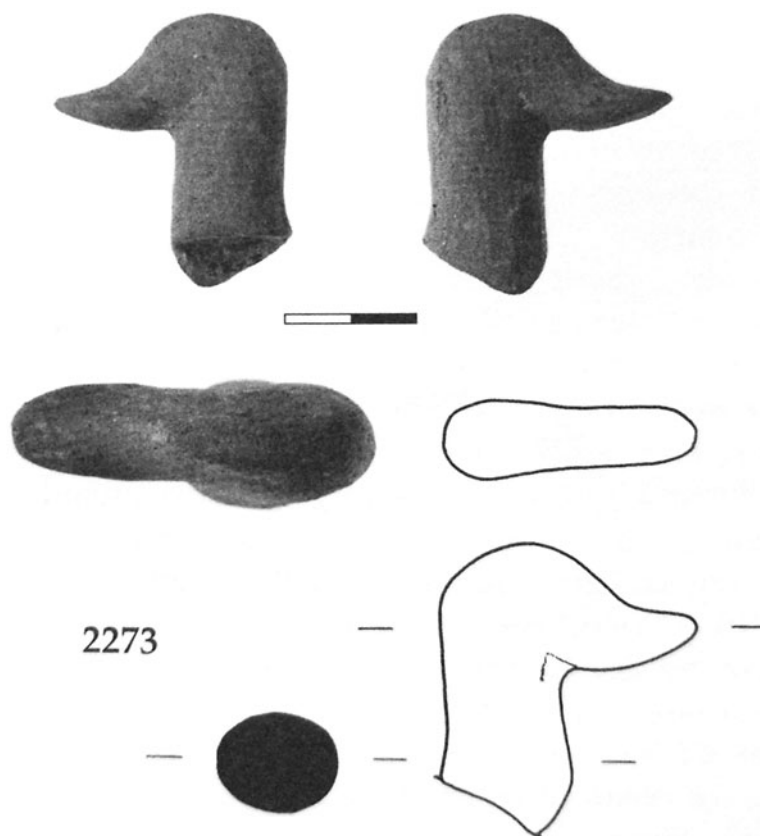


Fig. 21. Fragment of a sauceboat from Dhaskalio Kavos on Keros (64). Renfrew et al. 2007, 374 fig. 10.12. Courtesy of C. Renfrew.

Sauceboats seem to be a combination of an open drinking vessel (a cup) and a pouring vessel with a long spout (Weinberg 1969, 5–7; Wiencke 2000, 591–2; Morris 2008, 119–20). We may wonder whether this design was meant to facilitate libations performed before drinking. If the reconstruction proposed by the excavators is correct, the duck-headed sauceboat would belong to our category I, type 2. By replacing the spout, a rather close physical connection between the liquid and the duck was created. When the vessel was tipped, liquid would have flowed around the head. Waterbirds – as this folk taxonomical category that is found in many cultures suggests – have a close affiliation with water due to their aquatic habitat. Their connection to liquids is more obvious than that of doves, which only becomes apparent after some time spent observing the behaviour of the latter.

MC III–LC I

In the subsequent period, many of the Cycladic beaked jugs of the MC II–III period are decorated with birds (Davis, J.L. 1976), thus potentially falling into our category III. Yet these birds, which are probably falcons according to Porter (2011, 43), have rather peculiar bodies in the shape of red disks. Scholars have suggested that this form is linked to some kind of sun symbolism (Papagiannopoulou 2008, 442; Porter 2011, 45). These vases are also characterised by a spout that vaguely resembles a bird's beak, so this may allude to a connection between birds and liquids, but the link to the sun appears more prominent. In the subsequent LC I period, the beaked jugs become smaller and female features such as jewellery and nipples are added to them

(Goodison 2008, 421–3), further reducing their avian appearance and loosening any possible connection between birds and the flow of liquid.⁴⁰

Nevertheless, two objects directly connect birds and liquids in MC III/LC I. Discovered at Akrotiri on Thera, these are fragments of two bird-shaped vessels (65, 66). The long beaks and elongated heads suggest that they are waterbirds, probably ducks (Nikolakopoulou 2010, 217). Feathers and plumage patterns are indicated in paint on the preserved heads, necks and breasts and may arguably have once covered the whole bodies (Figs 22, 23).

Belonging to our category I type 1, these vessels were probably rhyta with the beaks functioning as spouts. Due to their remarkably naturalistic and animated appearance (especially by the emphasis laid on the eyes), the physical boundaries between bird and vessel seem almost dissolved, creating ambiguous entities. Comparable to the much earlier Cretan dove-shaped vessels, they afford birds, in this case ducks, a specific and active role in the distribution of liquids. From the contemporaneous frescoes found in the houses of Akrotiri we can deduce that ducks and geese were, in the minds of the inhabitants, inextricably linked to an aquatic habitat, as depicted in the riverine landscape in the East Frieze of the West House (Morgan 1988; Televantou 1994) or the Reed Fresco from Xeste 3.⁴¹ In the light of this observation, it seems plausible that ducks were believed to have a special influence on the natural supply of water.

