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**ON THE POSSIBILITY OF INTERNAL CONFLICT ON CRETE
BETWEEN THE PROTO- AND NEOPALATIAL PERIOD.
THE PAX MINOICA RE-EXAMINED**

ABSTRACT The *Pax Minoica* (Minoan Peace), a concept formulated by Sir Arthur Evans was, and still is, one of the most preeminent paradigms on Minoan culture. According to this theory Crete was protected from threats by a strong and far-reaching fleet. It was referred to in the works of Herodotus and Thucydides, who wrote about King Minos conquering the sea and triumphing over pirates. This state of affairs was supposed to explain the lack of fortifications in Crete during the Bronze Age and the relative peace prevailing on the island itself. Since the time Evans carried out his research, numerous examples of defensive architecture have been found on the island, as well as weapons used by the Minoans. They shed new light on our knowledge of the various stages of the development of Minoan civilization. In this article an attempt will be made to take closer look at them between EM II and MM III periods. This will allow us to verify if the alleged internal peace existed on Crete during the Bronze Age.

Keywords: Bronze Age, Crete, Minoan civilization, *Pax Minoica*

ABSTRAKT Teoria *Pax Minoica* została sformułowana przez Artura Evansa. Zakładała, że Kreta w Epoce Brązu była chroniona przez rozległą i silną flotę. Nawiązuje ona do dzieł Herodota i Tukidydesa, którzy pisali o podboju morza i triumfie nad piratami króla Minosa. Taki stan rzeczy miał tłumaczyć brak umocnień na Krecie w Epoce Brązu i pokój panujący na wyspie. Od czasów pracy badawczej Evansa, odkryto na wyspie liczne pozostałości architektury obronnej jak również przykłady broni używanej przez Minojczyków. Rzucają one nowe światło na naszą wiedzę na temat różnych etapów rozwoju cywilizacji Minojskiej na Krecie. W artykule zostaje podjęta próba ich analizy w okresie wczesno i średniominojskim. Pozwala to, na weryfikację domniemanego pokoju wewnętrznego na Krecie w trakcie trwania Epoki Brązu.

Słowa kluczowe: Epoka Brązu, Kreta, cywilizacja Minojska, *Pax Minoica*

As the world entered the 20th century, Sir Arthur Evans discovered the first traces of Minoan culture, arguably the cradle of western civilization, on Crete. According to Evans it was not by accident that King Minos, after whom Evans named the whole culture, was the son of a Phoenician princess named Europe.¹ In many respects, Crete had a privileged place on the map of the Mediterranean Bronze Age. Lying on a cultural border in the eastern Mediterranean, it quickly established contacts with the most important centres of the Near East and Egypt.² Evans's research was not limited to the study and reconstruction of the monumental

buildings which he had found at Knossos. Gradually, he established Minoan chronology and formulated various theories regarding the Minoans themselves; the nature of their social relations and religion. One of the most important of these theories was to be the so-called *Pax Minoica* (or Minoan Peace).³ Evans assumed, referring to Herodotus,⁴ and Thucydides,⁵ that Crete was protected from threat by her strong fleet. Therefore the Aegean Sea was supposed to be an arena controlled by the royal fleet of Knossos, which enabled colonial and commercial

³ Evans 1928: 60-92.

⁴ Hdt, III.122 – Herodotus, *Histories* 3.122.2, Harvard University Press 1920, translated by A.D. Godley.

⁵ Thuc, I.4 – Thucydides, *History of the Peloponnesian War* I.4, The Loeb Classical Library 1919, translated by C.F. Smith.

¹ Oxyrhynchus Papyri 1358 fr. 1 (3rd cen. A.D) [1720] (ll. 1-32) in Evelyn-White 2008.

² Manning 2008: 110; Branigan 1970: 179-196.

expansion and protected its merchant ships from threat. This type of security was supposed to explain the lack of fortifications in Crete during the Bronze Age, and the relative peace prevailing on the island itself. Evans, in formulating his thesis, did not hide that his inspiration was derived from the Roman Empire and the *Pax Romana*.⁶ Among later researchers, the *Pax Minoica* was sometimes misunderstood to be a theory assuming that a common peace prevailed among the inhabitants of the island, that a warrior-class did not exist in Minoan society, and that the Minoans did not engage in war.⁷ Evans, however, recognized that the Minoans did engage in war. In the third volume of *The Palace of Minos*,⁸ when analysing the scene depicted on the Silver Siege Rhyton from Mycenae (supposed to be a Minoan colony at that time), he even writes about forces from Knossos coming to protect the city from a barbarian attack.⁹ Further to that he also discusses a miniature fresco depicting warriors,¹⁰ and analyses elements of Minoan weaponry.¹¹ He even recognized some of the defensive architecture which was in use before the Neopalatial Period.¹² Although Evans's concept initially met with little criticism,¹³ when a new generation of researchers began to study Minoan society after World War II, they did not mention the role of war as a culture-forming process among the Minoans.¹⁴ This has even led to many mutations and misunderstandings of Evans's original concept as Molloy has pointed out.¹⁵

It has been established that many of the theories of Evans were formed under the influence of the Victorian era.¹⁶ Perhaps, consciously or subconsciously, when referring to the *Pax Minoica* Evans was thinking of the Royal Navy defending the British Empire.¹⁷ One can speculate that the supposed peace prevailing on the island in the Bronze

