A JARRING DISCOVERY

An analysis of pottery from Chalcolithic Cyprus

By

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Title: A jarring discovery: an analysis of pottery from Chalcolithic Cyprus

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Course and course code: BA thesis, 1083VTHESY-1920ARCH

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Specialization: Archaeology of the Near East

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Leiden, 01/07/2020, final version

1 - Introduction

Chlorakas-*Palloures* is one of a number of sites located in the southwest of Cyprus that date to the Chalcolithic, the intermediary period between the Neolithic and the Bronze Age. This thesis explores the uses of pottery at the Chlorakas-*Palloures* between the Middle and Late Chalcolithic phases at the site. The overall aim is to take a dataset of 216 processed diagnostic ceramic sherds from five trenches at Chlorakas-*Palloures* and assess what the difference in shapes can tell us about the difference in pottery usage between the Middle (3400-2900BC) and Late (2800-2400BC) Chalcolithic periods from the site. The Chalcolithic is a generally poorly investigated period in a number of archaeological regions, but sites such as *Chlorakas-Palloures* offer an insight into the shift toward the Bronze Age (Hadjigavriel 2019, 16; Peltenburg 2014, 1).

Currently, only little is known about pottery use from this archaeological site. However, other contemporary sites such as Kissonerga-*Mosphilia* and Lemba-*Lakkous* (Peltenburg *et al* 1985; Peltenburg *et al* 1998) have looked into the relationship between pottery form and function, which in turn allows for an understanding of pottery usage.
A comparative analysis of a sample of sherds from Chlorakas-*Palloures,* as well as an analysis of the relationship between form, function and use of these Chalcolithic vessels will contribute to a broader understanding about ceramic use during and between the Middle and Late Chalcolithic, and how Chlorakas-*Palloures* compares to other local Chalcolithic sites.

Research questions

For this research, the following research question is posed: *What can pottery shapes in the Middle and Late Chalcolithic material contexts from* Chlorakas-Palloures *tell us about pottery use and production*

A small number of sub-questions help to answer this main research question:

- Which vessel shapes can be most commonly seen in the Middle Chalcolithic phase at *Chlorakas-Palloures?*
- Which vessel shapes can be most commonly seen in the Late Chalcolithic phase at *Chlorakas-Palloures*?
- What can these vessel shapes tell us about the individual periods?
- How does the *Palloures* corpus compare to other LAP sites?

Outline and approach

This thesis is based primarily on a database analysis of diagnostic ceramic sherds from five different trenches at Chlorakas-*Palloures*. Chapters two, three and four will build on literature presenting an archaeological background and methodology. Following this, chapter five will present the results of the data analysis and chapter six will discuss these results and answer the research questions.

In chapter two, a general overview of Chalcolithic Cyprus is presented to provide context for the rest of this thesis. This includes a short summary of the geography and climate of the island and following this an overview of the Early, Middle and Late Chalcolithic. This overview will briefly cover the Early Chalcolithic for context, and then discuss settlement, subsidence, burial and ritual practices from the Middle and Late Chalcolithic. Following this is a brief history of the excavations at Chlorakas-*Palloures.* Chapter three continues by presenting on ceramic material from Chalcolithic Cyprus, first looking at the history of Chalcolithic ceramic research on the island, and then focusing on the red-on-white and red monochrome wares and introducing the relevant ceramic shapes for the analysis and understanding of the dataset material.

Chapter four will deal with form and function, first by introducing the concept of form and function in pottery analysis, and then summarising relevant previous research on form and function from the contemporary Chalcolithic sites of Kissonerga-*Mosphilia* and Lemba-*Lakkous*. Chapter five will subsequently discuss the methodology and present the dataset and surrounding limitations

Chapter six will present the results of the database analysis and attempt to answer the four sub-research questions that are posed in the introduction. Finally, chapter seven will offer some conclusions and briefly mention possible further research.