LC IIIC

A gap of several centuries separates the Theran rhyta from the final Cycladic bird-shaped vessels. These are two vases discovered in a LC IIIC tomb at Kamini on Naxos (67, 68).⁴² The vessels have handles on their backs and rounded spouts sit on top of the birds' tails (Fig. 24). The one whose head is preserved completely has a relatively short neck and a flat curved beak, thus resembling a duck.

As with the rhyta from Akrotiri (65, 66), these vessels belong to our category I type 1. Although they too have a close relationship to the liquid, which is enclosed by the bird's body, they seem to have only one spout which is rather artificially attached to the top of the tail. It has no functional or visual connection to the bird features. Combined with the prominent handle it prevents the vessel from visually merging with the waterbird. Moreover, the painted decoration does not show natural plumage patterns but consists of fish and wavy lines, which further underline the thematic association with the aquatic element, but also lend an unnatural air to the artefact. Rather than engaging the bird itself in the flow of liquid, these vessels bring together conceptually related entities – vessel, liquid/water, waterbird, and fish – to create an abstract thematic complex. This is similar to the changes occurring on Crete between the last composite vessels with dove figurines in LM IIIA2 and the spouted bird-shaped askoi of LM IIIC/Subminoan.

From the same cemetery on Naxos come some stirrup jars decorated with (water)birds and fish (Vlachopoulos 2006, esp. 198–200), which may have fallen into our category III. Similar vases have also been found in tombs at Perati in Attica and at some sites in the Dodecanese (Mee 1982, 32–4; Crouwel 1984; 2009; Benzi 1992, 83–4; Iakovidis 2003). Associated motifs, however, suggest that any bird–liquid connection only played a secondary role in the function of these vases. The majority of these vase-paintings feature a large octopus placed below the spout whose tentacles encompass the whole body of the vase. This animal suggests a marine rather than an aquatic setting, and the fact that a similar cluster of motifs appears on Cretan sarcophagi of the LM IIIA–IIIB period

⁴⁰ These vases are often decorated with swallows (Immerwahr 1990; Russell 2006; Marthari 2009), but these birds are not associated with aquatic environments in the iconography and appear instead with flowers such as lilies and crocuses.

⁴¹ Vlachopoulos 2000; Zeimbeki 2005. See also some MC III sherds depicting waterbirds among reeds and papyrus from Phylakopi on Melos (Morgan 1988, 64 figs 47, 48). No frescoes depicting waterbirds have been discovered on Crete yet, but doves appear in two wall paintings from Knossos (Cameron 1968; Hood 2005, 58–60 pl. 9c). The painting in the House of the Frescoes shows the doves in a landscape with a river.

⁴² Vlachopoulos (2006, 131) mentions another unpublished bird-shaped askos from tomb δ at Aplomata, which is on display in the Naxos Museum.



Fig. 22. Fragmentary vessel (rhyton) from Akrotiri on Thera (65). Nikolakopoulou 2010, 216 fig. 21.3f. Courtesy of C. Doumas.



Fig. 23. Fragmentary vessel (rhyton) from Akrotiri on Thera (66). Marinatos 1971, pl. 96d. Courtesy of the Archaeological Society at Athens.

(Alberti 2013) indicates some kind of mortuary significance for these stirrup jars. Thus, the two bird-shaped vessels from Naxos are the only objects that directly attest to the continuing presence of an ideological connection between birds and liquids in the Cyclades.

Greek Mainland

EH, MH, LH I-II

On the Greek Mainland, we can find many objects linking birds and liquids in the Mycenaean period. Before this time, the evidence is much more scattered. In the EH period, a fragmentary bird-shaped object from Zygouries could have been part of a vessel (69) and two spherical askoi from this period (70, 71) are modified by the addition of generic avian traits such as small tails. On the askos from Corinth (71) wings are indicated by incised lines. A single bird-shaped askos, found at Eutresis, can be dated to the MH period (72). These three vases share some traits with contemporary bird-shaped vessels from Crete (10, 21–24), and may be imitations of these (Misch 1992, 58, 95). The askoi dating to the EH period belong to category I type 2 because

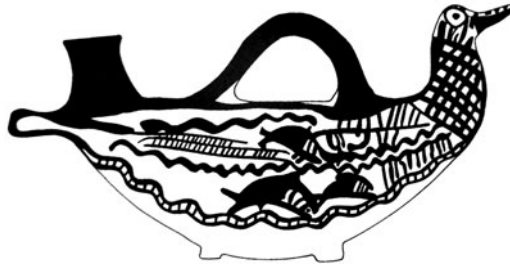


Fig. 24. Askos from Kamini on Naxos (67). Vlachopoulos 2006, fig. 26. Courtesy of A. Vlachopoulos.

they display merely a partial adoption of avian forms, while the unique vase from Eutresis with its legs, tail and wings falls into type 1.

