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LEFT HAND, RIGHT HAND, NEAR HAND, FAR HAND: ON HANDEDNESS IN AEGEAN ART¹

Abstract: Right-handedness dominates among all human populations but the question is if and how the Aegean artists depicted it in their art, or whether they compromised between reality and artistic concepts. In order to find answers to those questions, this paper examines wall and vase paintings, stone and metal vases, ivories, bronzes and terracottas, larnakes, stelae, daggers (seals and sealings are excluded because of the seal/sealing problem). These are examined according to the categorisation of skilled and unskilled, bi- and unimanual activities. The results suggest a domination of right-handedness in the Aegean iconography with some exceptions resulting mainly from the symmetry of specific compositions. It is also notable that the Aegean artists tended to represent right hands as the near ones and they preferred to show shoulders supporting long objects like spears as the near ones regardless of the orientation of depicted subjects.

Keywords: Aegaeon archaeology, Aegaeon art, handedness, near and far hand

Manual laterality is observable among primates but handedness understood as a species-level one hand preference appears solely among humans.² Research carried out over a number of decades has shown that the right handedness prevails over left- and bi-handedness (ambidexterity) by about 90%.³ As far as it is possible to study the handedness among the earliest humans this already applied to the Neanderthals and is more or less stable throughout the whole prehistory and history.⁴ Thus there is no question of the handedness of the Minoans or Mycenaeans — the great majority of them would have been right handed. We can be sure of that. Maybe among the Minoans, the percentage of left-handers was a little higher than average because there are opinions that people with preference of the left hand have more artistic abilities and are more creative,⁵ and the Minoan

¹ Because of the pandemics and closed libraries it was impossible to consult all the necessary publications. I decided to send this paper to the Editor “as is” because reopening of libraries is difficult to predict and the observations which I present here are based on evidence solid enough to make them reliable, at least in my opinion. I’d like also to thank the following colleagues for their invaluable help: Barbara Arciszewska, Angela Catania, Elżbieta Jaskulska, Pietro Militello, Arkadiusz Sołtysiak. I am greatly indebted to Dorota Stabrowska for helping me to prepare the illustration, to Lucy Goodison for sending

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² McMANUS 2002, p. 210; UOMINI, RUCK 2018, pp. 296–299.
³ COREN, PORAC 1977; CASHMORE, UOMINI, CHAPELAIN 2008, p. 8; UOMINI 2009, p. 411.

⁴ CASHMORE, UOMINI, CHAPELAIN 2008; UOMINI 2009, p. 412; UOMINI, RUCK 2018, p. 304.

⁵ SINGG, MARTIN 2016, pp. 2–3; contra McMANUS 2002, p. 298.

civilization is known for its creativity, numerous works of art and sublime aesthetics. Similarly, we can speculate on the percentage of left-handers among Mycenaeans because left hand offers some advantage in fighting against right-handers⁶ and war was especially important for the Late Helladic civilization. Such conjectures, however, do not have good scientific foundations and handedness seems to be mostly conditioned by genes and not culture.⁷

The problems I want to discuss in this paper concern handedness in Aegean art: did the artists take care about showing the handedness of their subjects; if that was the case, did they do this deliberately or just from habit; did they manipulate the representation of handedness for artistic or symbolic effects? Did they consistently show actions in which there is a specialization of the use of certain hands, even if not related to handedness, such as gestures?

In order to find answers to those questions, we have to evaluate the Bronze Age Aegean in respect of representations of handedness and manual actions in which it manifests itself (if it does). I propose a catalogue of manual actions usually performed unimanually or bimanually with preference for one hand and which are to be found in Aegean art. Among them there are skilled and unskilled actions.⁸ Fighting with a sword would be an example of the first, but carrying an object or gesturing would be an example of the second. For unskilled actions, hand preference is of importance, both in uni- or bimanual actions. Sometimes we use one particular hand, not because it is more skilled than the other, but out of preference:

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| • Fighting/hunting with a sword/dagger | skilled unimanual |
| • Fighting/hunting with a spear | skilled bimanual with hand preference |
| • Carrying weapons | unskilled unimanual |
| • Bow shooting | skilled bimanual with hand preference |
| • Slinging | skilled bimanual with hand preference |
| • Using whip or goad when driving a chariot | skilled unimanual |
| • Playing an instrument | skilled bimanual with hand preference or unimanual |
| • Gesturing | unskilled bi-/unimanual |
| • Carrying large vessels | unskilled bimanual with hand preference |
| • Carrying small vessels | unskilled unimanual |
| • Carrying a baby (<i>kourotrophoi</i>) | unskilled unimanual |
| • Saffron gathering | unskilled? bimanual with hand preference |

We will see how those actions were depicted in different media. Among them are wall and vase paintings, stone and metal vases, ivories, bronzes and terracottas, larnakes, stelae, the Lion Hunt niello dagger, and the Lasithi Dagger. The depictions in those media are more or less clear about showing the handedness. Seals and sealings will be left aside for a separate paper because of a problem with judging whether the seal or its impression was to show the “correct” orientation of the composition. For the purposes of this article, I have attempted to collect archaeological evidence providing a sufficiently broad overview of Aegean art to obtain highly probable results. The most complete research concerns frescoes, while for Mycenaean vase paintings,⁹ Minoan bronze figurines,¹⁰ or Mycenaean ivories,¹¹ I relied primarily, although not exclusively, on works containing corpora of finds belonging to these categories. We are interested here in representations of humans, monkeys, as well as hybrids like Minoan Genii equipped with hands. Many of them

⁶ McMANUS 2002, pp. 254–258; STEELE, UOMINI 2005, pp. 218–220; LLAURENS, RAYMOND, FAURIE 2009, p. 882; SINGG, MARTIN 2016, p. 2.

⁷ McMANUS 2002, pp. 205–209, 361–361; LLAURENS, RAYMOND, FAURIE 2009, pp. 883–884; SINGG, MARTIN 2016, p. 2.

⁸ DENNIS 1958; SPENNEMAN 1984.

⁹ VERMEULE, KARAGEORGHIS 1982; SAKELLARAKIS 1992.

¹⁰ VERLINDEN 1984; SAPOUNA-SAKELLARAKIS 1995.

¹¹ POURSAT 1977a; 1977b.

do not perform any action in which handedness could manifest itself, many are preserved in a state not allowing for any analysis (esp. in frescoes), some others (esp. in vase paintings and on larnakes) are too schematic or represented as silhouettes. Without complete statistics, it is impossible to estimate the proportion of figures performing actions involving handedness to the total of all represented figures. This had been done for Egypt by Dennis who analysed 14892 figures and ended up with just 1085 performing unimanual skilled actions.¹² In our case, the proportion is most probably different because I am also taking into account unskilled actions, such as gesturing or carrying objects. In anticipation of our reasoning, let us point out that we will also pay attention to the issue of far and near hands/arms, as it seems important for the analysis of Aegean art.¹³

Let us begin with unimanual skilled actions. In the realm of Aegean iconography, these are usually scenes of fighting/hunting with weapons. The most emblematic (but not unproblematic) is fighting with a sword or dagger, strongly connected with handedness. Our problem is that we have very few preserved representations of fighting/hunting swordsmen that are not on seals. Generally such warriors/huntsmen were depicted using their right hands to use their weapons. We see that in LH IIIB¹⁴ Battle Fresco from Pylos (22 H 64),¹⁵ where both duelists hold swords in their right hands,¹⁶ in one case the far one and in the other the near one [Fig. 1]. Swordsmen using weapons with their right hand are visible in the griffin/lion fighting scenes on LH III ivory mirror handles



Fig. 1. Fragment of the reconstruction of the Battle Fresco from Pylos
(drawing by K. Lewartowski after Lang 1969, pl. M)

¹² DENNIS 1958.

¹³ I've been inspired to turn my attention to this feature by M. Lang's publication of the Pylos frescos (LANG 1969). The concept of near and far shoulder, foot, hand, etc. is widely used in works on Egyptian art, e.g. SMITH 1949, from page 140 onwards; EATON-KRAUSS 1984; FAZZINI 2010.

¹⁴ Relative chronology abbreviations: EC = Early Cycladic, EM = Early Minoan, LC = Late Cycladic, LH =

Late Helladic, LM = Late Minoan, MC = Middle Cycladic, MM = Middle Minoan. For absolute chronology, see MANNING 2010, p. 23, tab. 2.2, with corrections suggested by PIERSON *et alii* 2018.

¹⁵ Numbers of Pylos frescoes according to LANG 1969.

¹⁶ By "right" or "left" hands, shoulders, sides we always mean "proper right" and "proper left": the sides seen from the point of view of represented subjects.

from Enkomi Tomb 24, Kouklia Tomb 8 and an ivory pyxis from Enkomi Tomb 24.¹⁷ Another scene of sword fighting is in the lower register of side A of larnax CM 40¹⁸ from Tanagra tomb 22 [Fig. 2]. This is a duel of two swordsmen poorly rendered in silhouette. Assuming that they are represented in the usual way, i.e. with their upper bodies frontally, one of them is handling his sword in his right (far) hand and the other in the left (far) one.¹⁹ In the upper register of side B, we have a huntsman sticking his sword held in the right hand in an antelope's neck. Thus right-handers prevail and we can hypothesize that in the duel scene the artist sacrificed realism for the sake of composition — the scene is symmetrical. We cannot, however, exclude the possibility that the artist really intended to show a fight of warriors using different hands.

Some fresco pieces from Pylos 25 H 64, 28 H 64 are very fragmentarily preserved parts of a Battle Scene. One right (near) hand gripping a dagger is preserved; according to Lang's reconstruction, in one of them there were also warriors using daggers in their left hands, but this is purely conjectural and can't be used as evidence. We read in the description of the other one that there were warriors with daggers but they are not visible on published fragments.

We have some instances of figures handling swords but not in the context of fighting. The LC IA monkey from Akrotiri Xeste 3²⁰ seems to hold the sword in its right hand, the youth from LM I Chieftain Cup²¹ rests his sword against his right shoulder holding its hilt in the right hand, the near one. The charioteer from Stele I from the Grave Circle A (further on as GCA) at Mycenae holds the reins in his left (far) hand and a sword in his right (near) one,²² exactly opposite to his fellow

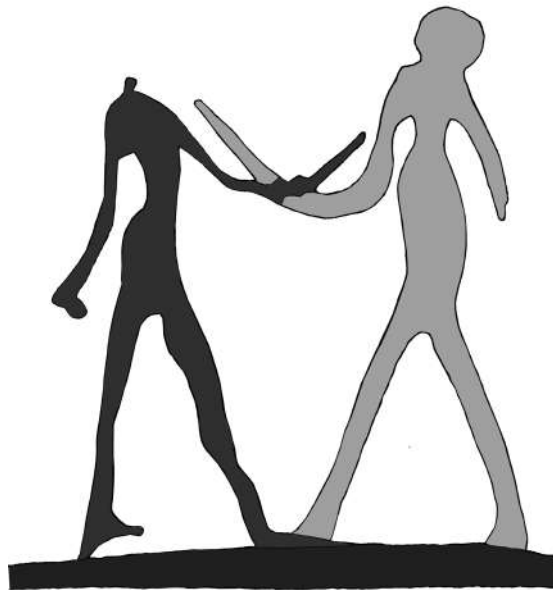


Fig. 2. Duelists from Tanagra larnax CM 40
(drawing by K. Lewartowski after Cavanagh, Mee 1995, fig. 3)

¹⁷ POURSAT 1977a, pl. XVI.3, 4, 6. The pyxis is fragmentarily preserved, thus it is not sure what weapon is used by the warrior, but it closely resembles the Enkomi handle: MURRAY, SMITH, WALTERS 1900, no. 883, p. 32.

¹⁸ For abbreviations of catalogues frequently used in this article, see the list below the text.

¹⁹ PAPADOPOULOS 2009, p. 69, thinks this is religious representation not a duel. For the new catalogue of the Tanagra larnakes, see KRAMER-HAJOS 2015.

²⁰ DOUMAS 1992, p. 128, figs. 95–96.

²¹ KOEHL 1986 with further bibliography.