2 - An overview of *Chalcolithic Cyprus*

2.1 - An introduction to Chalcolithic Cyprus

Cyprus is an island in the Eastern Mediterranean. The Island is situated approximately 70km south of Turkey and 95km west of Syria, with a surface area of 9251 square kilometres making it the third biggest island in the Mediterranean after Sardinia and Sicily (Knapp 2013, 3). The island has a long history of human occupation that stretches back to the 10th and early 9th millennium BC to the Pre-Pottery Neolithic (Watkins 2005, 232). According to Diane Bolger (2013, 1), the Neolithic sites on the Island demonstrate close links with the Levantine mainland during the 8th-9th Millennium BC. A few hundred years later in the Early Bronze Age, Cyprus became a huge producer and exporter of copper which was integral to the growth of the island in an ever-globalising world (Hadjigavriel 2019, 12).

The Chalcolithic is the interlude period between the Late Neolithic and the Early Bronze Age that is dated from approximately 4000BC to 2400BC. It is divided into three sub-periods: the Early, Middle and Late Chalcolithic (Peltenburg 2014, 1). The Early Chalcolithic dates to between approximately 4000 and 3400 BC, The Middle to between 3600/3400 and 2700 BC and the Late to between 2700/2600 and 2500/2400 BC (Knapp 2013, 27; 206; 246).

The Chalcolithic is a generally poorly investigated period in a number of archaeological regions (Hadjigavriel 2019, 16). During the Chalcolithic period in Cyprus, the Island has been considered relatively isolated from the rest of the world, (Peltenburg 2014, 1). The material from *Chlorakas-Palloures* shows that the site dates to the Middle and Late Chalcolithic (Düring et *al* 2018, 472). The following sub-chapters will briefly discuss the Early Chalcolithic for the purposes of context, and then cover settlement, subsidence, burial and ritual practices of the Middle and Late Chalcolithic.

2.2 - The Early Chalcolithic

The Early Chalcolithic in Cyprus dates to between approximately 4000 and 3400 BC (Knapp 2013, 27). Just after 4000 BC, there was an island wide shift in settlement systems, during which the Neolithic communities abandoned their villages and migrated to the west coast. This came to be the most densely populated region of the island during the Chalcolithic (Peltenburg 2014, 254). Overall settlement in this period expanded considerably (Knapp 2013, 197). It appears that the change happened rather quickly, although the transition from Stone Age to Chalcolithic may have been far more gradual (Peltenburg 2014, 2).

Furthermore, the idea of a rapid resettlement on the west of the Island may be biased because the known and researched Chalcolithic sites in Cyprus are located in the west. In addition, the northern part of Cyprus has been inaccessible for research for the past few decades due to the fact that it has been occupied by Turkey since 1974.

Other than a major relocation of the population to the west, sites in the early Chalcolithic, like Kissonerga-*Mylouthkia*, can be characterised by partially sunken pits and hollows that are surrounded by postholes. These pits have been interpreted as pit houses, but they lack some key features of later buildings on ground level. The circular shape of these supposed buildings is a switch from the rectangular stone buildings of the Late Ceramic Neolithic (Knapp 2013, 197; Peltenburg 2014, 3).

2.3 - The Middle and Late Chalcolithic - Settlement practices

During the Middle Chalcolithic, there was a significant increase in the Islands' population, and a noticeable development of social inequality that can be seen in the size of the houses, access to key foods and control of ritual (Peltenburg 2014, 9).

According to Knapp, the most significant and researched Middle Chalcolithic sites are "*Kissonerga Mosphilia, Lemba Lakkous, Souskiou Laona* and *Erimi Pamboula*, all of which are located in the South and Southwest of the island as part of a cluster of sites (Knapp 2013, 207-208). Spatial organisation and control are visible during the Middle Chalcolithic, both in the structure of the houses and the settlements. Free standing circular houses with stone foundations, plastered walls and a central hearth became common, with general homogeneity across the various sites. The space within the Middle Chalcolithic house was divided into different areas for working, cooking, storage and living (Knapp 2013, 206; Peltenburg 2014, 6).