In the Mycenaean period, the earliest attestation of the bird–liquid connection is a rock-crystal bowl from shaft grave omikron of Grave Circle B at Mycenae (73), dating to LH I. The handle is shaped like a bird’s reverted neck and head (Fig. 25). The head is elongated with a long flat bill, which has a small knob at its base. This feature is a trait of mute swans (*Cygnus olor*), as Phillips (2008, 1.185–6) has observed. Similar open vessels were made from clay in LH I–II. They have been found in tombs at Mycenae (74) and Nafplion (75). An almost identical one was found in a LH IIIB tomb at Kokla in the Argolid (76), but its similarity to the other ones suggests that its manufacture date significantly precedes its deposition date. The clay vessels are less detailed than the rock crystal bowl, but they seem to show waterbirds as well (Fig. 26).

The vessels belong to our category I type 2 because only the handles adopt avian shapes. The edge opposite the handle is modified to form a shallow spout so that the bowl could also be used for pouring. As with the much earlier sauceboats, this design may have enabled libations. The waterbird features serving as handles facilitate the pouring action but they do not come into direct contact with the liquid. Although this applies to both the rock crystal bowl (73) and its terracotta variants (74–76), they significantly differ from each other in terms of style. It seems plausible that this is due to differing artistic traditions, the rock crystal bowl probably being of Cretan manufacture (Phillips 2008, 2.374), while the clay bowls are local products. Whereas the swan’s head on the stone vase is turned back, resulting in a naturally dynamic appearance, the waterbird heads on the terracotta variants look straight ahead. Moreover, the clay bowls have additional ring handles and painted decoration under the rims which does not correspond to any plumage patterns. Here, the vessel elements dominate the bird features both visually and functionally.

LH IIIA–IIIB

Related bowls, only now made from bronze, were used from LH IIIA onwards. One such bowl (77) comes from a tomb of unknown location on the Greek Mainland, which also yielded a sword (Matthäus 1979). Part of the handle adopts the shape of a waterbird protome (Fig. 27). Comparable is a LH IIIB (?) bronze tankard from the LH IIIC Tiryns Treasure (78). Here, the support for the thumb is in the shape of a complete waterbird, while a smaller ring handle directly below would have been for the index finger (Fig. 28).⁴³ Belonging to our category I type 2, the bird motifs facilitate the handling of the vessels, but they never come into direct contact with the liquid content.

At this point one particular vessel needs to be analysed, whose hybrid nature seems to stem from different traditions.⁴⁴ This is a bronze vessel from the Sellopoulo tomb on Crete (79), dating to LM

⁴³ Personal communication S. Aulsebrook.

⁴⁴ For formal interrelations between the Sellopoulo vessel and other Mycenaean metal and clay vessels with bird features see Popham and Catling 1974, 250; Matthäus 1980, 252–4; 1981, 281, 285, 287–91.



Fig. 25. Rock crystal bowl from Mycenae (73). Image courtesy of Bildarchiv Foto Marburg.



Fig. 26. Bowl from Mycenae (74). Wace 1939 (1950), pl. 21a.4.

II–III A. The grave belongs to a group of tombs from the Knossos area which are characterised by architectural features and offerings (usually weapons or bronze vessels) with close parallels on the Greek Mainland and various degrees of hybridisation of traditional ‘Minoan’ and novel ‘Mycenaean’ features (Preston 2004; Miller 2011, esp. 26; Steinmann 2018, 180–1). The metal vessel, of which only its upper half is preserved, possesses a large handle, and opposite this handle the indented rim is modified to form a long-billed bird protome, probably a waterbird (Fig. 29).

The layout of this vessel conforms to our category I type 2. Both the bird and the overall arrangement closely resemble those of the Mycenaean metal vessels described above. The object was called a hydria by the excavators and the bird protome was explained as a way to facilitate the tipping of the vessel for pouring (Popham and Catling 1974, 236 cat. no. 28 (B2)). However, given its position at the shallow spout, which means that the bird would have become wet when the vessel was used, this seems rather impractical. Rather, this arrangement reminds one of the positioning of dove figurines on contemporaneous Cretan double vases, which were deliberately brought into direct contact with the liquid that was poured out. Thus, the Sellopoulo vessel displays a hybridisation of ideas concerning birds and liquids apparently originating from different regions.