Age was the opposite of the Crete of Evans's own times.¹⁸ Many of his presumptions about different issues were re-examined in later times.¹⁹ The *Pax Minoica*, however still remains somewhat controversial. Alexiou drew attention to the topography of Crete: in many cases the archaeological sites dating to the Early and Middle Minoan periods were endowed with natural fortifications.²⁰ Therefore any archaeological evidence for military activity may be difficult to detect in these types of locations. This observation was later underlined Starr.²¹ In a paper published in 1984, Hiller suggested that Crete was in a state of peace only during the MM Period.²² Many of the sites were then destroyed and abandoned as a result of the surge in political power that could have emanated from Knossos.²³ In 1998 archaeologists met at a conference in Belgium to discuss the concept of *Pax Minoica*. A variety of subjects were discussed, however no general consensus was achieved. Some scholars argued that the lack of military themes in Minoan art did not necessarily have to mean that they did not take part in military operations.²⁴ Most participants, however, claimed that there is a lack of evidence, both architectural,²⁵ and material,²⁶ for hostilities having taken place. Krzyszkowska pointed out that there is no direct evidence for warfare in Aegean *per se*.²⁷ But is this still the case? A number of publications concerning the subject have been released since the conference.²⁸ Some of them shed new light on the assumed peace that was reigning on Crete during the Bronze Age. An article published by Molloy in 2012 is probably the most important.²⁹ It presented a military vision of Crete, based on the idea of a 'triadic balance' which was in force between three elements of social interaction, i.e. administrative,

⁶ Evans 1928: 571.

⁷ Castelden 1990: 160; Krzyszkowska, Nixon 1983.

⁸ Evans 1930: 82-100.

⁹ Evans 1930: 98.

¹⁰ Evans 1930: 82.

¹¹ Evans 1930: 95.

¹² Evans 1930: 6.

¹³ Pendelbury 1937: 194-200.

¹⁴ Castelden 1990: 160. There is no mention of war in a whole range of publications. See for example Krzyszkowska, Nixon 1983 and more recently Shelmerdine 2008 among others.

¹⁵ Molloy 2012: 92.

¹⁶ Even the term 'palace', so deeply rooted in Minoan archaeology, is not universally accepted. More in Schoep 2002: 15-22.

¹⁷ Marinatos 2015: 52.

¹⁸ Crete at that time was under Ottoman rule, and the government were often at loggerheads with the Greek inhabitants of the island.

¹⁹ Evans's chronological system has been criticized in Hooder 1993: 268-269, his 'Minoan Thalassocracy' theory in Hagg, Marinatos 1984: 17-31.

²⁰ Alexiou 1979: 41-56

²¹ Starr 1984.

²² Hiller 1984: 17-31.

²³ Hiller 1984.

²⁴ Gates 1999: 277-283.

²⁵ Driessen 1999: 11-20.

²⁶ Krzyszkowska 1999: 489-497; Floyd 1999: 433-442; Branigan 1999: 87-94

²⁷ Krzyszkowska 1999: 489.

²⁸ On defensive architecture (Nowicki 2000; Alusik 2007) and weaponry (McCreery 2010; Molloy 2012).

²⁹ Molloy 2012: 87-142.

religious and military. In Molloy's opinion, a society at such an advanced level as the Minoan, would not have developed without the interplay of all of these three elements. Our knowledge of the existing defensive architecture on the island has also increased significantly over recent years thanks to the works of Nowicki and Alusik.³⁰

In order to recognize that warfare existed in Bronze Age Crete, one must understand the motivation and willingness of the Minoans to fight with each other. The cause could be both demographic growth and socio-economic change.³¹ Saunders, one of the creators of conflict archaeology, refers to two fundamental aspects.³² First of all, it is important to be aware that every conflict is multifaceted and impinges on many of the anthropological aspects of the communities involved. Secondly, to understand any given conflict one needs to understand all the causes underlying it. For obvious reasons, the implementation of both these prerequisites to the realities of Bronze Age Crete is very difficult. We can't be certain about the Minoan 'attitude' to war because we do not have any direct evidence. The task is made even more difficult by the lack of reliable translations of Cretan Hieroglyphs or Linear A. Any researcher who makes any claims about the mentality or attitude of Minoan people would have to make a start by establishing what political and administrative system was prevailing on the island at the time.

Bronze Age Crete was probably divided into several states.³³ Their existence was conditioned by the topography of Crete: divided into three mountain ranges and five major regions as it is. These regions had a three-level hierarchy, which consisted of the main centre, and smaller towns and villages.³⁴ Initially, these types of states had a decentralized form.³⁵ For many territories, religion could have been a unifying factor.³⁶ Unfortunately we can only speculate how many states were on the island. According to Fitton, the most probable centres seem to be in Knossos, Phaistos and Malia.³⁷ This territorial division corresponds surprisingly well to a fragment of the *Bibliotheca* of Pseudo-Apollodorus. It refers to the past history of Crete

when three brothers, the sons of Zeus, Minos, Rhadamanthys and Sarpedon fought against each other:³⁸

But when they were grown up, they quarrelled with each other; for they loved a boy called Miletus, son of Apollo by Aria, daughter of Cleochus. As the boy was more friendly to Sarpedon, Minos went to war and had the better of it, and the others fled.