The material structure of the Chalcolithic house during the Late Chalcolithic seems to be consistent with previous periods, with the key difference of no formal division between different spaces of the house. However, the various functions of the houses still stayed more or less the same (Peltenburg *et al* 1998, 237-240). There is evidence for communal food storage space, metalworking and specialised craft activities from the site of *Kissonerga Mosphilia*, specifically a house named 'the Pithos House' (Peltenburg et al 1998, 255). The Pithos House revealed evidence for the working of shell and picrolite, potentially imported shell beads, a cache of stone axes and adzes and storage vessels with a capacity of up to 4000 litres among other things (Peltenburg et al 1998, 252-254). A number of deer bones can be found at the house, which due to the scarcity of deer, might indicate that the house and deer hunting were for the social elite. Alternatively, the house may have been used as a

type of social storage and a place for redistribution of goods and materials (Knapp 2013, 249). Economic intensification is evident during this period, based on a visible increase of livestock and storage facilities (Peltenburg 2014, 10-12).

2.4 - The Middle and Late Chalcolithic - Subsidence Practices

Subsidence strategies in the Middle Chalcolithic were varied, with wild and farmed plants and different animals consumed. The most present species of animal in the Chalcolithic were fallow deer, caprines and pigs, although there was a noticeable decline in the hunting of deer and caprines and a rise in that of pigs between the Early and Middle Chalcolithic (Knapp 2013, 215; Peltenburg 2014, 206). Throughout the Chalcolithic, animal exploitation seems to have increased which may potentially reflect an increasing population (Croft 1991, 73). Emmer wheat was the type of wheat most regularly consumed, lentils and chickpeas were common and domesticated grapes began to appear during the period (Lucas 2012, 148-149). Furthermore, some of the first evidence of bulk storage of food based on ceramics can be seen in the Chalcolithic (Lucas 2012, 256). It is likely that animals were not only used as part of the subsistence economy, but also had uses relating to mortuary practice, ritual and feasting (Knapp 2013, 15).

During the Late Chalcolithic, a supposed shift toward domesticated and herded animals such as pigs and ovicarpines can be seen. The amount of deer meat at Kissonerga-*Mosphilia* dropped while the amount of pig meat supplying the site increased. At sites from the Early Chalcolithic, pig remains only constitute 22% of animals, but this increases to 49% in Late Chalcolithic sites (Croft 1991, 71). As mentioned previously, this change may be due to an increasing population over time and increasing food demand. This in turn may have led to overhunting and the potential reduction of the deer population and the limitation of their natural habitat (Croft 1991, 73).

2.5 - The Middle and Late Chalcolithic - Burial Practices

During the Early Chalcolithic, it appears that there was not any specific location where the dead were buried and burials were individual, but funerary practices became far more standardised and clear in the Middle Chalcolithic. Both individual burials and cemeteries become visible. Importantly, this is the first time that cemeteries appear on the island at the Souskiou complex of sites. These sites include four Middle Chalcolithic cemeteries, three of these at the site of Souskiou-*Vathyrkakas* and one at Souskiou-*Laona*. One of the cemeteries at Souskiou-*Vathyrkakas* contains a number of deep bell shaped

shafts with multiple burials that are unknown from the mortuary record of the Neolithic and Chalcolithic (Knapp 2013, 221-223)

The most common type of burial was in a pit grave, either with or without a capstone. Chamber tombs could also be found, and where pit burials tended to contain a single deceased child, chamber tombs usually contain more than one adult individual (Knapp 2013, 217-218; Peltenburg 1998, 70-71). The most frequently seen burial position was on the right side of the body, facing inland (east) with the hands placed in front of the face (Peltenburg 1998, 65). Grave goods were common, but not all deceased were buried with them. Objects found in burials include figurines, ceramic or aceramic vessels, shells, bone pendants and antlers (Niklasson 1991, 222-224).

Burials in the Late Chalcolithic varied quite somewhat from those of the Middle. Chamber tombs were still in use, but a double chambered tomb with vertical entrances was discovered as *Kissonerga Mosphilia* (Niklasson 1991, 201). Niklasson mentions that three types of burials took place in this period: pit grave burials, burials without a pit and burials in chamber tombs (Niklasson 1991, 202). Children were no longer buried with priority and grave goods were few. At Kissonerga-*Moshilia*, child burials consisted of hastily dug out pits, while adult burials were sometimes within the settlement but still relatively simple with limited grave goods (Knapp 2013, 258). Peltenburg views the changes in funerary practices in the Late Chalcolithic as evidence for ‘a major ideological shift in the Late Chalcolithic at Kissonerga-*Moshilia* (Peltenburg 2998, 84).