Returning to the Greek Mainland, there are some more artefacts linking birds and liquids in LH IIIA–IIIB. A distinct group of objects combines the shape of a bird with features of a vessel (Desborough 1972, 246). Three such objects have been found at Prosymna (80–82), two at Mycenae (83, 84), and one each comes from Vourvatsi (85) and Kallithea (86). Another vessel is said to be from Attica (87) and three are of unknown provenance (88–90).⁴⁵ Several, mostly

⁴⁵ A similar, but unpublished object from the Evangelistria cemetery is on display in the Nafplion Museum.



Fig. 27. Bronze bowl from Greece (77). Matthäus 1979, pl. 21b. Courtesy of H. Matthäus.



Fig. 28. Bronze tankard from Tiryns (78). Matthäus 1980, pl. 42.360. Courtesy of H. Matthäus.

fragmented ones, come from Tiryns (91–93).⁴⁶ A fragment of another such vase was found at Haghia Triada (94). The long necks and long, occasionally curved, bills of these bird-shaped figurines indicate that they represent waterbirds (Fig. 30).

Although these objects can be said to belong to our category I of bird-shaped vessels because the shape and the prominent handles on their backs make them resemble the contemporaneous flat-based askoi, these zoomorphic ‘vessels’ are actually hollow figurines (type 3).⁴⁷ Thus, only a loose association between birds and liquids is created by these objects. Being quite small and frequently found associated with miniature vessels of other types, they too may have been a symbolic substitute for regular-sized vessels.⁴⁸ The lack of actual functioning vessels in the shape

⁴⁶ The entries in the catalogue are some of over 20 fragments of bird-shaped vessels from Tiryns discovered in recent excavations.

⁴⁷ Desborough (1972), Misch (1992) and Guggisberg (1996) all included them in their discussion of bird-shaped vases. The small holes often found on their breasts or under the tails seem to be pressure relief holes needed during firing.

⁴⁸ These figurines are also frequently found in children’s graves or associated with typical grave goods of children such as feeding bottles, for example at Prosymna (80–82). Cf. also Lemos 1994, 231–4). Misch (1992, 146) considered the possibility that they are toys, but some figurines are associated with adult burials (83, 84).

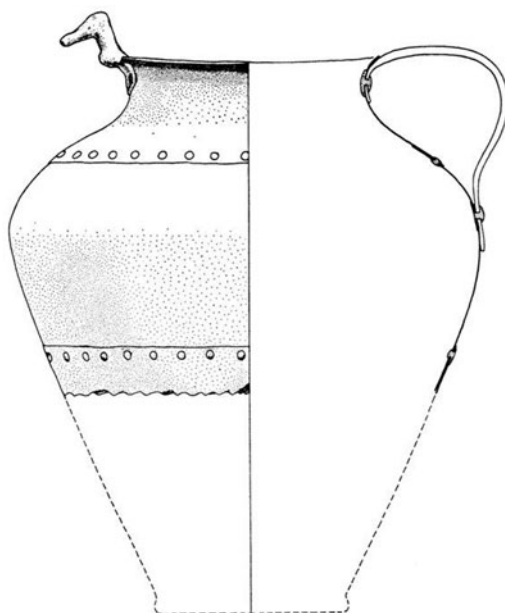


Fig. 29. Bronze jug from Sellopoulo (79). Popham and Catling 1974, 237 fig. 23.

of waterbirds during this time seems to reinforce the impression that for the Mycenaeans it was not deemed essential that the bird features physically touched the liquid.

Some vase-paintings from this period are also worth discussing in our context. Birds such as waterbirds and large wading birds⁴⁹ belong to the most common motifs in Mycenaean vase-painting (cf. Vermeule and Karageorghis 1982, 209–11, 214–16, 225–6; Güntner 2000, 85–127, 261–93). In most cases, they are depicted on open vessels such as kylikes, bowls and kraters.⁵⁰ Less frequently, birds are painted on pouring vessels such as jugs and spouted vessels such as stirrup jars.⁵¹ In most cases, these are not sufficiently preserved to determine the details of the compositions and the birds' relationship to the pouring of liquid. An exception is a group of squat stirrup jars from Mycenae dated to LH IIIA2–IIIB1 (Sakellarakis 1992, 110–13 cat. nos 246–9). These vases show small waterbirds (ducks?) alternating with sphinxes on the body, while papyrus flowers are depicted on the shoulder. The sphinxes suggest that these vases had some ritual purpose, but the positioning of the birds on the body, spatially removed from the spout, seems to indicate that the bird–liquid connection was not of primary importance to the function of these vases.

On other pouring vases that are (nearly) complete, however, the birds are always painted on the shoulder, thus set in close proximity to the spout. Examples come from Kokla (95), Mycenae (96, 97), Midea (98, 99), Ialysos on Rhodes (100) and Berbati (101). The birds on these vases are waterbirds of the type common in Mycenaean vase-paintings of this period. They either have plump or elongated bodies, but always long necks and bills.