²² HEURTLEY 1921–1922, p. 128. The finds from the Grave Circle A at Mycenae belong basically to the LH I period: FRENCH 2002, p. 37; CROWLEY 2008, p. 259; cf. papers by R. Laffineur, Th. Papadopoulou, A. Xenaki-Sakellariou in: LAFFINEUR (ed.) 1989.

from Stele V²³ who holds the reins in his right (near) hand and rests the left (far) one on the hilt of the sword shown against the background of his body, tilted to the left, suggesting that the warrior is left-handed. We must note that the man walking in front of the chariot is holding something in his raised left (far) hand. In this case it is possible that we are dealing with a representation of two left-handers although because of style and composition it is not conclusive. Warriors represented on two fragmentary LH IIIC vases from Tiryns (VK XI.49, XI.54) are using their swords in their right (near) hands, but another one on a LH IIIC fragmentary krater from Ugarit (VK XIII.29) is holding a large fish in his right hand and a sword in the left (near) one. The warrior from the reused stele from the Shaft Grave Γ in the Grave Circle B at Mycenae seems to hold his sword with both hands.²⁴

An indirect hint of the handedness of swordsmen is supplied by representations of figures with their weapons kept in scabbards, especially those three-dimensional ones which are terracottas. Figurines from Phylakopi (SF 2340),²⁵ Midea,²⁶ Petsofas [Fig. 3],²⁷ and Ashmolean Museum (AN1896-1908.AE.990)²⁸ all have their weapons (daggers or swords) attached to their belts in a position typical for right-handers — at their left sides or centrally, with hilts directed upwards to the right. But another figurine from Petsofas, a poorly rendered one,²⁹ has its weapon attached in a position convenient to a left-hander [Fig. 4]. A similar situation is seen on a horse rider from Mycenae if the object on his breast is a dagger and not a quiver or a bow.³⁰ The Chieftain from the Chieftain Cup has a knife at his left (near) hip as the right-handers do. A hunter on a larnax from

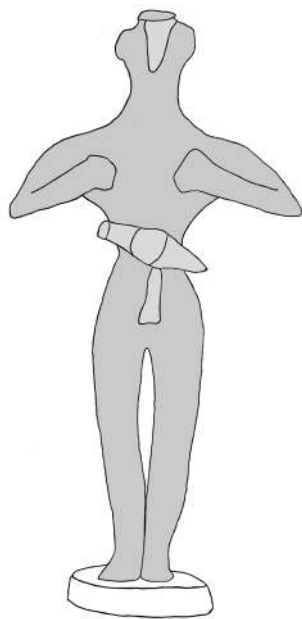


Fig. 3. Terracotta figurine from Petsofas (drawing by K. Lewartowski after Rutkowski 1991, pl. VIII.2)

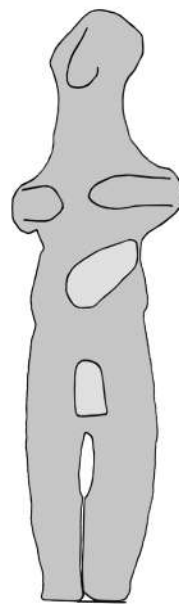


Fig. 4. Terracotta figurine from Petsofas (drawing by K. Lewartowski after Rutkowski 1991, pl. III.3)

²³ HEURTLEY 1921–1922, p. 132.

²⁴ MYLONAS 1973, pp. 50–51, pl. 40.

²⁵ FRENCH 1985, p. 223.

²⁶ DEMAKOPOULOU, DIVARI-VALAKOU 2001, p. 187.

²⁷ RUTKOWSKI 1991, nos. 1.1.8, 1.1.13, 1.1.15.

²⁸ <http://collections.ashmolean.org/object/476084> (access 16.02.2020).

²⁹ RUTKOWSKI 1991, no. 1.1.1.

³⁰ HOOD 1953; CROUWEL 1981, pp. 47 (whip in the right hand possible) and 161, cat. no. T 18; PAPADOPOULOS 2009, p. 70.

tomb 24 in Armenoi (LM IIIB-C)³¹ has his dagger attached in a position typical for right-handers (he is keeping a spear in the left, far hand). Less clear is the image built by vase paintings. Among the vases collected by Vermeule and Karageorghis there are at least eight showing warriors with swords attached to their belts. In three cases it is impossible to say on which hip, but on four kraters we see weapons attached to the right hips, e.g. on Enkomi LH IIIA1 krater (VK III.21) where a long-robed individual has his sword hanging from the baldric on his right (near) hip with the grip to the left. Before we conclude that Mycenaean vase painters tended to paint the left-handed warriors, let us have a look at a fragmentary LH III B1 krater from Enkomi (VK V.38) [Fig. 5]. Five long-robed figures with swords at their sides are preserved there: three of them have swords on their left (near) and two on the right (near) sides. The krater illustrates clearly the near side (or hand or arm) rule practiced by Mycenaean vase and wall painters, although the motivations of artists working in those media could be different. The vase painters were probably interested in showing whole swords and not the handedness thus the way to do this was to show figures facing right with swords at their right sides and those facing left at their left sides, the sides with which they are turned to the viewers, the near sides.³²

We have seen that among representations of figures holding their swords/daggers in their hands, right-handers prevail and two sure exceptions are made by the symmetric scene of a duel from Tanagra and by the krater from Ugarit. The situation is less clear when we analyse the positions of scabbards. They are sometimes attached to the left and sometimes the right sides of their owners, and the vase paintings are useless at this point because of the near side rule.

The spear was the weapon most frequently shown in art, used for the hunt and war. We have two main groups of spear representations. The first one shows warriors/hunters in a war/hunt context or aiming their weapons at enemies or game not shown or not preserved on fragments of compositions. The second group shows warriors/hunters walking or horse-riding and carrying their spears in their hands or leaning them against their shoulders. Both groups are fairly consistent in application of the near hand/arm rule.

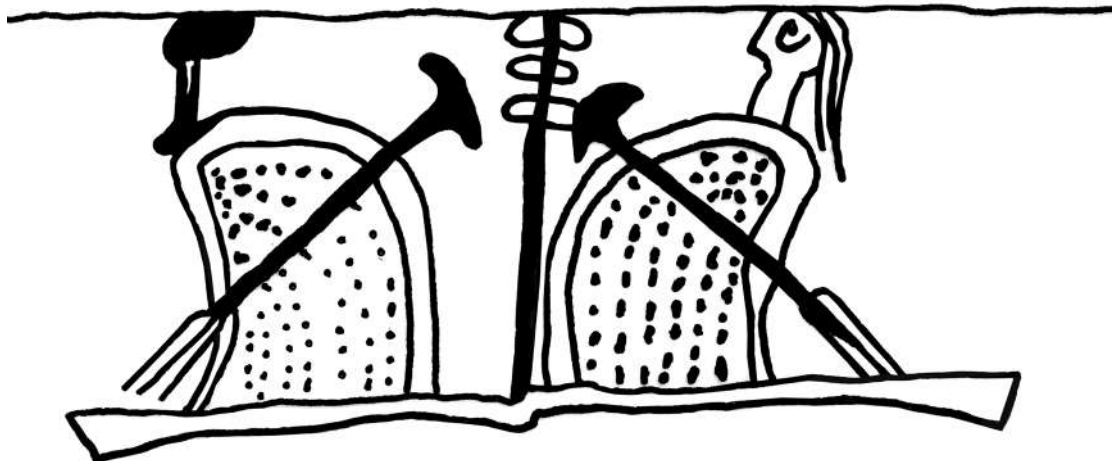


Fig. 5. Fragment of the naval scene on Enkomi krater
(drawing by K. Lewartowski after Vermeule, Karageorghis 1982, no. V.38)

³¹ TZEDAKIS 1971, pp. 219–220, fig. 5, pl. III.1; CATANIA 2012, cat. no. ARM 2.

³² It's a pity that the line of warriors marching right on fresco from The West House at Akrotiri, all with swords at their sides have their bodies hidden by tower shields

letting only the ends of scabbards to be visible; on the other hand they are carrying their long spears in their right (near) hands suggesting they are right-handed: DOUMAS 1992, pp. 47–49, figs. 26–48.

The scenes of spearmen from GCA at Mycenae: the silver Battle Krater³³ and the Lion Hunt Dagger³⁴ show a similar technique of using long spears [Fig. 6]: the right hand is gripping the lower part of the spear and gives impetus to the stroke and the left hand grips the upper part of the spear near the spearhead helping to direct it at the target. Five warriors attacking right display this technique which is consistent with right-handedness. Their shields are visible behind them hanging on baldrics, leaving both hands free. On the Krater, there are also spearmen attacking left but they are very fragmentarily preserved. Although Sakellariou recognized the right shoulder of one of them to the right of his head,³⁵ it is impossible to assess with certainty the way they are using their weapons but their shields are at their left sides typical for right-handers. But one of the warriors attacking right protects his body with a figure-of-eight shield at his right side which covers him from our view except his feet, head and arms, but both hands gripping the spear are not preserved. Again we cannot tell if he is a right- or left-hander, but the position of the shield would suggest the second possibility. Similarly, one of the warriors depicted on the Dagger (all attacking right) has his figure-of-eight shield in an atypical position: in front of him, and also covering him almost completely. In this case, one hand is not shown, we see only the hand behind his head and it disappears behind the head of another warrior following him. This suggests that the “rear” hand is the left one and the warrior is left-handed, but it is more probable that the artist didn’t want to obscure the view of the other’s head leaving us with the question of the warrior’s handedness unanswered. Another candidate for a left-handed spearmen is a partly preserved figure on the Siege Rhyton from the GCA at Mycenae³⁶ below the archers, if the object he is carrying is a spear. He is not shown in a clash with an enemy but his pose looks like a reversed version of the other spearmen. The right-handed use of a spear was illustrated on LH IIIB frescos: from Pylos (23 H 64), most probably on the Boar Hunt fresco from Tiryns (Rod. Tir. no. 172),³⁷ and reconstructed frescos from Pylos (16 H 46) and Tiryns (Rod. Tir. no. 153). A warrior or hunter using his spear in the same way is also represented on a LH IIIB1 rhyton from Ugarit (VK V.36).³⁸ Similarly,

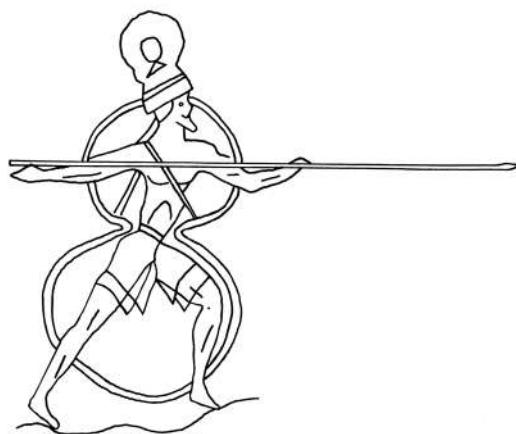


Fig. 6. One of the spearmen from the Silver Battle Krater from Mycenae (drawing by K. Lewartowski after Blakolmer 2009, pl. LVII)

³³ KARO 1930, pp. 119–120, nos. 605–607, pls. CXXIX–CXXXI; SAKELLARIOU 1974 (the complete reconstruction and detailed study); BLAKOLMER 2009, pp. 218–223.

³⁴ KARO 1930, pp. 95–97, cat. no. 394.

³⁵ SAKELLARIOU 1974, pp. 6–7.

³⁶ KARO 1930, pp. 106–108, no. 48, pl. CXXXII; KOEHL 2006, pp. 138–140, no. 425. For new reconstruction, see PAPADOPOULOS 2019, esp. pp. 407–408, pl. CLIV.

³⁷ The reconstructions in RODENWALDT 1912, fig. 55, pl. 13, show fragment no. 172 in reversed position for the sake of completeness of the composition, but pl. XI.8 shows it in the right position.