2.6 - The Middle and Late Chalcolithic - Ritual activity and Material Culture

According to Peltenburg, there is also an intensification of ritual activity with an island wide symbolic system and “*flourishing arts and crafts*” in the Middle Chalcolithic (Peltenburg 2014, 4). Ritual feasting in this period can be indicated by large concentrations of three flasks and almost forty cup sized bowls around the central hearth of a building at *Lemba-Lakkous* (Knapp 2013, 232). An increase in ritual activity can also be seen with the increased presence of anthropomorphic figurines, either made out of picrolite or ceramic. An example of these figurines was discovered in the Kissonerga-*Mosphilia* ceremonial area.

The ceremonial area in *Mosphilia* is an important and unique part of this site, characterised by its distinctive architecture and home to some of the largest known buildings from prehistoric Cyprus.There are four structures built around the ceremonial area, that feature stone foundations, thick plaster floors, radial partition walls and rectangular hearths (Knapp 2013, 209, Peltenburg 1998, pl. 5.1). The presence of highly decorated bowls for serving food and multiple holemouth jars led the excavators at Kissonerga-*Mosphilia* to the

hypothesis that the area may have served some purpose related to ritual feasting (Peltenburg 1993, 14-15).

The archaeologists working on this excavation discovered a Red-on-White ware building model bowl with eighteen anthropomorphic figurines on a distinct archaeological area. Eight of these were stone and the rest were made from pottery (Knapp 2013, 233; Peltenburg 1991a, 21-27). All of the ceramic examples depict females in different positions, such as standing or squatting, and it is believed that these are associated with childbirth.

The Middle Chalcolithic was also the first time that copper use could be seen in Cyprus. Artefacts found at Kissonerga-Mosphilia indicate metalworking during this period, and Peltenburg suggests that during this period copper was a prestige item as objects made out of copper were used as ornaments on necklaces (Knapp 2013, 230; Peltenburg 2001, 8).

During the Late Chalcolithic in Cyprus, some evidence for metal items from abroad made from Cypriot copper became evident. Examples of these include a copper axe and daggers found in Jordan, and a fishhook and awl found in Crete (Knapp 2013, 230). This is an indicator that Cyprus was having overseas interactions during the Late Chalcolithic period.

2.7 - Chlorakas-Palloures

The archaeological site of *Chlorakas-Palloures* (hereafter *Palloures*) is part of a number of Chalcolithic settlements that can be found in the Ktima lowlands, a 25km strip of Lowland in the Paphos region (Peltenburg 1991, 17). The site of *Palloures* itself can be found on a slope in the village of Chlorakas which is slightly north of the city of Paphos (Düring et *al* 2018, 468).