Belonging to our category III type 1, the bird motifs are set into a definite spatial relationship to the flow of liquid. In three cases (99–101), this relationship is reinforced by the positioning of the waterbirds, which are shown flanking a plant that grows directly below the spout (Fig. 31). Although the birds would not have been directly touched by the liquid poured out of the vessel,

⁴⁹ Called 'marsh birds' by Vermeule and Karageorghis (1982, 215 cat. no. IX.109).

⁵⁰ For example, Vermeule and Karageorghis 1982, 210 cat. nos VIII.14–16 (kraters), XI.98–105 (deep bowls); Güntner 2000, 88–90 cat. nos 8D, 8E, 8F, 9, 10, 11 (kylikes).

⁵¹ For example, a fragmentary closed vessel showing waterbirds flanking a plant comes from Berbati (Åkerström 1987, 39 cat. no. 216, pl. 38.1). The Lapoutsi cemetery at Brauron yielded two fragments of a jug or hydria showing a waterbird next to a plant (Paschalidis 2001, 95 figs 5, 6).



Fig. 30. Hollow figurine from Mycenae (83). Wace 1932, pl. XXIII.14. Reproduced by kind permission of the Society of Antiquaries of London.



Fig. 31. Vase-painting on a jug from Rhodes (100). Maiuri 1923-4, 227 fig. 144. Reproduction granted by the Scuola Archeologica Italiana di Atene.

it would have flowed fairly close to them. Incidentally, a similar arrangement can be observed on the double vase from Chania on Crete (35), already discussed above. On this vase, a waterbird among papyrus flowers is painted on the jug with the strainer section, directly below the flow of liquid. Since the same vase also has a dove figurine attached to the upper part of the strainer section, this vessel combines ritual practices from different regions. Comparable to the Sellopoulo bronze vessel (79), the Chania double vase attests to the cultural hybridity observable in middle and western Crete in the LM III period.⁵²

In the vase-paintings, the effect of an abundant flow of water is also illustrated by the growth of (wetland) plants such as papyrus or palm trees that are depicted amid the birds and below the spouts.⁵³ The waterbirds are pecking at these, and on three vases (98-100) we can observe a close physical and/or visual convergence between birds and plants. For example, long-stemmed vegetal elements can be directly attached to the birds' bodies, which results in rather unnatural but highly symbolic images. On the stirrup jar from Midea (98), the birds are shown next to a sprawling plant whose leaves mirror the form of the birds' bodies and wings (McMullen-Fisher

⁵² Cf. Harris 2014 for a study of practices surrounding the management and hunting of fallow deer in Chania, which display a similar hybridity stemming from Minoan and Mycenaean traditions.

⁵³ On the Midea stirrup jar (98), in addition to the fully grown waterbirds two smaller stick-like birds (chicks?) also flank the plant.



Fig. 32. Vase-painting on a stirrup jar from Midea (98). Drawing by E. Markou. McMullen-Fisher and Giering 1998, pl. 65. Courtesy of K. Giering.

and Giering 1994, 12) (Fig. 32). Such arrangements create the impression that waterbirds are – like the closely associated (wetland) plants – part of the thriving landscape and ecosystems that signify the abundant flow of water.⁵⁴

It seems likely that water-related fertility was the concern of the people using these vessels, probably in ritually charged situations. Such an argument is also supported by the find context of the stirrup jar from Midea. This vase was found together with part of a large female terracotta figure and a bovine figure, possibly remains of a shrine, on the Lower Terraces of the palace (Walberg 1994). The palatial connection of this vase also suggests that it was important for the people in charge to associate themselves with the continued flow of life-giving water.⁵⁵

In addition to the jugs and stirrup jars, there are a few Mycenaean conical rhyta that are decorated with waterbirds. One comes from Brauron (102), another from an unknown site in Attica (103) and a third was found at Kalavarda on Rhodes (104). These rhyta belong to our category III type 2 because although the waterbirds are painted onto these vessels they do not have a close spatial relationship to the flow of liquid (Fig. 33). However, waterbirds are repeatedly depicted on conical rhyta, which does suggest an ideological link between these birds and the liquid content (Paschalidis 2001, 98–101). This association is strengthened by the fact that conical rhyta found at Knossos (105), Karphi (106) and Palaikastro (107) on Crete dating to LM II–IIIA2/IIIB also show waterbirds.

Some scholars have interpreted conical rhyta exclusively as cult paraphernalia for performing libations, while others have advocated a wider significance, for example as implements for transferring liquids from one container to another.⁵⁶ On the rhyton from Rhodes, the waterbirds are included in a rather curious scene also involving lions or boars,⁵⁷ a mirror and a kylix,

⁵⁴ Waterbirds are also found in Mycenaean wall paintings, often shown in aquatic landscapes. For example, swimming waterbirds are set against a blue background in a fresco from a LH IIIA2 megaron-type building at Argos (Tournavitou and Brecolouki 2015, 230–3), and a flying duck or goose is shown in a landscape with plants and a river in a fresco from a LH IIIB building at Thebes (Aravantinos and Fappas 2015, 329 figs 10, 11).