³⁸ On the other hand, a warrior from a LH IIIB krater from Ugarit with only right (far) hand preserved seems to be using his spear in the left-handed way: VONHOFF 2008, no. 197.

the hunter from the LM IB-III A Lasithi Dagger turned right uses both hands with his long spear probably in the same way as the others, but this image is a simple schematic incision where the spear and the hands form one shape.³⁹ In all those cases the spearmen were right-handers and their right hands were the near hands. This technique of manipulating spears with both hands was used for long weapons.⁴⁰

The lighter spears or javelins could be easily used with one hand. A reconstructed hunter from the Deer Hunt fresco from Pylos (16 H 46) is probably prepared to throw his spear with his raised right (near) hand [Fig. 7]. The running hunter on a LM IB ivory pyxis from Katsamba⁴¹ aims his quite large spear with his raised right hand at a bull. He is running left, but looking and aiming backwards, which means that he is showing us his back and his right hand is the far one. The artist wanted to show the right-handedness of this figure even in such atypical pose. But on a LM II collared jug from Knossos a warrior or hunter is clearly depicted holding the spear in his left, near hand.⁴² On LH IIIB/C kraters from Tiryns and Phylakopi (VK X.37 and X.38 = Sak. 24A) there are warriors throwing their weapons and they are right-handers again and their right hands are the near hands. Hunters aiming their weapons at animals were shown on larnakes from Armenoi (tomb 24)⁴³ and Episkopi,⁴⁴ on LM IIIC Mouliana krater.⁴⁵ The hunters hold the spears in their raised right (far) hands, with the spearheads directed downwards. On the chest and the lid of the famous Episkopi larnax we see two hunters moving left, gripping their spears in their midsections with their right (far) hands while the hunter from Mouliana is shown with his right hand as the near one. On one of the panels of the Armenoi specimen, the hunter is using his left (far) hand. His left-handedness is slightly obscured by the fact that in his right hand he is gripping

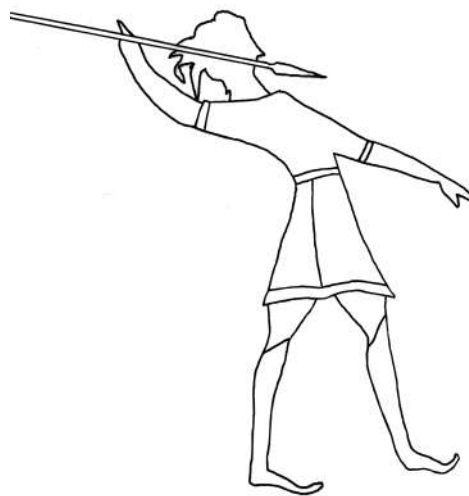


Fig. 7. Fragment of the reconstruction of the deer hunt fresco from Pylos
(drawing by K. Lewartowski after Lang 1969, pl. B)

³⁹ LONG 1978.

⁴⁰ A doubtful case is made by Stele IV from the Grave Circle A at Mycenae — a figure fronting the chariot is handling an extremely long spear aimed at the charioteer or is being stabbed by the charioteer. If the first is the case this warrior is in the reversed position in which the left (near) hand is the dominating one.

⁴¹ ALEXIOU 1967, pp. 55–56, pls. 30–33.

⁴² CROUWEL, MORRIS 1995, no. 36, pl. 3e.

⁴³ TZEDAKIS 1971, pp. 219–220, fig. 5, pl. III.1; CATANIA 2012, cat. no. ARM 2.

⁴⁴ PLATON 1947, p. 638; PLATONOS 2008 *n.v.*; CATANIA 2012, cat. no. EPI 4.

⁴⁵ XANTHOUIDES 1904, pp. 32–36, pl. 3; PAPAPOPOULOS 2009, p. 74, fig. 9.9.

the leash of his hunting dog, but still the spear manipulation is a skilled action in contrary to leash handling, so the figure is most probably a left-hander (on a larnax from tomb 11 of the same cemetery painted in a very peculiar style, there are two figures, both using their right, near hands to carry a double axe (?) and an unidentified object).⁴⁶ A similar male figure is on one of the side panels of the Episkopi larnax but he is holding the leash in his left hand when his right (near) one is raised up but empty. In this case, it is possible that the painter forgot about the spear or the figure is performing a gesture with his right (near) hand which is consistent with other representations of gestures (see below). It seems that the Episkopi painter was very careful about showing the handedness of his subjects.

A similar pose can be seen on the LH IIIC Warrior Stele (VK XI.43 = Sak. no. 21) and side B of the Warrior Vase (VK XI.42 = Sak. no. 32) [Fig. 8], from Mycenae where the enemy or game is not represented and on fragments of LH IIIC kraters from Mycenae (VK XI.1) and Iolkos (VK XI.57) where the potential enemy is not preserved. In all those cases, the warriors are holding their spears with their right (near) hands. The same can be seen on fragments of a LH IIIB/C-early LH III C krater from Bademgediği Tepe where we see warriors on ships steering towards a battle. Those moving right raise their javelins with right (near) hands, those moving left are preserved on small fragments, one of them is probably raising his javelin with his left (near) hand, but three others look like having shields on their left (near) sides and carrying their weapons in front of them in right (far) hands.⁴⁷ A LH IIIC krater from Kynos in east Lokris with similar scene [Fig. 9] doesn't leave any doubt: the warriors are shown as using for javelins their near hands only, what means that some of them are shown as right-handers and the others as left-handers.⁴⁸ A small fragment with one warrior left shows again the same “near hand rule”.⁴⁹ Other warriors are shown moving to the right, thus their right hands are the near ones.⁵⁰



Fig. 8. One of the warriors from side B of the Warrior Vase from Mycenae (drawing by K. Lewartowski after Vermeule, Karageorghis 1982, no. XI.42)

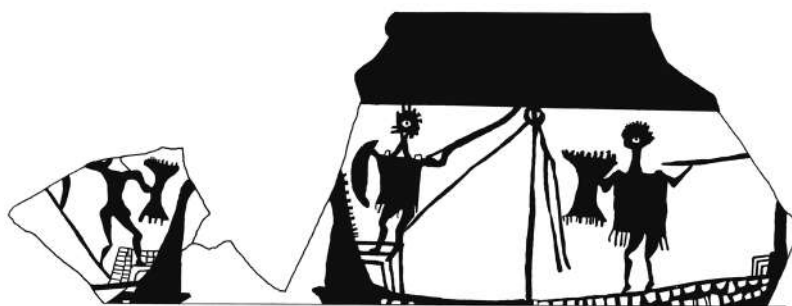


Fig. 9. Fragments of the naval battle scene on krater from Kynos (drawing by K. Lewartowski after Mountjoy 2011, fig. 2)

⁴⁶ TZEDAKIS 1971, p. 220, fig. 4, pl. III.3; CATANIA 2012, cat. no. ARM 1.

⁴⁷ MOUNTJOY 2011, pp. 485–487, fig. 3.

⁴⁸ DAKORONIA 2006a, pp. 24–26, fig. 1.

⁴⁹ DAKORONIA 2006a, p. 27, fig. 6.

⁵⁰ DAKORONIA 2006a, pp. 28–29, fig. 8; 2006b, p. 173, fig. 5 (a footed warrior). For war on sea, cf. WEDDE 1999b.

Spears can help with interpretation of the iconography in another way. We have a number of representations of warriors/hunters carrying their spears resting against their shoulders (carrying weapons is not a skilled action, but this theme has a special importance for our subject). They are shown in LM II/IIIA frescos from Knossos (Im. Kn. no. 27), LH IIIA2-B fresco from Mycenae (Rod. Myk. no. 5, 7), Orchomenos (Im. Or. no. 3),⁵¹ Pylos (26 H 64, 32 H 64) [Fig. 10], Thebes (?),⁵² Tiryns (Rod. Tir. nos. 1, 151) [Fig. 11], and on LH IIIB vases from Aradippo (VK III.29), LH IIIC from Mycenae (VK XI.42, 44), and LM IIIC from Moulana.⁵³ The striking feature of this group is that almost all represented figures carrying their spears leaning against their near shoulders regardless the orientation of their movement, and the number of spears (one or two). The possible exception is on a fresco fragment from Orchomenos⁵⁴ and a LH IIIC Tiryns krater fragment (VK XI.51), but the state of preservation makes this identification not certain in both cases. Other objects are also held on near shoulders. We can mention here a LH IIIB1 fresco from the West House at Mycenae⁵⁵ where a participant of hunt is carrying a pole with something hanging from it on his near (left) shoulder and Minoan Genii from a miniature fresco fragment from Mycenae (Im. My. no. 8) supporting a rope with their near (right) shoulders. We see that the same practice was shared by painters from Crete, and the Mycenaean ones (fresco and vase painters) through the Late Bronze Age. Interesting case is made in this context by the LM I Harvesters Vase from Agia Triada.⁵⁶ The composition on this rhyton has nothing to do with war or hunt, it shows rows of men carrying some agricultural long tools on their left (far) shoulders with exception of the “Priest”, probably the most important participant of the rite or procession — who is carrying something



Fig. 10. Warrior from the chariot scene fresco from Pylos (drawing by K. Lewartowski after Lang 1969, pl. 18)



Fig. 11. Hunter from the hunt fresco from Tiryns (drawing by K. Lewartowski after Rodenwaldt 1912, fig. 49)

⁵¹ SPYROPOULOS 2015, figs. 15, 16.

⁵² KOUNTOURI 2018, pp. 451–463.

⁵³ XANTHOUIDES 1904, pp. 32–35, pl. 3.

⁵⁴ SPYROPOULOS 2015, fig. 16.

⁵⁵ TOURNAVITOU 2015, p. 152, fig. 12. But a man preserved on fragments of LH IIIA2 fresco from the House of the

Oil Merchant at Mycenae is holding a horizontal pole with a load attached to it on his right, far shoulder: WACE 1953, p. 14, pl. 9a; CAMERON, MAYER 1995, p. 282.

⁵⁶ KOEHL 2006, no. 110, pp. 90–91.

looking like a solid cane on his right (near) shoulder. The tools carried by the participants of the procession are very long and they widen considerably just behind the heads of the carriers. Showing them in such a way that they do not cover the faces of the people in the next row would be more difficult if they were resting on near shoulders and the effect could look rather unnatural. The leader's cane, on the other hand, is narrow and much shorter. It can, therefore, be assumed that Aegean artists generally preferred to show the carrying of objects on near shoulders, if it did not pose any problems.

Shields do not add much to handedness. They accompany spears or swords and usually are shown held in left hands or on the left sides of their owners. Sometimes as is the case of Kynos, where some warriors are shown as keeping javelins in left hands, they are hold in right hands [Fig. 8]. Consequently they are usually on the far sides of the warriors. The cases of warriors protected with large shields on the right (near) side or at the front of a warrior known from the Battle Krater and the Lion Hunt Dagger from Mycenae has been analysed in the section on spears. Both are potential candidates for left-handers. The case of marching warriors from the West House at Akrotiri is different, because their shields look like kept on the right sides of their owners however the warriors are holding spears in their right hands in a way excluding such a possibility. Most probably the painter wanted to show the front sides of the shields for some reason and did it in such a way that they can be seen as shields and as simplified cuirasses at the same time (see note 32).

Shooting with a bow and arrow is certainly a skilled action. Modern right-handed archers hold their bows in their left hands and they use the right ones to draw bowstrings and lefthanders do this the other way round.⁵⁷ Few Aegean representations of archers showing them when shooting and preserved to the extent allowing recognition of their handedness suggest that this was the case in the Bronze Age as well.⁵⁸ Finds from the GCA (the Silver Siege Rhyton, the Battle Krater and the Lion Hunt Dagger [Fig. 12]), a fragment of a LM I steatite rhyton from Knossos,⁵⁹ LH IIIB fresco fragments from Pylos,⁶⁰ side B of a LH III B1 krater from Enkomi (VK V.28) [Fig. 13] all show archers holding bows in their left hands which, depending on the subjects' orientation, can be far or near (a small fragment from Iolkos, VK XI.58, is difficult to interpret). The artists were very careful about depicting right-handed archers.



Fig. 12. Archer from the Lions Hunt Dagger from Mycenae (drawing by K. Lewartowski after <https://historyofwesternartblog.wordpress.com/2015/10/09/inlaid-dagger-blade-with-lion-hunt/>; access 16.12.2020)



Fig. 13. Archers from side B of Enkomi krater (drawing by K. Lewartowski after Vermeule, Karageorghis 1982, no. V.28)

⁵⁷ I am grateful to Mr. Henryk Jurzak, the Vice President of the Polish Archery Federation for his advice.

⁵⁸ Cf. BRECOULAKI *et alii* 2008, p. 372.

⁵⁹ KOEHL 2006, p. 181, no. 769.

⁶⁰ BRECOULAKI *et alii* 2008.

The last activity directly connected with fighting or hunting is slinging. Here we have only one certain depiction of slingers in action (the Silver Siege Rhyton from Mycenae) and one doubtful example (the Stele VIII from Mycenae⁶¹). In all cases, the warriors hold the slings in their right hands (far on the Rhyton and near on the Stele) and use their left ones to stretch them as can be expected from right-handers.