This fragment is particularly interesting because Minos was traditionally identified with the centre in Knossos, Sarpedon with Malia and Rhadamanthys with Phaistos. If we assume that this much later source is to some extent reliable, then we can also set a possible date to the conflict between the two palatial periods (around 1700 BC). It is still assumed that the destruction of the palaces was caused by an earthquake. It is possible however, that these two events might have happened independently, and the earthquake might have triggered a conflict between the devastated centres.

If the aforementioned rivalry between these centres existed on the island in the Old Palatial Period, Knossos would have controlled the north-central, Phaistos the south-central, and Malia the central-eastern part of the island. However, especially during Prepalatial and Protopalatial times, the number of these centres could have been much higher.³⁹ It is unknown how these little polities were arranged and how they were governed. The tiny amount of archaeological and iconographical evidence arguing for the existence of kingship,⁴⁰ does not allow us to be certain that such an institution existed among the Minoans. According to Welwei, the transformation of the local elite into a monarchy would have been necessary for the creation of the palaces.⁴¹ It is also worth making mention of a relevant passage in Aristotle. In the *Politics* he writes about the Cretan political system of his time, claiming that King Minos was the one who established the given order on the island.⁴²

³⁰ Nowicki 2000; Alusik 2007.

³¹ Manning 2008: 105-120.

³² Saunders 2012.

³³ Younger, Rehak 2008: 150-152; Fitton 2002: 85-90.

³⁴ Fitton 2002: 85-90.

³⁵ Mannig, 2008: 105-120.

³⁶ Knappett 1999: 615-639.

³⁷ Fitton 2002: 85-87.

³⁸ Apollod, Bibl. 3.1.2 – Translation by Sir James George Frazer, Harvard University Press; London 1921, 301.

³⁹ There is evidence for similar centres existing in Chania and Zakro (Fitton 2002: 85-87; MacGillivray 1990), Petras (Tsipopolou 1999) Aghia Photia (Alusik 2007: 170).

⁴⁰ Marinatos 2010: *passim*.

⁴¹ Welwei 2002: 12-18.

⁴² Arystoteles, *Polityka: Dzieła wszystkie* 2003: 46.

Regardless of whether a king (or kings) existed or not, what we do have is evidence for the existence of elite groups on the island from at least MM IA onwards.⁴³ As some sociologists have indicated,⁴⁴ it is a widespread phenomenon that groups of this kind fight against each other, and suppress uprisings or revolts of the local population. Demographic, social, and religious issues could have all been responsible for this. According to Molloy, Minoan society could not have developed without possessing military strength.⁴⁵ Accepting that the island was divided into states, it is reasonable to assume the existence of internal conflict on the island. But are we able to discern when and where they happened? In formulating their theories on the subject, archaeologists have taken into account primarily evidence from three categories of sources: defensive architecture, weapons, and art. In order to arrive at some kind of answer to the question posed, I would like to re-examine two of them, namely defensive architecture and weaponry. The iconographic sources will be mentioned whenever relevant.

Defensive Architecture

Prehistoric defensive architecture has been found at about two hundred sites on Crete. Due to the fact that archaeological research is still on-going, the exact number is difficult to determine. The largest number of sites (105) have been found in the east of the island,⁴⁶ slightly less (92) in its central part,⁴⁷ with the smallest amount (16) found in the west.⁴⁸ The difference, however, should not be all that surprising, as the Sfakia region in the western part of an island almost entirely consists of the Lefka Ori mountain range. Furthermore, only three major surface surveys have been carried out in this part of the island.⁴⁹ Due to their location many places on the island did not require the construction of fortifications.⁵⁰ Alusik lists five basic types of Minoan defence architecture: enclosure walls, guard houses,

towers / bastions, modifications of the access system, and guard rooms.⁵¹ Structures of this type protected access to five categories of sites: palaces, so-called villas, cities, settlements, and refugee sites.

The so called guard-houses are the most numerous and diverse group of prehistoric defensive fortifications on Crete. So far, 169 structures of this kind have been identified at 129 sites.⁵² They are usually situated at locations in the proximity of roads, in dominant places with a good view of the surrounding area. They were not located within human settlements or in the vicinity of other buildings. Remains of guard-houses have attracted the attention of scholars and travellers since the 19th century. Sir Arthur Evans was the first to locate and document several of these structures in the eastern part of the island.⁵³ They were examined on a larger scale for the first time during the Minoan Roads Research Program published in 1984.⁵⁴ Typical examples of guard houses had dimensions from 10 x 10 to 12 x 12m. The external walls were made with large blocks of stones supplemented with small stones, stacked into the gaps. Their interior was often characterized by a paved central room, surrounded by other rooms. Their exact height can never be determined, as no remains of roofing have ever been found. Recent research conducted by Brabander has confirmed that most of guard houses had a defensive purpose.⁵⁵ Alusik mentions a number of possible functions of guard-houses.⁵⁶ First of all, they provided protection and control over traffic on the nearby roads. Their location made it possible to take the necessary action in the case of a road being blocked in a given section. Additionally, thanks to the presence of the so-called *vigilai* (observation towers), they could also have a role in communicating a warning of a possible threat. According to Alusik, these buildings, and the warriors gathered in them, could have played an important role in maintaining order after the annexation of a given territory, as well as upholding order during road construction.⁵⁷ It is reasonable to suspect that both guard houses and the roads they protected were created thanks to the existence of a central, state authority which was managing the territory. Whenever

⁴³ Mannig 2008: 105-120; Colburn 2008: 203-224; Borowka 2018: 9-18.