⁵⁵ See Peatfield (1995, 227) and Yiannouli (1998, 66) for fertility rituals and their link to prestige and status. Cf. also the palatial find-contexts of the vases from Mycenae (96, 97).

⁵⁶ For their use as libation vessels, often for the dead, see Laffineur 1986, 83–7. One rhyton from Tiryns shows long-robed people, and Koehl (2006, 403) argued for the presence of such rhyta in graves to signify priests' burials. Markou (2016, 35–6) also argued for their use as libation vessels, based on the ceramic assemblages in which they occur in Mycenaean tombs. Koehl (2006, 270) has noted that conical rhyta could furthermore have been used in the process of mixing wine and water.

⁵⁷ Karantzali (1998, 96) identified the animals as hybrids due to their pose, but there are no other human features visible.



Fig. 33. Conical rhyton from Attica (103). Image courtesy of bpk/Antikensammlung, Staatliche Museen zu Berlin.

possibly for libations (Fig. 34).⁵⁸ On all rhyta, the waterbirds are shown in groups of two, three or more rather plump birds, thereby creating an impression of abundance and fecundity.⁵⁹ They may thus have symbolised the positive effects of water on nature, an allegorical function that would have been appropriate both in a ritual and in a feasting context.

LH IIIC/Submycenaean

The bird–liquid connection survived the fall of the palaces, attesting to the pervasiveness of this association in popular belief systems. In LH IIIC, bird-shaped vessels with elongated bodies, heads and long bills appeared (Fig. 35). Five such vessels have been found at the Klaus cemetery (108–112), two each at Kanghadi (113, 114) and Kallithea (115, 116), and one each comes from Tanagra (117), Ialysos on Rhodes (118) and Kladeos (119). To the Submycenaean phase belong three vases from Lefkandi on Euboea (120–122), one askos from Alyki (123) and five vessels from Athens (124–128). They could be ducks or geese because their necks seem too short for swans.

Belonging to our category I type 1, these bird-shaped vessels have cylindrical beaks which in most cases serve as secondary spouts.⁶⁰ Thus, the bird features have a rather intimate spatial connection to the liquid, whose flow is mediated by a part of their anatomy, the bill. Since this arrangement is a novelty on the Greek Mainland, scholars have considered these vessels to result from a possible influence from elsewhere such as Crete or Cyprus, where similar vessels were

⁵⁸ See Hägg 1990 for the kylix as the primary libation vessel.

⁵⁹ See Cocker 2013, 81–2, for the frequent ideological association of waterbirds of the family Anatidae with sexuality and fertility due to their appearance in great numbers and the fact that they, unlike most other birds, have an external sex organ.

⁶⁰ On the vessel from Kladeos (119) the head is replaced by a round spout, which makes the vase resemble the contemporary bird-shaped askoi from Crete.



Fig. 34. Vase-painting on a conical rhyton from Rhodes (104). Karantzali 1998, 97 fig. 10a. Courtesy of E. Karantzali.



Fig. 35. Rhyton from Patras – Klauss (?) (111). Kontorli-Papadopoulou 1979, 157 fig. 2.1. Courtesy of T. Papadopoulos.

more regularly used.⁶¹ Although the specific vessel type may indeed have come from elsewhere, we have seen that the principle idea of associating waterbirds and liquids had a long local tradition on the Greek Mainland.⁶²

Structurally similar vessels were indeed used in the Pre- and Protopalatial periods on Crete and on MC III–LC I Thera, but the ones from the Greek Mainland differ from them in some important details. Significantly, they possess elements that visibly obstruct the merging of bird and vessel features. For example, the beaks adopt the rather unnatural shape of a cylindrical spout. Moreover, angular handles and openings for filling the vase project rather prominently from the back. The openings are often as high as or even higher than the bird's head, drawing the eye to this characteristic vessel feature. Moreover, only a few vases attempt to depict wings and/or natural plumage patterns. Some vessels show downright unnatural features such as teeth (116). Most are decorated with geometric and abstract motifs taken from the contemporaneous vase-painting repertoire. One vessel from Kanghadi even has quadrupeds painted on its sides (114).

Comparable to the contemporaneous bird-shaped vessels from the Cycladic island of Naxos (67, 68), all these elements interact to make these objects appear like vessels which happen to be in

⁶¹ Desborough 1972, 266–73; Papadopoulos 1978–9, 103. For an updated discussion on the origin of bird-shaped vessels, also in light of more recent finds, see Vlachopoulos 2012, 115–21.