Driving a chariot in war, hunting or parade is a skilled action, however only one its aspect is directly connected with handedness: manipulation of a whip or a goad.⁶² It is difficult to state if this was a skilled action in Mycenaean times. Modern drivers of horse vehicles can use whips in a very subtle manner and are trained in this skill; right-handers do it with their right hands and left-handers with their left ones. Reins, if handled with one hand, are usually kept in the left one regardless the driver's handedness although in sports in which driver is sitting in the centre of the vehicle's front (like in ancient chariots) they use their preferred hand for this.⁶³ Clear representations of charioteers with whips/goads are not very abundant. On the LM II/III A1 "Palanquin" fresco from Knossos (Im. Kn. no. 25), the charioteer holds both the reins and the whip in the right (near) one [Fig. 14]. Also side C of the LM III A Agia Triada Sarcophagus (Im. A.T. no. 2) seems to show the driver of the goat chariot holding half of the reins in her left (near) hand and the whip and the other half of the reins in her right (far) hand.⁶⁴ The charioteer on the left panel of the side A of the Episkopi larnax is depicted holding the whip in his right (near hand) and the reins in the other one. A small fragment of a fresco from Mycenae⁶⁵ shows probably the right (far) hand of a charioteer holding the whip/goad and half reins. A better preserved LH III A/B charioteer from Tiryns (Rod. Tir. no. 4) is holding the goad and reins in his right (far) hand while retaining a spear (?) horizontally in his left [Fig. 15]. In this case we do not know which action is more skilled thus

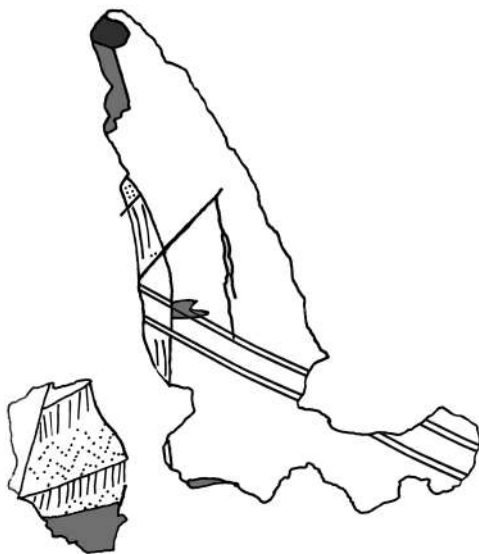


Fig. 14. Charioteer from the "Palanquin" fresco from Knossos (drawing by K. Lewartowski after Crouwel 1981, pls. 104–105)



Fig. 15. Charioteer from Tiryns fresco (drawing by K. Lewartowski after Crouwel 1981, pl. 91)

⁶¹ According to HEURTLEY 1921–1922, p. 135.

⁶² CROUWEL 1981, p. 111.

⁶³ I am deeply grateful to Mr. Marek Zalewski from the Polish Equestrian Federation for his patience in answering my questions and for the information he provided.

⁶⁴ LONG 1974, esp. p. 55.

⁶⁵ RODENWALDT 1921, p. 169, n. 154, no. A4; CROUWEL 1981, cat. no. W 22.

it is equally possible that the charioteer was right- as left-handed. A small fragment of a LH IIIB fresco from Tiryns (Rod. Tir. no. 120) shows the right (near) hand of a female driver holding a goad and half of the reins. According to Rodenwaldt's reconstruction the goad is visible on another LH IIIB fresco fragment from Mycenae (Rod. Myk. no. 15) and although the hand is not preserved it would be the right (near) one.

The Stele I from CGA at Mycenae was mentioned in the context of swords — the charioteer holds the reins in his left (far) hand and a sword in the right (near) one. A fresco fragment from Argos shows the left hand of a charioteer holding reins, but we do not know what is occupied his right one with.⁶⁶ Similarly the Agia Triada Sarcophagus (Im. A.T. no. 2) side D shows a charioteer of the griffin chariot holding reins in her left (near) hand, but the state of preservation of the paint does not allow for any observation on the right hand's action. Despite the very small size of the preserved fragment, preventing a reliable reconstruction, it is possible that a LH IIIC vase from Lefkandi may have shown a right-handed charioteer with his goad (VK XI.37).

We have two possible LH IIIC examples of a whip from a bowl from Tiryns (VK XI.19 = Sak. 36) in left (far) hand and a double-pronged goad from a krater from Lefkandi, in this case it would be the right (near) hand. The fragmentary state of those vessels does not allow for reliable reconstruction.

The interpretation of Stele V from CGA at Mycenae is not clear: the charioteer is holding reins in his right hand and his left one rests on his sword's grip (see above). Is he left-handed or on the contrary — is he using his preferred hand for driving while the left one is just resting?

The representations of charioteers seem to show the tendency of artists to depict right-handed chariot drivers.

The last skilled action we can discuss here is the play of instruments, mostly lyres, kitharas, phorminxes or harps. Musicians use both hands for playing but their role is different. All representations preserved well enough to allow the reconstruction of the playing technique show that the musicians were right-handed: they held instruments with their left hands used also to suppress the strings (depending on the type of instrument), and they stroked strings with their right hands. We can see this on Cycladic harpists from EC II (the soundbox on the right hip), on the LC I fresco of monkeys from Xeste 3 at Akrotiri, LM III terracotta group from Palaikastro as well as on the LM II-III La Grande Processione fresco and the Sarcophagus from Agia Triada. Interestingly enough the player from the fresco is oriented right and the one from the Sarcophagus left but both are shown playing in the same way. It means that they were portrayed realistically at least from this aspect. Because both works could have been by the same author it is even more important for our subject showing the artists took care to show real technique and consequently the right-handedness of those musicians. It is a pity that the hands of the Lyre Player from Pylos (PY 43 H 6) are not preserved. It is also impossible to determine the technique of the player from a fragmentary LH IIIB krater found at Nauplion (VK IX.14.1) because of the painter's highly stylised manner.⁶⁷

The sistrum player from the Harvesters Vase is using his right (near) hand for playing the instrument.

Representations of gestures constitute a class of actions which are not skilled but important for our topic.⁶⁸ Among gestures classified by Wedde,⁶⁹ there are some executed symmetrically with both hands and others in which the roles of hands are different and usually one seems to be active and the other one passive. The second group of gestures (or postures)⁷⁰ and in which we are

⁶⁶ TOURNAVITOU, BRECOULAKI 2015, pp. 220–223.

⁶⁹ WEDDE 1999a. Cf. HITCHCOCK 1997, esp. pp. 113–116.

⁶⁷ For types of instruments, playing techniques, the catalogue of representations, see YOUNGER 1998.

⁷⁰ See MORRIS, PEATFIELD 2002, p. 109.

⁶⁸ See CORBALLIS 2003 on connection between speech, gesture and right-handedness.

interested comprise Wedde's gestures nos. 2–8 (in other sections of this paper we will address also gestures 18–21 which are connected to carrying objects). In contrary to all other actions discussed here, whether skilled or not, the hand preference more probably results not from biological reasons but is connected with beliefs, habits, traditional opposing dualities such as left-right, dark-light etc. It is not clear to what extent the artists were aware of this but surely they knew very well how the ritual gestures should be executed. For our purpose the classification is not essential, we will treat all asymmetrical gestures together. Three groups of Minoan gestures show such a laterality. The first one is usually called the “adoration gesture”⁷¹ in which the right fist touches the forehead of male or female figurine. The second one consists of a group of gestures collected here in one set in which the right hand is upraised in front of the chest or the head of a figurine. The third one is much rarer than the two former ones — in this gesture the right palm rests on the left shoulder, the left hand is below the right one; in one case the palm of the left hand rests on the wrist of the right one.

Those gestures are represented richly by terracottas and bronzes from MM III to LM III.⁷² The right hand is almost exclusively the one which is higher, or active or seems to be more active than the left one. A female terracotta figurine in “Klage oder Ausichtsgestus” from Chamaizi⁷³ seems exceptional in raising her left hand higher than the right one in front of her face. Similar gestures, resembling G2, G4, G5, are known from the Mycenaean vase paintings in LH IIIA2 – LH IIIC. They are usually performed by individuals accompanying chariots on foot (e.g. VK IV.13, IV.14, IV.18, V.170) but also by the woman on the Warrior Vase (VK XI.48) and a child on the krater from Agia Triada in Elis.⁷⁴ In all listed cases the acting hand is the left, far one.

Because gestures have ritual character we include into this group also representations of figures holding rods, lances or staffs vertically in front of them, probably presenting them (Wedde's G8; the so called commanding gesture⁷⁵). We know it from the famous LM I Chieftain Cup⁷⁶ and an ivory plaque from the Delian Artemision.⁷⁷ The Minoan chieftain is turned to the left, the Mycenaean warrior to the right [Fig. 16] but they both present their staffs or lances with their right hands, in the first case the far one and in the second the near one. A man from a LH IIIB2 krater from Mycenae (VK IX.2 = Sak. no. 11) turned left is holding vertically a short stick in his left (near hand) but this gesture does not seem to be a presentation of the object and from the point of a viewer of the vase the holder has it behind him instead of in front of him.

With the exception of the Mycenaean vase painters the artists almost unanimously represented unsymmetrical gestures as executed with right hands or in which right hands are more active, more important, more exposed. In the two-dimensional art, this is emphasized by showing right hands sometimes as far ones sometimes as near ones.

Carrying a vessel is another unskilled action but with importance for our discussion. The vessels can be of large dimensions or heavy (bimanual action) or of small dimensions (unimanual one). In the case of large handled vases we can expect that right-handers would hold the handles in their right hands and support the bottoms with their left hands. And this is the case of a LH IIIB Minoan Genius from the ivory plaque from Pylos⁷⁸ and of another from the LM I chlorite

⁷¹ E.g. MORRIS 2001, p. 246.

⁷² As collected in VERLINDEN 1984; SAPOUNA-SAKELLARAKIS 1995; RETHEMIOTAKIS 2001.

⁷³ SAPOUNA-SAKELLARAKIS 1995, p. 109, pl. 39.2.

⁷⁴ SCHOINAS 1999, p. 258, fig. 1.

⁷⁵ E.g. NIEMEIER 1988, esp. pp. 238–242; BLAKOLMER 2019, p. 54.

⁷⁶ KOEHL 1986.

⁷⁷ GALLET DE SANTERRE, TRÉHEUX 1947–1948, pp. 156–162, pl. XXV; POURSAT 1977b, p. 157, pl. XIV.1; TOURNAVITOU

1995, pp. 491–492. POURSAT 1977b, p. 152, and TOURNAVITOU 1995, p. 527, date the deposit to LH IIIA2–B2.

⁷⁸ BLEGEN, RAWSON 1966, p. 202, fig. 284; GILL 1964, no. 1; POURSAT 1977a, no. 393/7840.

triton from Malia [Fig. 17].⁷⁹ Both are turned to the right what means their right hands are the far ones (Minoan Genii carrying jugs were represented mostly on seals⁸⁰). We see exactly the same on a MC III bridge-spouted jug from Akrotiri (“Ganimedes Jug”) where a man is pouring a liquid from his large jug to the small cup of another man [Fig. 18].⁸¹ On the Cupbearer and Corridor of the Procession LM II-III A frescos from Knossos (Im. Kn. no. 22) there are fragments of at least two men carrying large vessels whose pose could be safely restored. Interestingly enough the Cupbearer⁸² is walking left and the member of the Group C from the West Porch⁸³ is walking right although both are carrying their vases in the way described above, which means that the painter really wanted to show the right-handed individuals since the right hand of one of them is the near one and of the other — the far one. A boy from Xeste 3 at Akrotiri is holding a shallow metal vase exactly in the same way, and the hand holding the handle is the far one. But the mature man from the same wall is shown differently: he is pouring a liquid from a large metal hydria while securing the base with his right (near) hand and with the wrist of his left hand he is supporting the handle.⁸⁴



Fig. 16. Ivory plaque from the Delian Artemision (courtesy École française d'Athènes; source: Gallet de Santerre, Tréheux 1947–1948, frontispiece)



Fig. 14. — La représentation, interprétation graphique (éch. 1:1; dessin I. Athanassiadi)*.

Fig. 17. Chlorite triton from Mallia (courtesy Pasquale Darcque and École française d'Athènes; source: Baurain, Darcque 1983, fig. 14)

⁷⁹ BAURAIN 1985, p. 95, fig. 1; BAURAIN, DARQUE 1983.

⁸⁰ E.g. GILL 1964; WEINGARTEN 1991; REHAK 1995; BLAKOLMER 2015.

⁸¹ NIKOLAKOPOULOU 2010; VLACHOPOULOS 2015, p. 42, fig. 3, with further bibliography.

⁸² EVANS 1928, p. 705, pl. XII.