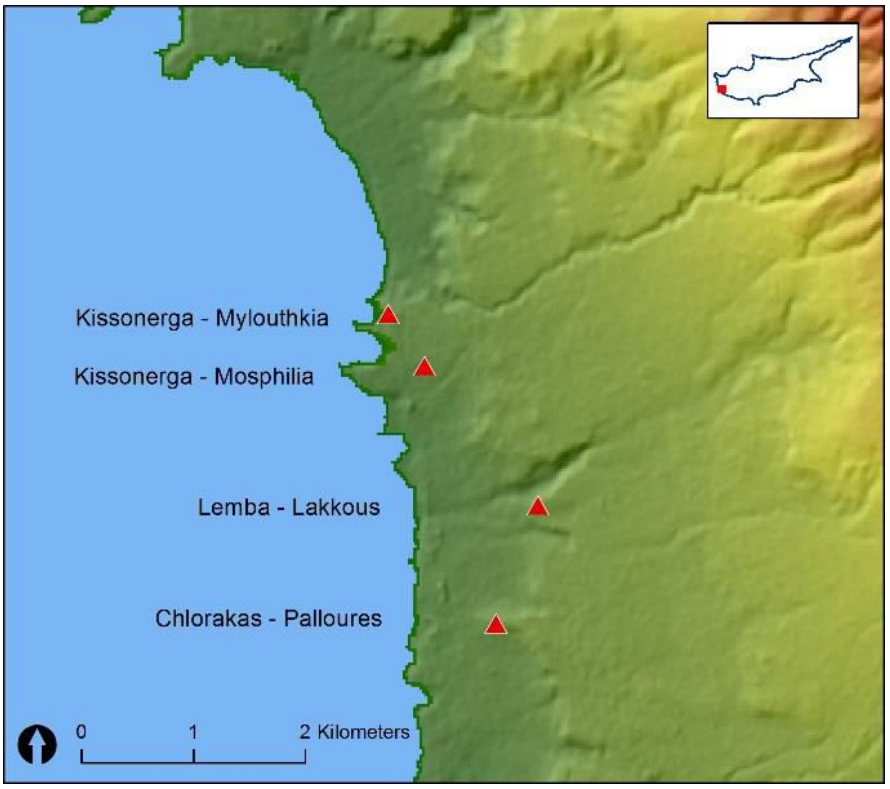

Fig. 1. Map of the Ktima lowlands showing important Chalcolithic archaeological sites (Düring et al. 2018, 12)

Palloures was first identified in the 1950s, and the first studies of the site were conducted during the Paphos district survey in 1979 (Düring et *al* 2018, 468). Following a land consolidation program in the 1970s, the site was impacted heavily. The hill that the settlement was located underneath was terraced, spreading artefacts that had previously been buried down the hill, and traces of wall were even visible (Düring et *al* 2018, 469). The site was terraced again in the following years and is currently surrounded by urban construction which has impacted it considerably. The current owners of the land where the site is located initially intended to sell the plots for development. However, due to its archaeological importance, the Department of Antiquities of the Republic of Cyprus wanted rescue excavations to take place and Leiden University set up excavations in consultation with the department (Düring et *al* 2018, 467-469). The landowners no longer intend to sell the fields upon which the site is located, and the land has been confiscated by the Department of Antiquities of Cyprus.

Excavations at Palloures by Leiden University began in July of 2015, and by the end of the 2017 field season, a total of seventeen trenches were excavated (Düring 2019, 2). The excavations were initially restricted to three campaigns that would last until 2017. However, in 2016 Paphos museum staff excavated trial trenches on an adjacent plot of land

that was also intended for development, and following a season to study the material from the previous three years, the adjacent plot was purchased by the Department of Archaeology in Cyprus in 2019 (Düring 2019, 1). This thesis will focus on the ceramic material from trenches BT13, BU12, BU13, BV13 and BW14 from the excavations that took place between 2015 and 2017.