⁶² As also emphasised by Papadopoulos (1978–9, 103; 1980, 170), Guggisberg (1996, 248, 251, 263) and Lemos (1994, 229–30).

Table 2 Chronological and regional distribution of categories and types.

Region	Crete			Cyclades			Greek Mainland		
	Category I	Category II	Category III	Category I	Category II	Category III	Category I	Category II	Category III
Type 1	X O* V	X O	O*	X O V	X		X* V		O
Type 2	X O*	X* O* V*	O	X*			X O		O
Type 3							O		
Epoch Legend	X: EM I–MM II O: MM III/LM I–LM IIIA ₂ V: LM IIIB–IIIC/Subminoan *only one object found			X: EC I–EC II O: MC III–LC I V: LC IIIC			X: EH, MH, LH I–LH II O: LH IIIA–LH IIIB V: LH IIIC		

bird shape rather than birds which have the potential to act as vessels.⁶³ The purpose of the waterbird features seems to consist of giving the vessel a form which is symbolically appropriate for its purpose of distributing liquid, probably water, in a ritual setting. Since the majority of these vessels come from tombs, sometimes associated with female figurines and/or miniature vessels, they may also have had a specifically funerary significance, possibly connected to notions of regeneration.⁶⁴

CONCLUSION

A close study of the interconnections between vessels, liquids and birds in the Aegean Bronze Age provides important insights into ritual practices and human–bird relationships. By systematically categorising different types of vessels and relative positions of bird depictions, it becomes possible to identify various interaction effects. Divergent trends can be observed both from a diachronic and a regional perspective (Table 2).

The earliest evidence of a link created between birds and liquids comes from Crete. Here, bird-shaped vessels and bird figurines attached to vessels appear from EM I until LM IIIC and the Subminoan phase, with a gap observable in LM IIIB. The birds can consistently be identified as doves; occasionally, a more specific identification as a rock or turtle dove is possible. The association between doves and liquids may have been inspired by natural behaviour that is unique to this bird family such as the ability to drink water in a continuous motion and to produce crop milk for their young. Waterbirds sometimes appear on Cretan vessels, but they are mainly found in contexts that show a strong influence from the Greek Mainland.

Both bird-shaped vessels and bird figurines attached to vessels afford a close interaction between liquids and birds. In the Cretan vessels of the first category we can note an attempt to physically hide vessel parts within natural dove features or merge the two elements so that the bird itself seems to take over the role of the vessel. In the LM IIIC period, a significant change is observable in this regard because now vessel parts such as spouts visually dominate the rather stylised bird features.

In Cretan vessels of the second category we can observe efforts to bring the dove figurines into direct contact with the liquid during the process of handling. Beaks would have become wet so that the – relatively naturalistic – bird figurine would have appeared to be drinking from the vase. The element of multiplication that is frequently observable seems to both maximise contact between bird and liquid and create a sense of abundance. Such arrangements imply that doves were thought to have some positive effect on the liquid. One could imagine that they were believed to be able to bring rain and/or increase the fertile and nourishing aspects of water and milk, which made it necessary to award the birds an active role within the ritual. Such an attitude towards animals is consistent with animist notions.

On the Cyclades, the earliest evidence for a link between birds and liquids dates to EC I–II, and such a connection continues, albeit with considerable gaps, into the LC IIIC period. As on Crete, both bird-shaped vases and bird figurines on vessels were used. Doves seem to have played a similarly important role, at least in the EC period. However, waterbirds such as ducks and geese were also associated with the handling of liquids in the Cyclades. Because of their aquatic habitat, waterbirds possess a natural link to the element of water which is more obvious than that of doves.

In comparison to the Cretan objects, the Cycladic bird-shaped vessels of the EC and MC III–LC I periods are also characterised by a deliberate integration of vessel elements with the bird's anatomy and an emphasis on natural features. Moreover, it seems to have been deemed necessary that the liquid was directly touched by the bird elements. As on Crete, this was sometimes underlined by a repetitive appearance of bird figurines. Therefore, it seems that the people of the Cyclades also

⁶³ Consequently Desborough (1972, 274–5) argued for a primarily decorative purpose of the waterbird shape of these vessels.

⁶⁴ Vlachopoulos 2012, 116–21. See Laffineur 1986, 79, for the importance of the notion of regeneration in the Mycenaean funerary sphere.

assigned birds a decisive role in the natural and ritual flow of liquids, possibly within an animist framework. Again, this had changed by LC IIIC, when the two preserved bird-shaped vessels display prominent spouts and a painted decoration that does not show a bird's natural plumage pattern but rather serves to further symbolise the aquatic element.