⁸³ EVANS 1928, p. 725, fig. 450; Evans reconstructed there three men in the same pose, but only one is preserved

to an extent not leaving any doubt about his carrying of a vessel.

⁸⁴ DOUMAS 1992, p. 130, figs. 109–115; VLACHOPOULOS 2008, p. 452.

We have two scenes showing individuals carrying small vessels in a way similar to the one described above and both from Akrotiri. On the “Ganimedes Jug” mentioned above [Fig. 18] the man on the right side is holding his small cup on the palm of his left (near) hand and securing the rim with the right one. The priestess from the West House is carrying the small vase on the palm of her left (near) hand and using the right one to keep the fire that was kept in the vessel⁸⁵ — typical for right-handers. Such representations are rare — normally small drinking vessels, usually kylikes, can be carried with one hand gripping the stem and the left one prevails. This is the case of two women from a LH IIIB2 fresco from Thebes (near hands),⁸⁶ a man from a LH IIIA1 krater from Enkomi (VK III.17) (a cup?, phiale?, far hand), a man from Agia Triada in Elis LH IIIC krater with *prothesis scene* (far hand) [Fig. 19],⁸⁷ a woman on a Tanagra LH IIIB larnax from tomb 36 (CM 48, far hand) [Fig. 20], and preserved left hand of a LH IIIC terracotta figurine from Amyklai in Lakonia.⁸⁸ On side A of a LM IIIB larnax from Episkopi, the first figure in the left panel, has a kylix in his raised left (far) hand and the man in the right panel is holding a kylix in his right (far) raised hand [Fig. 21]⁸⁹ as is a woman on a throne from a LH IIIC krater from Tiryns (VK XI.19.1). There are preserved two fragments of the Campstool Fresco from Knossos (Im. Kn. no. 26) with hands gripping stems of two different type vessels: fragment A shows a man’s right near hand with a kylix, and fragment G a man’s left near hand with a golden chalice.⁹⁰ The fresco is very poorly preserved so we can only conjecture that in this case the artist preferred the symmetry of his composition over reality. The depiction of the LH IIIB fresco from Tiryns (Rod. Tir. no. 101) is unclear, only a woman’s left far hand on a rim of a bottle or stirrup jar is preserved — probably the right one carried the vessel.



Fig. 18. Scene from the bridge-spouted jug from Akrotiri (drawing by K. Lewartowski after Vlachopoulos 2015, fig. 3)



Fig. 19. Fragment of the prothesis scene from a fragmentary krater from Agia Trada in Elis (drawing by K. Lewartowski after Schoinas 1999, fig. 1)

⁸⁵ DOUMAS 1992, p. 47, figs. 24–25.

⁸⁶ KOUNTOURI 2018, p. 453, fig. on p. 450, fig. 1.

⁸⁷ SCHOINAS 1999, p. 258; GALLOU 2005, p. 100 — an axe or hammer.

⁸⁸ DEMAPOULOU 1982, pp. 54–56, pls. 25–26.

⁸⁹ MARINATOS 1993, p. 237.

⁹⁰ EVANS 1935, pp. 323–325, pl. XXXI.

As we've seen, the far hand dominates. This can mean that the artists were generally showing real scenes which have usually a funerary context. According to the beliefs known from many cultures, death belongs to the left side while life to the right one,⁹¹ and many of the kylikes were kept in the left hands.

Nursing a baby is not a skilled manual action (it needs other skills of course) but belongs to important lateralities. Mycenaean art offers figures of *kourotrophoi* — mortal women or goddesses, carrying small children and sometimes breast-feeding them. The majority of this class is made by Mycenaean idols of all types except Late Psi [Fig. 22].⁹² They are usually standing, but there is also a sitting one from Louvre⁹³ and one from Voula.⁹⁴ The only bronze *kourotrophos*, a pendant from the Cyclades in the George Ortiz Collection is of problematic chronology. Most probably Sub-Mycenaean/Protogeometric, it was dated by Eckstein to MM III.⁹⁵ With a few exceptions⁹⁶ the babies are shown as leaning against the left breasts of their mothers.



Fig. 20. Woman with a kylix from Tanagra larnax CM 48 (drawing by K. Lewartowski after Cavanagh, Mee 1995, fig. 9)



Fig. 21. An individual with a kylix from the Episkopi larnax (drawing by K. Lewartowski after Meroussis 2018, fig. 14)



Fig. 22. Example of Mycenaean kourotrophos, Zurich 3956 (drawing by K. Lewartowski after Pilafidis-Williams 2009, fig. 8)

⁹¹ On dualisms from anthropological perspective, see, e.g., HERTZ 1960, esp. pp. 99–109; NEEDHAM 1973; MAL-LORY 1989, pp. 140–141; McMANUS 2002, pp. 22–23.

⁹² BUDIN 2011, pp. 303–309; 2016, pp. 604–605; OLSEN 1998, pp. 384–388; PILAFIDIS-WILLIAMS 2009.

⁹³ Inv. no. CA 1872; MOLLARD-BESQUES 1954, pl. I; PILAFIDIS-WILLIAMS 2009, p. 120.

⁹⁴ OLSEN 1998, p. 387.

⁹⁵ <https://www.georgeortiz.com/objects/greek-world/064-mother-and-child-mycenaean/> (access 03.03.2020); ECK-STEIN 1959, p. 644; 1961, p. 404.

⁹⁶ Cf. fragment of a Tau idol from the British Museum: PILAFIDIS-WILLIAMS 2009, fig. 10 and p. 116.

Crete is lacking kourotrophic representations.⁹⁷ Instead we have a series of anthropomorphic vases, sometimes called “Vase-Goddesses”, dated to EM II-EM/MM and usually having feminine features like breasts.⁹⁸ Seven of them are embracing jugs with one hand (visible in five cases) in the way similar to baby-nursing.⁹⁹ Some of the jugs are shown in more realistic manner, like on the famous Goddess of Myrtos, the Snake Goddess from Koumasa HM 4137 or Koumasa HM 4993 [Fig. 23], in three other cases the jugs are the figurines’ shoulders at the same time but the vessels are still recognizable (Koumasa HM 4138, Agios Myron, Trapeza Cave, Yiophyrakia). Except the Trapeza figurine, all others have the jugs at their left shoulders. The formal similarity to Mycenaean *kourotrophoi* is quite clear despite of difference in style and chronology. It makes probable that the intention of Minoan makers of those figurines was to show babies symbolically as jugs. It is not our aim here to discuss the meaning and use of those “Vase-Goddesses”. From our point of view it is important that both Early Minoan and much later Mycenaean makers had the same scheme of baby nursing in mind — a baby should be shown on the left side of its mother. This is a widely shared conviction in different areas and epochs. Already Uhrbrock had shown that there is a great prevalence in art of women with children on the left arm¹⁰⁰ although McManus pointed out that in Renaissance paintings of the Madonna with Child in the 13th century the Child is on the left, but in 15th–16th-century scenes the child is usually on the right, which change can be explained by developments in theology.¹⁰¹ It seems that in our case the artists were guided by the observation of real mothers who tend to carry their children on the left sides regardless their handedness whatever the reason for that is.¹⁰²

Before coming to the conclusions we can briefly mention some other representations which can be of some use in this discussion.

The Saffron Gatherers from LC I Akrotiri¹⁰³ use their right (far) hands for picking the crocuses (the older one uses her left one for holding a basket). The great majority of pictures representing modern saffron gatherers from Morocco, Iran etc. show them using their hands exactly in the same way. To make the picture less clear, we have to note that the monkey from the MM III/LM I Saffron

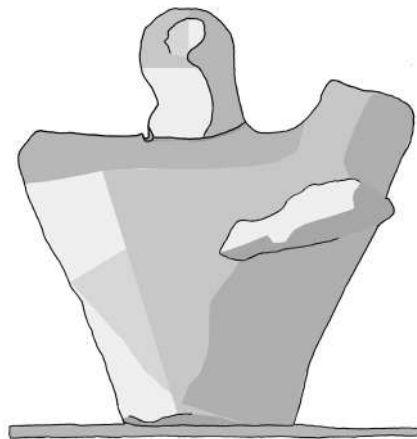


Fig. 23. “Vase-Goddess” from Koumasa, HM 4993
(drawing by L. Goodison after Xanthoudides 1924, pl. 19:4993)

⁹⁷ BUDIN 2016, pp. 596–598; OLSEN 1998, pp. 388–390.

⁹⁸ See esp. BUDIN 2010, pp. 23–24; CADOGAN 2010; FOWDEN 1990; GOODISON 2009, pp. 235–236; NIKOLAIDOU 2012, pp. 44–46; PEATFIELD 1995, p. 223.

⁹⁹ FOWDEN 1990, pp. 17–18; OLSEN 1998, p. 388.

¹⁰⁰ UHRBROCK 1973, pp. 32–34.

¹⁰¹ McMANUS 2002, p. 330.

¹⁰² McMANUS 2002, p. 330; PILAFIDIS-WILLIAMS 2009, p. 113; UHRBROCK 1973, p. 34.

¹⁰³ DOUMAS 1992, pp. 130–131, figs. 122–130; on saffron and crocuses in the Aegean Bronze Age, see DAY 2011.

Gatherer fresco from Knossos (Im. Kn. no. 1) uses its left (near) hand for picking saffron.¹⁰⁴ Because this is only a small fragment we do not know what the right hand was doing. It is also possible that the painter hadn't been concerned with handedness because his subject was an animal or had other reasons to show it this way. On the other hand the Gatherers from Akrotiri are moving left,¹⁰⁵ thus they compose very nicely with their right hands stretching out horizontally in front of them.

Some of the LM IIIB1 idols from the House of the Idols at Mycenae were carrying objects, now lost, in their raised right hands but never in left ones.¹⁰⁶ Probably those objects were hammers/axes¹⁰⁷ or weapons.¹⁰⁸ Nevertheless, those idols were right-handed.

Less instructive is the case of LH IIIB frescos depicting women carrying idols/little girls in their right (near) hands. We know two such cases from Tiryns (Rod. Tir. no. 103) and Mycenae.¹⁰⁹ Related to those frescos is a female procession from a Tanagra LH IIIB larnax CM 50, where the leading figure seems to carry a small figurine on her left (far) hand. In this case the range of interpretations is wider,¹¹⁰ thus it is very difficult to tell if the far hand had been chosen because for some reason it was important to engage the left one for this ritual action (funerary context) or maybe it was just the matter of composition.

On larnakes from Tanagra tombs 6 (CM 31) and 51 (CM 45, 46) there are figures touching columns or chequered objects with their far hands (right or left). In all these cases, we have symmetrical compositions, which probably explains the use of different hands. Taking into account also the duel scene mentioned above, we can suppose that the Tanagra artists were not especially concerned with handedness, and the composition was more important to them.

Two women shown carrying necklaces on frescos from Akrotiri¹¹¹ and Mycenae¹¹² (LC IA and LH IIIB) are turned in opposite direction and handle their objects in the far hands which are respectively the left and the right one. This difference can have many explanations such as various traditions, the meanings of this gesture, the character of the depicted women (e.g., a mortal one as opposed to a goddess).

In the light of the evidence presented above, it is clear that figures using their right hands are shown much more frequently than the others. It is absolutely clear as concerns three-dimensional representations, which are very rarely occupied with skilled activities: mostly *kourotrophoi* and performers of ritual gestures. In the first case we are not dealing with handedness and in the second one the role of the hands was defined on religious or cultural grounds but both prove convincingly that the artists depicted such lateralities in line with reality. In the two-dimensional representations, the unimanual skilled actions are almost always performed with right hands and bimanual in ways typical for right-handers. The number of warriors, hunters, or charioteers shown as left-handers is very low and the musicians are all right-handers. The same applies, somewhat surprisingly, to the unskilled action of the carrying of large or heavy vessels where the right hands hold vessels handles and the left ones support bottoms. It was shown that way, regardless the orientation of the subjects. About half of all exceptions to right-handedness are to be found in vase painting or on larnakes which both present schematic and simplified styles. In one case at least, the artist from Tanagra, realism was sacrificed for the symmetry of the duel scene. We can conclude

¹⁰⁴ EVANS 1921, pp. 265–266, pl. IV.

¹⁰⁵ VLACHOPOULOS 2008, p. 453.

¹⁰⁶ MOORE, TAYLOUR 2000, cat. nos. 69–63, 68–1572, 68–1589.

¹⁰⁷ MOORE, TAYLOUR 2000, pp. 93–101.

¹⁰⁸ WHITTAKER 2009, pp. 102–103.