⁴⁴ Znamierowski 2001.

⁴⁵ Molloy 2012: 87-142.

⁴⁶ Alusik 2007: 17-56, 57-108.

⁴⁷ Alusik 2007: 57-10.8.

⁴⁸ Alusik 2007: 107-112.

⁴⁹ Nowicki 1987, 1992, 1999, 2002; Kanta, Stampilidis 2001; Hood 1965; Chrysoulaki 1997; Tzedakis, Chrysoulaki 1987.

⁵⁰ Cretan coast line established a great protective barrier as well.

⁵¹ Alusik 2007: 113-149.

⁵² Alusik 2007: 124-136.

⁵³ Evans, Myres 1895: 469-470.

⁵⁴ Tzedakis, Chrysoulaki, Voutsaki, Venieri 1989: 43-75.

⁵⁵ Brabander 2012.

⁵⁶ Alusik 2007: 131-135.

⁵⁷ Alusik 2007.

a period of political instability began, there was no reason for maintaining their function. Therefore, we have numerous examples of guardhouses which have been abandoned or rebuilt with a different function. Although we see evidence for such activities during the Prepalatial period,⁵⁸ the clearest evidence comes from the period after the fall of the Old Palaces in Knossos, Malia and Phaistos (around 1700 BC). The majority of guard houses were abandoned then, and in their place new ones were built. These were, however, deployed differently. The change in their location might point to a completely new pattern of their usage. From now on they were possibly more useful for monitoring and sustaining economic activity. This may testify to a new central authority (perhaps located in Knossos), which began to dominate over the island.⁵⁹

The second most common type of defensive architecture was enclosure walls. Alusik lists their presence at ninety-two sites.⁶⁰ Usually, they were made of variations of the local limestone. Very often they were built in the so-called 'Cyclopean' technique. The term for this technique was introduced in 1837 by British explorer Robert Pashley, who encountered this kind of structure on the Juktas hill.⁶¹ Evans discovered remains of massive constructions of this type erected in the palace of Knossos.⁶² Somehow he ignored them while formulating his *Pax Minoica* theory. More recently new examples of enclosure walls have been published by Nowicki and Schlager.⁶³ According to Alusik enclosure walls surrounded eight types of structures,⁶⁴ and also were used as *periboloi*, i.e. a long wall connecting single guard houses with each other. The walls were supposed to demonstrate power and to discourage potential attackers. Fortifications of smaller areas or fortified buildings were designed to deter violations of property. In the context of the current article, the presence of this kind of fortification in palatial buildings during the Protopalatial period is most interesting. Their existence has been confirmed in buildings located in Knossos, Petras

and Malia.⁶⁵ One suspects that these massive walls were built to ensure security, prestige and to build up respect in the eyes of others: a significant symbol, which clearly defined boundaries. After the guardhouses, they were another sign of state division on island. It is also possible that these walls were built to secure the sovereignty of individual centres. There is no record of fortifications surrounding the palaces during the Neopalatial period. Perhaps, the new ruling class was by then accepted by the societies that they ruled, and there was no threat of an uprising against them. It is also a possible, however, that the enclosure walls were replaced with a new, typically Neopalatial, architectural element, namely a located in the north-west of the island, and were aimed to restrict access to them.⁶⁶ According to Driessen the reason for their appearance were the deteriorating socio-economic conditions following on from the crisis caused by the Thera eruption.⁶⁷ Considering the fact that these buildings were the main centres for control and the distribution of goods, the ruling class may have wanted to demonstrate their readiness to defend themselves with such adaptations to the access system. It is also possible that the so-called guard-rooms had a similar function. The term was used for the first time by Evans when he uncovered this kind of structure near the entrance to the Palace of Knossos. In his opinion, they had a 'police' function, supposedly protecting the palace and its goods.⁶⁸ The guard rooms were an individual, rectangular space measuring several square meters. Their exact reconstruction is impossible in many cases. It is also very difficult to interpret their function. More recently it has been suggested that their purpose was not defensive.⁶⁹ Alusik however, claims that the function of at least some of guard-rooms was indeed defensive. Our understanding of these features is, unfortunately, limited by the small number of guard-rooms that have been

⁵⁸ Alusik 2007.

⁵⁹ Alusik 2007.

⁶⁰ Alusik 2007: 116.

⁶¹ Pashley 1837: 220.

⁶² Evans 1930: 235.

⁶³ Schlager 1997; Nowicki 1988; 1990; 1992a; 1992b; 1993; 1994; 1996; 1998.

⁶⁴ Farms, residential houses, observation towers, palaces, villas or fortifications of settlements, 'cities' or shelter estates

⁶⁵ It is possible that the enclosure wall existed also in Malia. More in Alusik 2007: 123. More about the fortifications in Knossos see Evans 1935a: 55-59; MacGillivray 1994: 49-52; Pendelbury 1969 (Reprint, originally published in 1933): 29, Watrous 2001: 199. On Petras see Tsipopoulou 1999: 183, 184; Tsipopoulou 2002: 137.