On the Greek Mainland, birds were occasionally associated with liquids in the EH and MH periods, and this link continues in a more consistent manner throughout the Mycenaean period from LH I to LH IIIC. The objects differ from most of the Cretan and Cycladic ones in a number of ways. Bird-shaped vessels and vase-paintings of birds on pouring vessels were used, while bird figurines attached to vessels are lacking. Only waterbirds such as swans, ducks and geese appear in this context and there is no indication that doves were thought to have a special role connected to liquids.

Both bird-shaped vessels and vase-paintings of birds from the Greek Mainland are for the most part characterised by a certain distance maintained between the bird motifs and the flow of liquid. This dissociation is achieved by the visual domination of vessel elements over bird parts – bird heads serve as handles, spouts are prominently positioned on the birds' backs – and the frequent spatial separation of bird parts on the one hand and the openings/spouts on the other. In some cases, the liquid is even completely absent and only alluded to by the general similarity of the object to a vessel. Another feature that creates a distancing effect from the 'real' flow of liquid is the extensive stylisation and conspicuous depiction of unnatural features observable in Mycenaean waterbird depictions. This suggests that the Mycenaean had a less literal understanding of the role of birds in relation to liquids than the Minoans or the people of the Cyclades. Instead of believing in an active influence of birds on the flow of liquid, the plump waterbirds among sprouting plants may have been seen as an appropriate way of symbolically referencing the positive effects of the abundance of water. With the Mycenaean expansion towards the southern Aegean in LH IIIB, such notions, which are consistent with an analogical worldview, were apparently adopted also by people on Crete and the Cyclades whose ancestors may have perceived nature in a different way.

ACKNOWLEDGEMENTS

This research is based on a PhD dissertation completed at the University of Oxford, which profited from discussions with Lisa Bendall, Irene Lemos, Lyvia Morgan and Stephanie Aulsebrook. Funding was provided by Merton College, Oxford, and the Vronwy Hankey Memorial Fund for Aegean Studies, BSA. I also thank the anonymous reviewers for their helpful and stimulating comments.

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SUPPLEMENTARY MATERIAL

Supplementary Material for this paper is available at the following url: <https://doi.org/10.1017/S006824541900008X>.

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Σαν την πάπια στο νερό – Τα πτηνά και το υγρό στοιχείο στην εποχή του χαλκού στο Αιγαίο

Η παρούσα μελέτη εξετάζει τις σχέσεις μεταξύ των πτηνών και του υγρού στοιχείου κατά τη διάρκεια του μινωικού, κυκλαδικού και μυκηναϊκού πολιτισμού. Η έρευνα εστιάζεται στα πτηνόμορφα αγγεία, στις απεικονίσεις πτηνών σε αγγεία και σε ορισμένα ρητά διακοσμημένα με μοτίβα πτηνών· τα αντικείμενα παρατίθενται στον συνοδευτικό κατάλογο. Η ανάλυση του υλικού δείχνει ότι οι απεικονίσεις τόσο των περιστεριών όσο και των υδρόβιων πτηνών απαντώνται σε αγγεία αποθήκευσης υγρών, και το είδος των πτηνών που απεικονίζονται διαφοροποιείται στο χρόνο και κατά τόπους. Ένα άλλο χαρακτηριστικό που ποικίλλει στον χρόνο και κατά τόπους είναι ο τύπος της επαφής ανάμεσα στο υγρό στοιχείο και στα πτηνά. Εντοπίζονται τρεις κατηγορίες διαρούμενες σε τρεις ή δύο υποκατηγορίες, με κριτήριο διαφοροποίησής τους να είναι ο βαθμός εγγύτητας μεταξύ του υγρού στοιχείου και του μοτίβου του πτηνού. Υποστηρίζεται ότι αυτές οι διαφορές αντανακλούν τις διαφορές στην αντίληψη της σχέσης των πτηνών με τα υγρά στοιχεία. Ενώ η άμεση και ενεργή συμμετοχή των πτηνών στη ροή των υγρών στοιχείων, όπως το νερό και το γάλα, παρατηρούνται σε πολλά κρητικά και κυκλαδίτικα αντικείμενα, στην ηπειρωτική Ελλάδα τα αντίστοιχα αντικείμενα παρουσιάζουν ένα διαφορετικό μοτίβο. Υπάρχει μικρότερη άμεση επαφή συνοδευόμενη με μια στυλιζαρισμένη απεικόνιση, η οποία υποδηλώνει ότι το μοτίβο των πτηνών έχει έναν πιο παθητικό ρόλο, ενώ εξάιρεται ο θετικός αντίκτυπος της ροής του νερού. Τα παραπάνω ευρήματα συμβάλλουν στις πρόσφατες επιστημονικές συζητήσεις για τη σχέση ανθρώπου-ζώου και στα οντολογικά ζητήματα στην εποχή του χαλκού στο Αιγαίο.