¹⁰⁹ KRITSELI-PROVIDI 1982, cat. no. B-2. For the reconstruction and discussion, see also, e.g., BOULOTIS 1979; IMMERWAHR 1990, My. no. 4, Ti. no. 4, pp. 119–120; BUDIN 2007–2008, pp. 102–103; JONES 2009.

¹¹⁰ SPYROPOULOS 1974, pp. 12–13 (palladion); CAVANAGH, MEE 1995, pp. 46–47 (soul or small goddess); IMMERWAHR 1995, p. 117 (figurine); GALLOU 2005, pp. 57–58 (*theophoreia*).

¹¹¹ DOUMAS 1992, pp. 121–130, figs. 100–108; VLACHOPOULOS 2008, p. 453.

¹¹² KRITSELI-PROVIDI 1982, cat. no. B-1 (“Mykenaiia”); JONES 2009.

that the majority of artists depicting those skilled and unskilled activities were correct as regards the handedness of their subjects. It is also clear that the right hand was usually the near hand which means that the figures were usually turned to the right. This is especially true as regards swords, daggers and spears (the last ones when operated both bi- and unimanually). The charioteers using whips or goads, archers and musicians but also the holders of large vessels although represented as right-handed could be oriented right as well as left. For some reason in this case, it was not so important to depict their right hands as the near ones. We can hypothesize that such activities, involving both hands, made them more equal and their actions less characteristic.

Although the right-handedness of warriors and hunters was so important for artists, the real position of scabbards, connected with handedness, usually correctly shown in terracottas, was much less important for vase painters who were concerned with depicting them on the near sides of their owners, irrespective of whether they were left or right ones. A similar situation is seen in the case of carrying spears and other long objects on shoulders (this time shown mostly on frescos) which should be the near ones. Raising up small drinking vessels, usually kylikes, known from paintings on walls, vases and larnakes can be performed with the right as well as the left hand which can be near or far as well. In this case there is no difference between frescos and other media. Gestures of raised hands known from LH vase paintings are performed with left, always far hands. Perhaps Mycenaean gestures have different meaning than those known from Minoan terracottas and bronzes.

Even though the Aegean art is not “realistic”,¹¹³ the artists when creating their world(s) used elements well known to them and right-handedness was so common that they even didn’t have to think about it to show most of their subjects as right-handers. The same applies to activities with hand preference, whatever were the grounds of such literalities: biological, instinctive, cultural, ritual etc. which were commonly performed as gestures. But I think that artists did it at least in some cases deliberately, e.g. the Silver Battle Krater from Mycenae where it would be much easier for the artist to show warriors oriented left as left-handed instead of right-handed. On the other hand, the list of possible candidates for left-handers shown as such deliberately is very short. The most probable, although not completely sure, are depictions on the Stele V, the Silver Battle Krater and Lion Hunt Dagger from Mycenae, the collared jug from Knossos, and the larnax from Armenoi. Many cases of “left handedness” resulted probably from the fact that the composition was more important for some artists than the depiction of handedness like on the Kynos krater.

It seems also that this tendency to represent right-handed subjects or the real arrangement of hands in unskilled actions was common among the Aegean artists regardless of chronology, culture or sex of represented figures.

Abbreviations

CM	CAVANAGH, MEE 1995: catalogue of Tanagra larnakes
HM	Heraklion Museum inv. number
Im.	IMMERWAHR 1990: catalogue of the Aegean frescos
Rod. Myk.	RODENWALDT 1921: the publication of frescos from Mycenae
Rod. Tir.	RODENWALDT 1912: publication of frescos from Tiryns
Sak.	SAKELLARAKIS 1992: the catalogue of Mycenaean pictorial vases from the National Archaeological Museum at Athens
VK	VERMEULE, KARAGEORGHIS 1982: the catalogue of Mycenaean pictorial vase painting

¹¹³ ESTRIN 2015, esp. p. 120.

Bibliography

- ALEXIOU 1967 S. ALEXIOU, *Υστερομινωικοί τάφοι λιμένος Κνωσού (Κατσάμπα) / Ysterominōikoi taphoi limenos Knōsou (Katsampa)* [Late Minoan tombs of the Knossos harbour (Katsamba)] (= *Βιβλιοθήκη της εν Αθήναις Αρχαιολογικής Εταιρείας* 56), Athens.
- BAURAIN 1985 C. BAURAIN, “Pour une autre interprétation des génies minoens”, [in:] *L’iconographie minoenne. Actes de la Table Ronde d’Athènes (21–22 avril 1983)*, ed. P. DARQUE, J.-CL. POURSAT (= *Suppléments au Bulletin de correspondance hellénique* 11), Paris, pp. 95–118.
- BAURAIN, DARQUE 1983 C. BAURAIN, P. DARQUE, “Un triton en pierre à Malia”, *Bulletin de correspondance hellénique* 107, pp. 3–73.
- BLAKOLMER 2009 F. BLAKOLMER, “The silver Battle Krater from Shaft Grave IV at Mycenae: evidence of fighting ‘heroes’ on Minoan palace walls at Knossos?”, [in:] *Epos: Reconsidering Greek Epic and Aegean Bronze Age Archaeology. Proceedings of the 11th International Aegean Conference, Los Angeles, UCLA – The J. Paul Getty Villa, 20–23 April 2006*, ed. S. P. MORRIS, R. LAFFINEUR (= *Aegaeum* 28), Liège, pp. 213–224.
- BLAKOLMER 2015 F. BLAKOLMER, “The many-faced ‘Minoan Genius’ and his iconographical prototype Taweret. On the character of Near Eastern religious motifs in Neopalatial Crete”, [in:] *There and Back Again – The Crossroads II. Proceedings of an International Conference Held in Prague, September 15–18, 2014*, ed. J. MYNÁZOVÁ, P. ONDERKA, P. PAVŮK, Prague, pp. 197–219.
- BLAKOLMER 2019 F. BLAKOLMER, “No kings, no inscriptions, no historical events? Some thoughts on the iconography of rulership in Mycenaean Greece”, [in:] *From ‘LUGAL.GAL’ to ‘Wanax’. Kingship and Political Organisation in the Late Bronze Age Aegean*, ed. J. M. KELDER, W. J. I. WAAL, Leiden, pp. 49–94.
- BLEGEN, RAWSON 1966 C. W. BLEGEN, M. RAWSON, *The Palace of Nestor at Pylos in Western Messenia*, vol. I: *The Buildings and Their Contents*, Princeton.
- BOULOTIS 1979 Ch. BOULOTIS, “Zur Deutung des Freskofragmentes Nr 103 aus der tirynter Frauenprozession”, *Archäologisches Korrespondenzblatt* 9, pp. 59–67.
- BRECOULAKI *et alii* 2008 H. BRECOULAKI, C. ZAITOUN, S. R. STOCKER, J. L. DAVIS, “An archer from the Palace of Nestor: a new wall-painting fragment in the Chora Museum”, *Hesperia* 77, pp. 363–397.
- BUDIN 2007–2008 S. L. BUDIN, “A new look at the Mavrospelio ‘Kourotrophos’”, *Aegean Archaeology* 9, pp. 91–103.
- BUDIN 2010 S. L. BUDIN, “Maternity, children and ‘Mother Goddesses’ in Minoan iconography”, *Journal of Prehistoric Religion* 22, pp. 6–38.
- BUDIN 2011 S. L. BUDIN, *Images of Woman and Child from the Bronze Age: Reconsidering Fertility, Maternity, and Gender in the Ancient World*, Cambridge.
- BUDIN 2016 S. L. BUDIN, “Maternity in the Bronze Age Aegean”, [in:] *Women in Antiquity: Real Women across the Ancient World*, ed. S. L. BUDIN, J. M. TURFA, Abingdon – New York, pp. 595–607.
- CADOGAN 2010 G. CADOGAN, “Goddess, nymph or housewife; and water worries at Myrtos?”, [in:] *Cretan Offerings: Studies in Honour of Peter Warren*, ed. O. KRZYSZKOWSKA (= *British School at Athens Studies* 18), London, pp. 41–47.
- CAMERON, MAYER 1995 M. CAMERON, A. MAYER, “Frescoes”, [in:] I. TOURNAVITOU, *The ‘Ivory Houses’ at Mycenae* (= *British School at Athens Supplementary Volume* 24), London, pp. 280–283.

- CASHMORE, UOMINI, CHAPELAIN 2008 L. CASHMORE, N. UOMINI, A. CHAPELAIN, “The evolution of handedness in humans and great apes: a review and current issues”, *Journal of Anthropological Sciences* 86, pp. 7–35.
- CATANIA 2012 A. M. CATANIA, *Le larnakes dipinte nel TM III: analisi iconografica e stilistica*, Catania, unpublished MA thesis.
- CAVANAGH, MEE 1995 M. CAVANAGH, Ch. MEE, “Mourning before and after the Dark Age”, [in:] *Klados. Essays in Honour of J. N. Coldstream*, ed. Ch. MORRIS, C. E. MORRIS (= *Bulletin of the Institute of Classical Studies. Supplement* 65), London, pp. 45–61.
- CORBALLIS 2003 M. C. CORBALLIS, “From mouth to hand: gesture, speech, and the evolution of right-handedness”, *Behavioral and Brain Sciences* 26, pp. 199–260.
- COREN, PORAC 1977 S. COREN, C. PORAC, “Fifty centuries of right-handedness: the historical perspective”, *Science* 187 (4317), pp. 631–632.
- CROUWEL 1981 J. H. CROUWEL, *Chariots and Other Means of Land Transport in Bronze Age Greece* (= *Allard Pierson Series* 3), Amsterdam.
- CROUWEL, MORRIS 1995 J. H. CROUWEL, C. E. MORRIS, “Pictorial pottery of Late Minoan II-III A2 Early from Knossos”, *Annual of the British School at Athens* 90, pp. 157–182.
- CROWLEY 2008 J. L. CROWLEY, “Mycenaean art and architecture”, [in:] *The Cambridge Companion to the Aegean Bronze Age*, ed. C. W. SHELMERDINE, Cambridge, pp. 258–288.
- DAKORONIA 2006a F. DAKORONIA, “Mycenaean Pictorial Style at Kynos, East Locris”, [in:] *Pictorial Pursuits: Figurative Painting on Mycenaean and Geometric Pottery. Papers from Two Seminars at the Swedish Institute at Athens in 1999 and 2001*, ed. E. RYSTEDT, B. WELLS, Stockholm, pp. 23–29.
- DAKORONIA 2006b F. DAKORONIA, “Bronze Age pictorial tradition on Geometric pottery”, [in:] *Pictorial Pursuits: Figurative Painting on Mycenaean and Geometric Pottery. Papers from Two Seminars at the Swedish Institute at Athens in 1999 and 2001*, ed. E. RYSTEDT, B. WELLS, Stockholm, pp. 171–176.
- DAY 2011 J. DAY, “Crocuses in context: a diachronic survey of the crocus motif in the Aegean Bronze Age”, *Hesperia* 80, pp. 337–379.
- DEMAKOPOULOU 1982 K. DEMAKOPOULOU, *To μυκηναϊκό ιερό στο Αμυκλαίο και η YE III Γ περίοδος στη Λακωνία / To mykēnaïko iero sto Amyklaio kai ē YE III Γ periodos stē Lakōnia* [The Mycenaean temple at Amyklaion and the LH IIIC Period in Laconia], Athens.
- DEMAKOPOULOU, DIVARI-VALAKOU 2001 K. DEMAKOPOULOU, N. DIVARI-VALAKOU, “Evidence of cult practice at Midea”, [in:] *Potnia, Deities and Religion in the Aegean Bronze Age. Proceedings of the 8th International Aegean Conference. Göteborg, Göteborg University, 12–15 April 2000*, ed. R. LAFFINEUR, R. HÄGG (= *Aegaeum* 22), Liège – Austin, pp. 181–191.
- DENNIS 1958 W. DENNIS, “Early graphic evidence of dextrality in man”, *Perceptual and Motor Skills* 8, pp. 147–149.
- DOUMAS 1992 Ch. DOUMAS, *The Wall-Paintings of Thera*, Athens.
- EATON-KRAUSS 1984 M. EATON-KRAUSS, *The Representations of Statuary in Private Tombs of the Old Kingdom*, Wiesbaden.
- ECKSTEIN 1959 F. ECKSTEIN, Review of: *Greek, Etruscan and Roman Antiquities. An Exhibition from the Collection of Walter Cummings Baker Esq. Held at the Century Association, New York 17.5.1950–25.9.1950* by René D’Harnoncourt, Dietrich v. Bothmer; *Ancient Art in American Private Collections. A Loan Exhibition at the Fogg Art Museum of Harvard University 28.12.1954–15.2.1955*, *Gnomon* 31, pp. 639–646.
- ECKSTEIN 1961 F. ECKSTEIN, Review of: *Meisterwerke griechischer Kunst* by Karl Schefold, *Gnomon* 33, pp. 400–406.