⁶⁶ For more information about Zakro in Platon 1971: 89-92; Driessen 1997: 73, about Phaistos in Driessen 1997: 76; Driessen, Macdonald 1997: 190, about Malia in Driessen, Macdonald 1997: 76, about Gournia in Soles 1991: 66-67.

⁶⁷ Driessen 1997: 84-87.

⁶⁸ Evans 1921: 215-217, 391-392.

⁶⁹ Hitchcock 2000: 74.

discovered so far,⁷⁰ and their wide chronological dating. Therefore, making any kind of assumptions at this point would be pointless.

Towers/ bastions have been found at twenty-nine sites. Since most of these Bronze Age structures have only survived at the level of their foundations it is very difficult to determine their height. The existence of these towers or bastions has been determined on the basis of a number of indicative factors: width of foundation, building material employed, their shape and location. Usually, they consist of massive walls made of larger stone blocks either rectangular or circular in shape. They appear in six types of context: as an independent structure within an area of the human settlement, as part of a partition wall, as part of a palace or villa, as part of a guardhouse system, and at the entrances to human settlements. The defensive scale of these structures differed depending on the specific function of a given tower or bastion. Towers / bastions which form part of the enclosure wall were definitely defensive. Mostly, however, their military role was secondary.⁷¹ In most known cases, they probably fulfilled the role of checkpoints, monitoring the surrounding area. The number of tower-like structures increases in MM IA, reaching its peak at the beginning of the Protopalatial period. According to Alusik this proves the emergence and consolidation of territorial divisions on the island.⁷² When looking at the development of tower-like structures one can see a similar pattern to that of guard-houses and enclosure walls, as many of them ceased to exist. Many of them were destroyed at the end of the Protopalatial period, which again indicates the possibility of an internal conflict on the island at that time.

The structures described above become particularly interesting if we place them in the context of the chronology of their occurrence on the island. The first examples of defensive architecture (mostly enclosure walls) in Crete are found in the Late Neolithic period. In the Prepalatial, their number gradually increases. However, the development of defensive architecture on a larger scale took place in the Protopalatial period. This was probably connected with the appearance of palaces and the process of state-formation. External fortifications have been noted at four municipal sites: Knossos, Petras, Malia, and Monastiraki. Additionally, in three of them (Knossos, Petras, Malia) the palaces

had additional fortifications. Outside the cities the so-called villas and other settlements of this period were fortified as well. Guard houses were built, which created an integrated network of observation points aimed at warning the central authority. Towers/ bastions were incorporated in both guard houses and enclosure walls. The first guard rooms also appear in Knossos and Phaistos. It should be noted that during the Protopalatial, defensive architecture flourished. At the end of this period, however, the destruction of many sites took place, ending not only the existence of the old palaces in Knossos, Phaistos and Malia, but also many defensive structures.

At the beginning of Neopalatial period, many sites had been rebuilt or transformed. The rebuilt palaces at Knossos, Phaistos and Malia were joined by new constructions of this type in Galatas and Zakro.⁷³ It was at that time that many 'palatizing' buildings were erected. The name comes from the fact that some of their rooms imitated internal design known at that time by then only from palace architecture. This could be evidence for the formation of homogeneous elites that wanted to emphasize their prestige by referring to similar patterns found in the palaces. In the case of defensive architecture, an extraordinary development takes place. Despite the fact that the total extent of defensive architecture was at the all-time high, the number of fortifications (enclosure walls) or major defensive structures significantly decreased. The only urban site that was surrounded by fortifications was Palakaistro.⁷⁴ Other examples come mainly from the villas.⁷⁵ Although many new guard-houses were built, the remaining ones from the Protopalatial period were often transformed into buildings for other purposes or abandoned. This may testify to a new administrative system on the island, as well as the dominance of a new ruling elite. The given architectural evidence might therefore indicate that there was military conflict between the periods MM II and MM III that, along with natural disasters, changed the balance of power on the island.

Weaponry

In addition to the architectural remains, one should look at the presence of weapons that appeared in the various parts of the island which prove

⁷⁰ Very few (20) were found at 7 sites. See Alusik 2007: 144- 146.

⁷¹ Alusik 2007: 136-141.

⁷² Alusik 2007.

⁷³ McEnroe 2010: 81-92.

⁷⁴ Alusik 2007: 119.

⁷⁵ Alusik 2007.

that armed conflict was practiced on Bronze Age Crete. Finds of weapons are one of the best sources for studying conflict. Their development indicates the transformation of society towards a more organized method of combat. Crete has the largest diachronic concentration of bronze weapons within the Aegean.⁷⁶ Branigan has stated that there is solid evidence for war in Crete in the Early Bronze Age, basing his belief mainly on the occurrence of weapons.⁷⁷ Hiller has further argued that it was during the EM period that the custom of weapon burials might have appeared in Cretan society.⁷⁸ According to Molloy, the emergence of bronze weapons was crucial for the socio-military transformation that was to take place in Minoan culture.⁷⁹ An analysis of the various types of Minoan weapons is very important for the advance of research into this subject. It allows one to determine when the transformation of hunting implements into weapons took place, as well as indicating the emergence of a sense of threat of potential aggression. It is worth noting that symbols of various types of weapons (bows, arrows, spears and daggers) already appeared in Cretan hieroglyphic writing.⁸⁰ This suggests the possible involvement of the administration in their production and distribution at an early stage.