- ESTRIN 2015 S. ESTRIN, "Living surfaces: the materiality of Minoan wall paintings", [in:] *Beyond Iconography: Materials, Methods and Meaning in Ancient Surface Decoration*, ed. S. LEPINSKI, S. McFADDEN, Boston, pp. 109–125.
- EVANS 1921 A. EVANS, *The Palace of Minos at Knossos*, vol. I, London.
- EVANS 1928 A. EVANS, *The Palace of Minos at Knossos*, vol. II.2, London.
- EVANS 1935 A. EVANS, *The Palace of Minos at Knossos*, vol. IV.2, London.
- FAZZINI 2010 R. FAZZINI, "Aspects of the Mut's Temple's contra-temple at south Karnak Part II", [in:] *Offerings to the Discerning Eye: An Egyptological Medley in Honor of Jack A. Josephson*, ed. S. D'AURIA, Leiden, pp. 83–103.
- FOWDEN 1990 E. FOWDEN. "The Early Minoan goddess: images of provision", *Journal of Prehistoric Religion* 3–4, pp. 15–18.
- FRENCH 1985 E. FRENCH, "The figures and figurines", [in:] *The Archaeology of Cult: The Sanctuary at Phylakopi*, ed. C. RENFREW (= *British School at Athens Supplementary Volume* 18), London, pp. 209–280.
- FRENCH 2002 E. FRENCH, *Mycenae: Agamemnon's Capital. The Site and Its Setting*, Stroud, Gloucestershire.
- GALLET DE SANTERRE, TRÉHEUX 1947–1948 H. GALLET DE SANTERRE, J. TRÉHEUX, "Rapport sur le dépôt égéen et géométrique de l'Artémision à Délos", *Bulletin de correspondance hellénique* 71–72, pp. 148–254.
- GALLOU 2005 Ch. GALLOU, *The Mycenaean Cult of the Dead* (= *BAR International Series* 1373), Oxford.
- GILL 1964 M. A. V. GILL, "The Minoan 'Genius'", *Athenische Mitteilungen* 79, pp. 1–21.
- GOODISON 2009 L. GOODISON, "Gender, body and the Minoans: contemporary and pre-historic perceptions", [in:] *FYLO. Engendering Prehistoric 'Stratigraphies' in the Aegean and the Mediterranean. Proceedings of an International Conference, University of Crete, Rethymno, 2–5 June 2005*, ed. K. KOPAKA (= *Aegaeum* 30), Liège – Austin, pp. 234–241.
- HERTZ 1960 R. HERTZ, *Death and the Right Hand*, Glencoe, IL [English translation of the French original texts from 1907 and 1909].
- HEURTLEY 1921–1922 W. A. HEURTLEY, "The grave stelai", *Annual of the British School at Athens* 25, pp. 126–146.
- HITCHCOCK 1997 L. A. HITCHCOCK, "Engendering domination: a structural and contextual analysis of Minoan Neopalatial bronze figurines", [in:] *Invisible People and Processes. Writing Gender and Childhood into European Archaeology*, ed. J. MOORE, E. SCOTT, London – New York.
- HOOD 1953 M. S. F. HOOD, "A Mycenaean cavalryman", *Annual of the British School at Athens* 48, pp. 84–93.
- IMMERWAHR 1990 S. A. IMMERWAHR, *Aegean Painting in the Bronze Age*, London.
- IMMERWAHR 1995 S. A. IMMERWAHR, "Death and the Tanagra larnakes", [in:] *The Ages of Homer: A Tribute to Emily Townsend Vermeule*, ed. J. B. CARTER, S. P. MORRIS, Austin, pp. 109–122.
- JONES 2009 B. R. JONES, "New reconstructions of the 'Mykenai' and a Seated Woman from Mycenae", *American Journal of Archaeology* 113, pp. 309–337.
- KARO 1930 G. KARO, *Die Schachtgräber von Mykenai*, Munich.
- KOEHL 1986 R. B. KOEHL, "The Chieftain Cup and a Minoan rite of passage", *Journal of Hellenic Studies* 106, pp. 99–110.
- KOEHL 2006 R. B. KOEHL, *Aegean Bronze Age Rhyta* (= *Prehistory Monographs* 19), Philadelphia, PA.
- KOUNTOURI 2018 E. KOUNTOURI "Part of iconographic 'koine'? Discussing new wall paintings from Thebes", [in:] *XPQΣTHPEΣ / PAINTBRUSHES. Wall-painting and Vase-painting of the Second Millennium BC in Dialogue:*

- Proceedings of the International Conference on Aegean Iconography Held at Akrotiri, Thera, 24–26 May 2013*, ed. A. G. VLACHOPOULOS, Athens, pp. 451–463.
- KRAMER-HAJOS 2015 M. KRAMER-HAJOS, “Mourning on the larnakes at Tanagra: gender and agency in Late Bronze Age Greece”, *Hesperia* 84, pp. 627–667.
- KRITSELI-PROVIDI 1982 I. KRITSELI-PROVIDI, *Τοιχογραφίες τοῦ θρησκευτικοῦ κέντρου τῶν Μυκηνῶν / Toichographies tou thrēskeutikou kentrou tōn Mykēnōn* [Wall-paintings from the cult centre at Mycenae], Athens.
- LAFFINEUR (ed.) 1989 *Transition: le monde égéen du Bronze Moyen au Bronze Récent: Actes de la deuxième Rencontre égéenne internationale de l’Université de Liège, 19–20 avril 1988*, ed. R. LAFFINEUR (= *Aegaeum* 3), Liège.
- LANG 1969 M. L. LANG, *The Palace of Nestor at Pylos in Western Messenia*, vol. II: *The Frescoes*, Princeton.
- LLAURENS, RAYMOND, FAURIE 2009 V. LLAURENS, M. RAYMOND, C. FAURIE, “Why are some people left-handed? An evolutionary perspective”, *Philosophical Transactions of the Royal Society of London B* 364, pp. 881–894.
- LONG 1974 Ch. R. LONG, *The Ayia Triadha Sarcophagus: A Study of Late Minoan and Mycenaean Funerary Practices and Beliefs* (= *Studies in Mediterranean Archaeology* 41), Göteborg.
- LONG 1978 Ch. R. LONG, “The Lasithi Dagger”, *American Journal of Archaeology* 82/1, pp. 35–46.
- MALLORY 1989 J. P. MALLORY, *In Search of the Indo-Europeans: Language, Archaeology, and Myth*, London.
- MANNING 2010 S. W. MANNING, “Chronology and terminology”, [in:] *The Oxford Handbook of the Bronze Age Aegean (ca. 3000–1000 BC)*, ed. E. H. CLINE, Oxford, pp. 11–28.
- MARINATOS 1993 N. MARINATOS, *Minoan Religion: Ritual, Image, and Symbol*, Columbia.
- McMANUS 2002 Ch. McMANUS, *Right Hand, Left Hand: the Origins of Asymmetry in Brains, Bodies, Atoms and Cultures*, London.
- MEROUSSIS 2018 N. MEROUSSIS, “Larnax-painters and vase-painters: *vitae parallelae* in Late Minoan III Crete”, [in:] *ΧΡΩΣΤΗΡΕΣ / PAINTBRUSHES. Wall-painting and Vase-painting of the Second Millennium BC in Dialogue: Proceedings of the International Conference on Aegean Iconography held at Akrotiri, Thera, 24–26 May 2013*, ed. A. G. VLACHOPOULOS, Athens, pp. 339–357.
- MOLLARD-BESQUES 1954 S. MOLLARD-BESQUES, *Musée National du Louvre. Catalogue raisonné des figurines et reliefs de terre cuite grecs, étrusques et romains*, vol. I: *Époques préhellénique, géométrique, archaïque, et classique*, Paris.
- MOORE, TAYLOUR 2000 A. D. MOORE, W. D. TAYLOUR, *Well Built Mycenae*, fasc. 10: *The Temple*, Cambridge.
- MORRIS 2001 C. MORRIS, “The language of gesture in Minoan religion”, [in:] *Potnia, Deities and Religion in the Aegean Bronze Age. Proceedings of the 8th International Aegean Conference. Göteborg, Göteborg University, 12–15 April 2000*, ed. R. LAFFINEUR, R. HÄGG (= *Aegaeum* 22), Liège – Austin, pp. 245–251.
- MORRIS, PEATFIELD 2002 C. MORRIS, A. PEATFIELD, “Feeling through the body. Gesture in Cretan Bronze Age religion”, [in:] *Thinking through the Body. Archaeologies of Corporeality*, ed. Y. HAMILAKIS, M. PLUCIENNIK, S. TARLOW, New York, pp. 105–120.
- MOUNTJOY 2011 P. A. MOUNTJOY, “A Bronze Age ship from Ashkelon with particular reference to the Bronze Age ship from Bademgediği Tepe”, *American Journal of Archaeology* 115/3, pp. 483–488.
- MURRAY, SMITH, WALTERS 1900 A. S. MURRAY, A. H. SMITH, H. B. WALTERS, *Excavations in Cyprus: Bequest of Miss E. T. Turner to the British Museum*, London.

- MYLONAS 1973 G. E. MYLONAS, *Ο Ταφικός Κύκλος Β των Μυκηνών / Ο Taphikos Kyklos B tōn Mykēnōn* [The Grave Circle B at Mycenae], Athens.
- NEEDHAM 1973 R. NEEDHAM, “Right and Left in Nyoro symbolic classification”, [in:] *Right and Left. Essays on Dual Symbolic Classification*, ed. R. NEEDHAM, Chicago – London 1973, pp. 299–341 (= “Right and Left in Nyoro symbolic classification”, *Africa* 34/4, 1967, pp. 425–452).
- NICOLAÏDOU 2012 M. NICOLAÏDOU, “Looking for Minoan and Mycenaean women: paths of feminist scholarship towards the Aegean Bronze Age”, [in:] *A Companion to Women in the Ancient World (Blackwell Companions to the Ancient World. Ancient History)*, ed. S. L. JAMES, S. DILLON, Oxford – Chichester, pp. 38–53.
- NIEMEIER 1988 W.-D. NIEMEIER, “The ‘Priest King’ fresco from Knossos. A new reconstruction and interpretation”, [in:] *Problems in Greek Prehistory: Papers Presented at the Centenary Conference of the British School of Archaeology at Athens. Manchester, April 1986*, ed. E. B. FRENCH, K. A. WARDLE, Bedminster – Bristol, pp. 235–244.
- NIKOLAKOPOULOU 2010 I. NIKOLAKOPOULOU, “Middle Cycladic iconography: a social context for ‘A new chapter in Aegean Art’”, [in:] *Cretan Offerings: Studies in Honour of Peter Warren*, ed. O. KRZYSZKOWSKA (= *British School at Athens Studies* 18), London, pp. 213–222.
- OLSEN 1998 B. OLSEN, “Women, children and the family in the Late Aegean Bronze Age: differences in Minoan and Mycenaean constructions of gender”, *World Archaeology* 29, pp. 380–392.
- PAPADOPOULOS 2009 A. PAPADOPOULOS, “Warriors, hunters and ships in the Late Helladic IIIc Aegean: changes in the iconography of warfare?”, [in:] *Forces of Transformation: The End of the Bronze Age in the Mediterranean. Proceedings of an International Symposium Held at St John’s College, University of Oxford, 25–26 March 2006*, ed. Ch. BACHHUBER, R. R. GARETH (= *BANEA Publication Series* 1), Oxford, pp. 69–77.
- PAPADOPOULOS 2019 A. PAPADOPOULOS, “Mneme and propaganda in the Early Late Bronze Age Aegean: the case of the ‘Siege Rhyton’”, [in:] *MNHMH/MNEME. Past and Memory in the Aegean Bronze Age. Proceedings of the 17th International Aegean Conference, University of Udine, Department of Humanities and Cultural Heritage, Ca’ Foscari University of Venice, Department of Humanities, 17–21 April 2018*, ed. E. BORGNA et alii (= *Aegaeum* 43), Leuven – Liège, pp. 405–412.
- PEATFIELD 1995 A. A. D. PEATFIELD, “Water, fertility, and purification in Minoan religion”, [in:] *Klados. Essays in Honour of J. N. Coldstream*, ed. Ch. MORRIS, C. E. MORRIS (= *Bulletin of the Institute of Classical Studies. Supplement* 63), London, pp. 217–227.
- PIERSON et alii 2018 Ch. L. PIERSON, P. W. BREWER, D. BROWN, T. J. HEATON, G. W. L. HODGINS, A. J. T. JULL, T. LANGE, M. W. SALZER, “Annual radiocarbon record indicates 16th century BCE date for the Thera eruption”, *Science Advances* 4/8 (15 August 2018): eaar8241. DOI: 10.1126/sciadv.aar8241.
- PILAFIDIS-WILLIAMS 2009 K. PILAFIDIS-WILLIAMS, “The Mycenaean kourotrophos figurine at the Sanctuary of Aphaia on Aigina”, [in:] *Encounters with Mycenaean Figures and Figurines. Papers Presented at the Seminar at the Swedish Institute at Athens, 27–29 April 2001*, ed. A.-L. SCHALLIN (= *Acti Instituti Atheniensis Regni Sueciae, Series in 8* 20), Stockholm, pp. 113–124.
- PLATON 1947 N. PLATON, “Η αρχαιολογική κίνησης εν Κρήτη κατά τα έτη 1941–1947 / Ἡ αρχαιολογικὴ κινήσῃς εν Κρήτῃ κατα τα εἰῃ 1941–1947” [Archaeological activities in Crete in years 1941–1947], *Κρητικὰ Χρονικά: Κείμενα και μελέται της κρητικής ιστορίας* 1, pp. 631–640.