Daggers make up about 95% of Cretan weapons of the Early Bronze Age.⁸¹ They had a relatively simple form: a short, thin blade, sometimes reinforced by ribs. Wooden handles were attached to the blade handle with rivets. In Peatfield's opinion, they were used for interpersonal combat.⁸² So-called triangular daggers make up the second largest group of EM daggers. Most examples of this type of artefact have been found in the Mesara region (88 of 92 examples), especially in Hagia Triada. Their dating ranges from EM I to EM III. The importance of triangular daggers in Crete is best illustrated by their appearance on clay figures of men in peak sanctuaries.⁸³ Branigan divided triangular daggers into seven main types differing in the number of rivets, profile or the appearance of the blade.⁸⁴ In McCreery's opinion triangular daggers could have been used as secondary weapons.⁸⁵ However, both

Branigan and Molloy think that they were unsuitable for use in interpersonal combat.⁸⁶ This is not the case with another type of Early Minoan weapon: the long dagger. Branigan divided these objects into 14 types.⁸⁷ Long daggers were usually double-edged, had a hilt made of wood or bone, and measured approximately 20 cm. Some of them had silver rivets. Most of the finds again come from burials from the Mesara region. The blade was relatively flat and the later types had midribs that prevented them bending. According to Ivanova the development of more and more powerful midribs in daggers could have helped in fighting against more advanced weapons.⁸⁸ Branigan suggested that the hilt of these long daggers was too fragile to be used in combat.⁸⁹ This was later refuted by Molloy, who proved that daggers of this type could be used for very strong cuts or stabs without suffering any damage.⁹⁰ In this context a particularly interesting weapon is type X. This dagger was replaced by short swords at the end of MM. At this time the type X dagger could have been used as a rapier.⁹¹ This may indicate the introduction of a new tactic into fighting at close-quarters.⁹² Looking at the development of Minoan long daggers, one gets the impression that in fact they were created with possible skirmishes and duels in mind. Strengthening of the blade as well the introduction of the midrib was of great benefit in combat, as it increased the reliability of the weapon in a fight.

The process whereby swords were developed on Crete is not understood. It is usually assumed that swords differ from knives or daggers because of their length.⁹³ The appearance of swords on Crete might have been caused by the desire to create more effective weapons.⁹⁴ This, in turn, would testify to an increase in violence and warfare during the MM I-II period. The sword was not simply a lengthened dagger. According to Molloy, the sword evolved to perform a completely different style of combat, and the production of its blade required more advanced metallurgical techniques.⁹⁵ As Howard has noted, the most significant difference between a dagger and a sword is that the latter is created for the purpose of combat. It is only during the Middle Minoan

⁷⁶ Branigan 1999: 81.

⁷⁷ Branigan 1999: 87-94.

⁷⁸ Hiller 1984: 17-31.

⁷⁹ Molloy 2012: 123-131.

⁸⁰ Poursat 1999: 427.

⁸¹ Branigan 1999: 88.

⁸² Peatfield 2008: 87-88.

⁸³ Rutkowski 1991.

⁸⁴ Branigan 1968.

⁸⁵ McCreery 2010.

⁸⁶ Branigan 1967: 211-239; Molloy 2012: 124.

⁸⁷ Branigan 1968.

⁸⁸ Ivanova 2007: 254-255.

⁸⁹ Branigan 1999.

⁹⁰ Molloy 2007: 90-111.

⁹¹ McCreery 2010: 36.

⁹² McCreery 2010: 36.

⁹³ Branigan 1968b: 183-203.

⁹⁴ McCreery 2010: 37-38.

⁹⁵ Molloy 2010: 403-428.

period that the first types of long swords appear on Crete. Sandars has created a universally recognized typology for these swords.⁹⁶ This typology was later modified by Driessen and Macdonald.⁹⁷ This exists alongside an alternative typology created by Kilian-Dirlmeier, who paid more attention to variants ending with horns.⁹⁸ Molloy created a graph integrating these two types of typology.⁹⁹ The large number of these swords found on Crete proves that Minoan workshops were responsible for their production. It is worth noting that, despite the relatively high quantity of long swords which have survived in the archaeological record, their quantity in use may have been very much higher. As Howard has pointed out, the Linear B tablets from Knossos alone mention a much larger number of swords than archaeologists have found at this site (24 pieces in all).¹⁰⁰

Types A and B preceded the earliest possible period of Mycenaean invasion, and are the most interesting in the context of this paper. Type A was created in Crete around MM II-III. It had length of approximately 1 metre, and the blade, with its midrib, was riveted to the hilt. It had rounded arms at the shoulders of the blade and a very small tang. Three rivets were used to secure the handle to the blade, two of them were on the shoulders, the third of them was on the tang. The handle was made of wood or bone, sometimes decorated with golden elements. Branigan believed that they were derived from the long daggers of the MM I period. Their earliest examples come from the old palace at Malia. The objects found there probably had a ceremonial function but were made on the basis of combat prototypes.¹⁰¹ Their combat function may have varied depending on the circumstances. Due to their size and weight the Minoans could use them as weapons in their one-on-one duels, or in demonstration fights. Certainly it was an effective weapon in short-range combat. Additionally the frescos found on Thera indicate that long swords of type A were used on the battlefield by Minoan warriors.¹⁰² Type B swords were not as popular in Crete as Type A, and Dickinson thought that the Type A sword originated in the Argolid.¹⁰³ Other scholars, however, are inclined to think that Type

A originated in Crete.¹⁰⁴ These swords were shorter than the previous type, rarely exceeding 60 cm in length. What distinguishes them is the long blade with few rivets, and the presence of wider, rolled arms at the shoulders of the blade. According to Peatfield, the Type B sword was much better suited for combat.¹⁰⁵ It was better balanced, which enabled the warrior to deliver blows with greater rapidity. Both Types A and B were a result of the progressive militarization of society that was taking place on Crete. As Molloy has demonstrated, these swords were capable of inflicting deadly blows without doing much damage to the hilt. The adoption of this weapon by the Mycenaeans, as well as its prolonged existence on Crete itself, is the best proof of its significance in the evolution of warfare in the Aegean Bronze Age. It is from the A and B Types that the later sword types evolved. It is hard to imagine that such a weapon was created by people who were not familiar with violence and conflict. The dating of Types A and B also indicates that elite groups might have been already preparing themselves for military conflict immediately before the supposed conflict in MM II/III.

Beside daggers and swords there are other types of implements which may have been used by the Minoans as potential weapons. Combat axes first appear in the Aegean at the turn of the Neolithic and early Bronze Age.¹⁰⁶ It is probable that the battle-axe is one of the symbols on the still un-deciphered Phaistos disc. In Crete axes were regarded as prestigious objects which emphasized their possessors' status.¹⁰⁷ According to Salimbeti and D'Amato, these types of axes testified to the use of force in mutual relations, and to the belligerent mentality of the Minoans.¹⁰⁸ Mathieu and Meyer have shown that stone axes were mainly used for woodworking. Molloy thinks, however, that these axes could also have been used in warfare.¹⁰⁹

One object (and symbol) which is especially associated with Bronze Age Crete is the labrys, or a double axe. The earliest examples are miniature bronze examples which come from the EM period. Full-size double axes made of bronze, reminiscent of these miniatures, were found as sacrificial offerings in the Dictaeon cave. In 1934 the most spectacular

⁹⁶ Sandars 1961: 17-29; Sandars 1963: 117-153.

⁹⁷ Driessen, Macdonald 1984: 49-74.

⁹⁸ Kilian- Dirlmeier 1993.

⁹⁹ Molloy 2010: 406.

¹⁰⁰ Howard 2011: 36.

¹⁰¹ Branigan 1968.

¹⁰² L. Morgan 1988.

¹⁰³ A. Dickinson 1999: 21-29.

¹⁰⁴ Hood 1980; Hiller 1984.

¹⁰⁵ Peatfield 1999: 67-74.

¹⁰⁶ D'Amato, Salimbeti 2013: 23-46.

¹⁰⁷ The best example is the panther-shaped axe from the Malia palace.

¹⁰⁸ D'Amato, Salimbeti 2013: 23-46.

¹⁰⁹ Mathieu, Meyer 2002: 73-83.

example of a double axe was found at Arkalochori. The axe has 15 characters carved on the surface, some of which have been identified as being written in Linear A script, whereas others correspond with some of the glyphs of the Phaistos disk.¹¹⁰ The double axe undoubtedly played an important role in religious practices. This is best demonstrated by its common appearance in religious iconography alongside other cult symbols such as the pillar and the horns of consecration. It is possible, however, that the double axe was also used as a weapon. According to Molloy and Haysom,¹¹¹ the ritual labrys could have been inspired by its combat counterpart. During fighting, the double axe was ideal to attack the upper part of the shield, thereby breaking up the array of the opponents' forces.

Spears or javelins figure in every culture which has engaged in collective conflict in antiquity.¹¹² This was most likely because of the relatively low costs of production, ease of use, and efficiency. According to Harding, the spear appears in the Aegean area around 2000 BC.¹¹³ Because the spear-shaft was made of wood, an organic material, archaeologists predominantly find spearheads. As Howard has pointed out, differences between individual types of spearhead are often so small, that typologies can become inconsistent and confusing to the reader. EM and MM spears and javelins had a simple construction. According to Molloy, they served both for combat and hunting. They were used to penetrate. Branigan has catalogued spearheads that could have been used as weapons.¹¹⁴ He divided them into two types. Type I originated in the period EM III-MM I. It had a flat, leaf-shaped blade, and a small socket. Type II was similar to type I, and it was differentiated by the lack of curvature in the shape, and the added strength of the blade. In the LM I we find some additional examples of spearheads from Crete. According to Molloy they were used similarly to those found in the shaft graves at Mycenae.¹¹⁵ Spears and javelins were effective weapons. As McCreery has noted, javelins could be used by defenders and attackers of any defensive site.¹¹⁶ Spears inflicting penetrating wounds used in short distance combat could perfectly complement other weapons, such as daggers or swords, which were used for cutting.