- PLATONOS 2008 M. PLATONOS, “Εικονιστική σαρκοφάγος από την Επισκοπή Ιεράπετρας / Eikonistikē sarkophagos apo tēn Episkopē Ierapetras” [Painted sarcophagus from Episope Hierapetras], [in:] *Amicitiae Gratia. Τόμος στη μνήμη Αλκμήνης Σταυρίδη*, ed. D. ΖΑΦΙΡΟΠΟΥΛΟΥ, Athens, pp. 17–34 (n.v.).
- POURSAT 1977a J.-C. POURSAT, *Catalogue des ivoires mycéniens du Musée National d’Athènes* (= *Bibliothèque des Écoles françaises d’Athènes et de Rome* 230bis), Paris.
- POURSAT 1977b J.-C. POURSAT, *Les ivoires mycéniens: essai sur la formation d’un art mycénien* (= *Bibliothèque des Écoles françaises d’Athènes et de Rome* 230), Paris.
- REHAK 1995 P. REHAK, “The ‘Genius’ in Late Bronze Age glyptic: the later evolution of an Aegean cult figure”, [in:] *Sceaux Minoens et Mycéniens, IV symposium international, 10–12 septembre 1992, Clermont-Ferrand*, ed. W. MÜLLER (= *Corpus der minoischen und mykenischen Siegel. Beiheft* 5), Berlin, pp. 215–231.
- RETHEMIOTAKIS 2001 G. RETHEMIO TAKIS, *Μινωικά πήλινα ειδώλια από την νεοανακτορική έως την υπομινωική περίοδο / Minōika pēlina eidōlia apo tēn neoanaktorikē eōs tēn ypominōikē periodo* [Minoan clay idols from the New Palatial and Sub-Minoan periods] (= *Βιβλιοθήκη της εν Αθηναις Αρχαιολογικής Εταιρείας* 218), Athens.
- RODENWALDT 1912 G. RODENWALDT, *Tiryns II. Die Fresken des Palastes*, Athens.
- RODENWALDT 1921 G. RODENWALDT, *Die Fries des Megarons von Mykenai*, Halle.
- RUTKOWSKI 1991 B. RUTKOWSKI, *Petsophas. A Cretan Peak Sanctuary* (= *Studies and Monographs in Mediterranean Archaeology and Civilization*, series I, 1), Warsaw.
- SAKELLARAKIS 1992 J. A. SAKELLARAKIS, *The Mycenaean Pictorial Style in the National Archaeological Museum of Athens*, Athens.
- SAKELLARIOU 1974 A. SAKELLARIOU, “Un cratère d’argent avec scène de bataille provenant de la IV^e tombe de l’acropole de Mycènes”, *Antike Kunst* 17, pp. 3–20.
- SAPOUNA-SAKELLARAKIS 1995 E. SAPOUNA-SAKELLARAKIS, *Die bronzenen Menschenfiguren auf Kreta und in der Ägäis* (= *Prähistorische Bronzefunde* I.5), Stuttgart.
- SCHOINAS 1999 Ch. SCHOINAS, “Εικονιστική παράσταση σε όστρακα κρατήρα από την Αγ. Τριάδα Ηλείας / Eikonistikē parastasē se ostraka kratēra apo tēn Ag. Triada Ēleias” [Krater sherds with pictorial representations from Aghia Triadha Elias], [in:] *Η περιφέρεια του μυκηναϊκού κόσμου, Πρακτικά Α΄ Διεθνούς Διεπιστημονικού Συμποσίου, Λαμία 25–29 Σεπτεμβρίου 1994*, ed. E. PHROUSSOU, Lamia, pp. 257–262.
- SINGG, MARTIN 2016 S. SINGG, Z. MARTIN, “Left-handedness and artistic abilities: a first look”, *Biology and Medicine* 8/2 (no page numbers).
- SMITH 1949 W. S. SMITH, *A History of Egyptian Sculpture and Painting in the Old Kingdom* (2nd. ed.), London.
- SPENNEMAN 1984 D. H. R. SPENNEMAN, “Right- and left-handedness in Early Southeast Asia: the graphic evidence of the Borobudur”, *Bijdragen tot de Taal- en Volkenkunde* 140/1, pp. 163–166.
- SPYROPOULOS 1974 Th. SPYROPOULOS, “Ανασκαφή Μυκηναϊκής Τανάγρας / Anaskaphē Mykēnaikēs Tanagras” [Excavations of Mycenaean Tanagra], *Πρακτικά της εν Αθηναις Αρχαιολογικής Εταιρείας*, pp. 9–33.
- SPYROPOULOS 2015 Th. SPYROPOULOS, “Wall paintings from the Mycenaean palace of Boiotian Orchomenos”, [in:] *Mycenaean Wall Paintings in Context: New Discoveries, Old Finds Reconsidered*, ed. H. BRECOULAKI, J. L. DAVIS, S. R. STOKER, Athens, pp. 355–370.
- STEELE, UOMINI 2005 J. STEELE, N. UOMINI, “Humans, tools, and handedness”, [in:] *Stone Knapping: The Necessary Conditions for a Uniquely Hominin Behaviour*, ed. V. ROUX, B. BRIL, Cambridge, pp. 217–239.

- TOURNAVITOU 1995 I. TOURNAVITOU, ‘The Mycenaean ivories from the Artemision at Delos’, *Bulletin de correspondance hellénique* 119, pp. 479–527.
- TOURNAVITOU 2015 I. TOURNAVITOU, ‘Sport, prestige, and ritual outside the palaces: pictorial frescoes from the West House at Mycenae’, [in:] *Mycenaean Wall Paintings in Context: New Discoveries, Old Finds Reconsidered*, ed. H. BRECOULAKI, J. L. DAVIS, S. R. STOKER, Athens, pp. 145–169.
- TOURNAVITOU, BRECOULAKI 2015 I. TOURNAVITOU, H. BRECOULAKI, ‘The Mycenaean wall paintings from Argos: a preliminary presentation’, [in:] *Mycenaean Wall Paintings in Context: New Discoveries, Old Finds Reconsidered*, ed. H. BRECOULAKI, J. L. DAVIS, S. R. STOKER, Athens, pp. 212–245.
- TZEDAKIS 1971 Y. TZEDAKIS, ‘Λάρνακες Υστερομινωικού νεκροταφείου Αρμένων Ρεθύμνης / Larnakes Ysterominōikou nekrotaphείου Armenōn Rethymnēs’ [Larnakes from the Late Minoan cemetery at Armenoi Rethymni], *Athens Annals of Archaeology* 4/2, pp. 216–222.
- UHRBROCK 1973 R. S. UHRBROCK, ‘Laterality in art’, *The Journal of Aesthetics and Art Criticism* 32/1, pp. 27–35.
- UOMINI 2009 N. T. UOMINI, ‘The prehistory of handedness: Archaeological data and comparative ethology’, *Journal of Human Evolution* 57, pp. 411–419.
- UOMINI, RUCK 2018 N. UOMINI, L. RUCK, ‘Chapter 11. Manual laterality and cognition through evolution: An archeological perspective’, [in:] *Cerebral Lateralization and Cognition: Evolutionary and Developmental Investigations of Behavioral Biases*, ed. G. S. FORRESTER *et alii* (= *Progress in Brain Research* 238), London, pp. 295–323.
- VERLINDEN 1984 C. VERLINDEN, *Les statuettes antropomorphiques crétoises en bronze et en plomb du III^e millénaire au VII^e siècle av. J.-C.* (= *Archaeologia transatlantica* 4), Providence – Louvain-la-Neuve.
- VERMEULE, KARAGEORGHIS 1982 E. VERMEULE, V. KARAGEORGHIS, *Mycenaean Pictorial Vase Painting*, Cambridge, MA – London.
- VLACHOPOULOS 2008 A. G. VLACHOPOULOS, ‘The wall paintings from the Xeste 3 building at Akrotiri: towards an interpretation of the iconographic programme’, [in:] *Horizon: A Colloquium on the Prehistory of the Cyclades*, ed. N. BRODIE, Cambridge, pp. 451–465.
- VLACHOPOULOS 2015 A. G. VLACHOPOULOS, ‘Detecting ‘Mycenaean’ elements in the ‘Minoan’ wall paintings of a ‘Cycladic’ settlement: the wall paintings at Akrotiri, Thera, within their iconographic *koine*’, [in:] *Mycenaean Wall Paintings in Context: New Discoveries, Old Finds Reconsidered*, ed. H. BRECOULAKI, J. L. DAVIS, S. R. STOKER, Athens, pp. 37–65.
- VONHOFF 2008 Ch. VONHOFF, *Darstellungen von Kampf und Krieg in der minoischen und mykenischen Kultur* (= *Internationale Archäologie* 109), Rahden/Westf.
- WACE 1953 A. J. B. WACE, ‘Mycenae, 1939–1952. Part I: Preliminary report on the excavations of 1952’, *Annual of the British School at Athens* 48, pp. 1–18.
- WEDDE 1999a M. WEDDE, ‘Talking hands. A study of Minoan and Mycenaean ritual gesture. Some preliminary notes’, [in:] *Meletemata: Studies in Aegean Archaeology Presented to Malcolm H. Wiener as He Enters His 65th Year*, ed. Ph. BETANCOURT *et alii* (= *Aegaeum* 20), Liège, pp. 911–920.
- WEDDE 1999b M. WEDDE, ‘War at sea: The Mycenaean and Early Iron Age oared galley’, [in:] *Polemos: Le contexte guerrier en Égée à l’âge du Bronze. Actes de la 7^e Rencontre égéenne internationale, Université de Liège, 14–17 avril 1998*, ed. R. LAFFINEUR (= *Aegaeum* 19), Liège – Austin, pp. 465–476.
- WEINGARTEN 1991 J. WEINGARTEN, *The Transformation of Egyptian Taweret into the Minoan Genius: A Study in Cultural Transmission in the Middle Bronze Age* (= *Studies in Mediterranean Archaeology* 88), Partille.

WHITTAKER 2009

H. WHITTAKER, “The cultic function of Mycenaean anthropomorphic terracotta figurines”, [in:] *Encounters with Mycenaean Figures and Figurines. Papers Presented at a Seminar at the Swedish Institute at Athens, 27–29 April 2001*, ed. A.-L. SCHALLIN, P PAKKANEN (= *Acta Instituti Regni Sueciae, Series in 8 20*), Stockholm, pp. 99–111.

XANTHOUIDES 1904

S. A. XANTHOUIDES, “Ἐκ Κρήτης / Ek Krētēs” [From Crete], *Αρχαιολογική Εφημερίς*, pp. 1–56.

XANTHOUIDES 1924

S. A. XANTHOUIDES, *The Vaulted Tombs of Mesará: An Account of Some Early Cemeteries of Southern Crete*, London.

YOUNGER 1998

J. G. YOUNGER, *Music in the Aegean Bronze Age* (= *Studies in Mediterranean Archaeology and Literature. Pocket-book 114*), Jonsered.

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