Bows were present in Crete from Neolithic times onwards. The archaeological finds associated with archery are dominated by arrowheads. For a long period of time (2,500-1,500 BC), this type of object had triangular, or leaf-shaped, shape, and a sharp tip. They were made of flint and obsidian.¹¹⁷ Around the LM I period, a new type of 'heart-shaped' arrowhead evolved from them. On the basis of iconographic evidence, Molloy assumed that archers were an active component of the Minoan infantry.¹¹⁸ McCreery, in turn, has noted that the fact that arrowheads frequently occur in burials located in caves indicate the high level of attachment of the Minoans to the bow in ritual contexts.¹¹⁹ In her opinion, bows could be the most frequently-used weapon in a defensive context. This is evidenced by the occurrence of arrowheads at sites endowed with defensive architecture. She mentions the example of the guard house at Aphroditis Kephali, and argues that the frequent location of such fortifications on the top of a hill could increase the strength and the momentum of the bowshot.¹²⁰

Conclusions

According to Herodotus (1.87.4) the Lydian king Croesus once said:¹²¹

No one is so foolish as to choose war over peace. In peace sons bury their fathers, in war fathers bury their sons.

The *Pax Minoica* on Bronze Age Crete should, however, be re-examined. Both the presence of defensive architecture, and the way in which weapons developed indicate that Minoan society had a propensity for waging war on an ever increasing scale. Considering the destruction that which place at the end of the Protopalatial period, and the history of individual defensive structures, nobody should be surprised that scholars have begun to suggest the possibility of conflict at various stages in Minoan history. Nowicki lists four possible conflicts and/or crises on the island. The first one took place in the transition period between the Neolithic and the EM I, which manifested itself in the desire of inhabitants to settle on higher, more easily defensible

¹¹⁰ Timm 2004: 204-241.

¹¹¹ Haysom 2010: 35-55.

¹¹² Howard 2011: 42.

¹¹³ Harding 2004: 157-173.

¹¹⁴ Branigan 1968.

¹¹⁵ Molloy 2012: 124.

¹¹⁶ McCreery 2010: 45-46.

¹¹⁷ D'Amato, Salimbeti 2013: 23-46.

¹¹⁸ Molloy 2012: 126.

¹¹⁹ McCreery 2010: 48-49.

¹²⁰ McCreery 2010.

¹²¹ Translation by Godley 1920: 113.

areas. The second one falls in the Prepalatial (EM II) Period, and has been indicated by a series of destructions, when more defensible locations were again preferred. The next potential conflict is the most interesting one in the context of this article. It supposedly ended with a series of disasters at the Protopalatial sites of Knossos, Malia and Phaistos. Usually these disasters have been interpreted as having been the result of an earthquake that struck the island at the time. Nowicki presents an alternative explanation.¹²² He believes that the disasters under discussion were a consequence of a long series of conflicts between individual centres or groupings of islanders. The evidence for this is the ever increasing number of fortifications and defensive structures, which formed an organized defensive system on the island. Alusik also opts for this hypothesis.¹²³ A little earlier Driessen and McDonald had also suggested warfare at this period.¹²⁴

Weapon finds from various periods also seem to support the possibility of periodic military conflicts on the island. In the EM period the presence of daggers and bows clearly indicates the increasing propensity of society towards warfare in particular regions of the island. The formation of elite groups, which according to Molloy were associated with the symbolism of the warrior and armed conflict, could also play a role in potential conflicts.¹²⁵ Furthermore, the weapons that emerged during the MM period indicate the adoption of more advanced metallurgical techniques. The best examples of this are the appearance of elongated daggers with a midrib, as well as the first long swords. The strengthening the blade, as well as the introduction of a midrib, were great improvements to the reliability of the weapon in combat. The gradual extension of the blade put the warrior at a great advantage. The production of swords of Types A and B is a significant indicator of the militarization of society. We can see that the newly introduced types of weapons began a new pattern in the practice of violence, which reflects the increasing acceptance of war as a social practice. Looking at iconographic motifs, which contain an increasing number of scenes of conflict and violence, we see that war was embedded in the technological, religious and political logic of society. The image of a warrior became desirable during the LM period,¹²⁶ hence it can be assumed

that the elite chose to legitimize itself in this way. If, on the other hand, we accept that war is the source of this imagery, and was the normative process which shaped Cretan society during the Neopalatial period, we can see perfectly well that the development of weapons, or of defensive architecture in the preceding periods is all evidence for conflict on the island. The elites, therefore, used the images of violence in controlling their subordinates. Thus, armed force and war became the main supports of governments in Crete. The conflicts which occurred between individual centres during the Palatial periods could have culminated in the unification of power in Knossos in the Neopalatial. As archaeological evidence from the other parts of the island shows, this power, however, could not feel confident enough to terminate opposing militaristic rhetoric completely.¹²⁷ Therefore, it is legitimate to say that the hostilities on the island are testified to by the development of defensive architecture, weapons, and perhaps also by iconographic motifs.¹²⁸

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¹²² Nowicki 2000.

¹²³ Alusik 2007: 171.

¹²⁴ Driessen, Macdonald 1997: 12.

¹²⁵ Molloy 2012: 131.

¹²⁶ Krzyszkowska 2005: 204-207.

¹²⁷ Palakaistro is an example of a site where we find indications of resistance to established rule in LM IB. More in Younger, Rehak 2008: 170.

¹²⁸ More about combat scenes in Minoan glyptic art in Krzyszkowska 2005: 204-207.

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