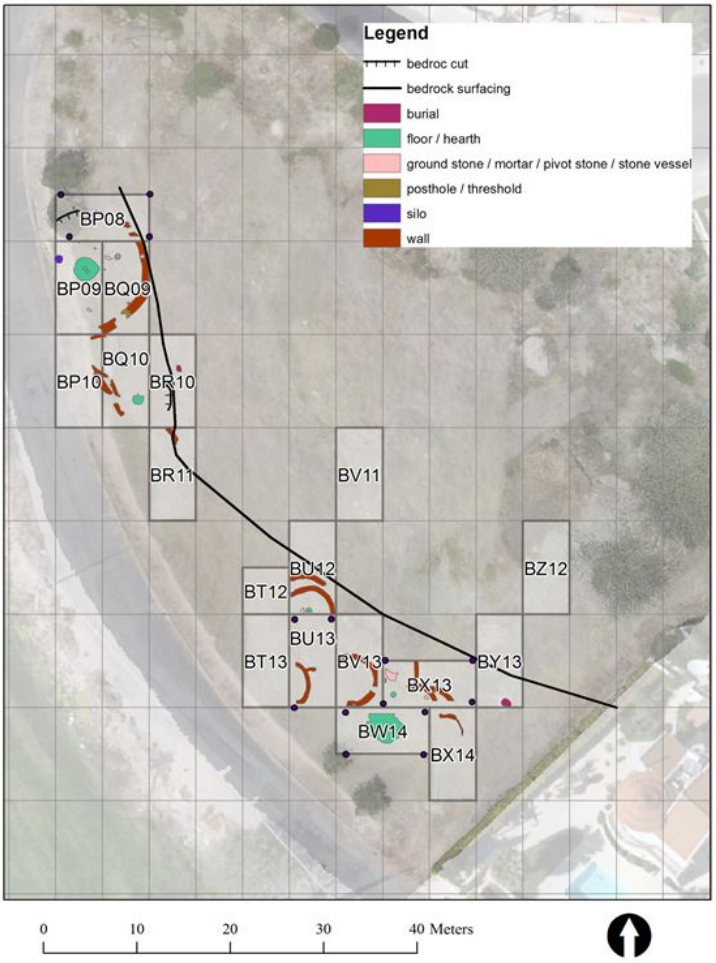

Fig. 2. The trenches at Chlorakas-Palloures in Plot 568 (Düring 2017, 4)

The first three years of excavations at *Palloures* yielded a variety of interesting and important finds for Chalcolithic Cyprus. As can be seen in Figure 1, the trenches revealed two clusters of buildings in the north and the south of the site (Düring 2017, 4). There were a number of burials discovered, including a child burial in the cut of the bedrock. Alongside the burials, numerous pottery sherds, lithics and ground stone were discovered. One of the most fascinating artefacts discovered is a copper axe, which is so far the oldest found in Cyprus, found alongside some pig hook tusks and a flat stone axe/adze in a large Red Monochrome

jar which was not produced locally. This jar was found adjacent to the hearth of a building in Trench BU12 (Düring et *al* 2018, 473-464).

3 – Pottery in the Chalcolithic

3.1 - An overview of Chalcolithic pottery study

The initial discovery and analysis of 3rd Millennium BC pottery and identification of the Chalcolithic period can be attributed to Porphyrios Dikaios, a Cypriot archaeologist working in the early 20th century. He excavated the settlement of *Erimi-Pamboula* near Limassol, and established a pottery chronology (Bolger and Webb 2013, 39). However, this proved to be limited. In the 1970s, Edgar Peltenburg began the *Lemba Archaeological Project* in the Ktima lowlands of western Cyprus with the aim of establishing a clearer chronology of development on the island before the Bronze Age. A combination of stratigraphic sequences and carbon 14 dating of material has been used to construct a chronology for the 3rd millennium BC in the West of the island (Bolger and Webb 2013, 39-40). More recent excavations in different parts of the island have proven differences in ceramic production and periodisation, but since *Palloures* is located on the west of Cyprus, the work of Peltenburg and his chronologies suffices for the dating and periodization of the site

The ARCANE (Associated Regional Chronologies of the Ancient Near East and Eastern Mediterranean) volume on Cyprus presents a detailed assessment of chronological developments in Cyprus during the Third Millennium BC, based on archaeological data from the island and written by prominent and well known specialists. It contains information on not only ceramic material, but architectural development, ritual objects, ground stone, lithics and burial customs.

In the ARCANE Cyprus volume, Diane Bolger and Jennifer M. Webb present an overview of the different wares and vessel shapes of Chalcolithic and Early Bronze Age pottery (Bolger and Webb 2013, 39-127). This chapter covers dating and can be used for the identification of Chalcolithic pottery. The authors use a particular periodization for pottery from the Middle and Late Chalcolithic. This dating method is as follows: ECY1 dates roughly to the Middle Chalcolithic, and ECY2 to the Late Chalcolithic. ECY3 dates to the Philia Phase, the period following directly after the Late Chalcolithic. However, this phase is not

relevant for the material from *Palloures* that is presented here. Figure 3 displays a table with the relevant periodisations for visual aid.

Chalcolithic period	ARCANE period	Approximate dates (BC)
Early Chalcolithic		ca. 4000/3900 - 3600/3400 BC
Middle Chalcolithic	EYC 1	ca. 3600/3400 - 2900/2700 BC
Late Chalcolithic	EYC 2	ca. 2900/2700 - 2400 BC

Fig. 3. Periodisation of the Chalcolithic. Created by Max Condon after Bolger and Webb (2013)

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Pottery in the Chalcolithic was exclusively made by hand, since wheel made pottery is not visible on the island before the Late Bronze Age. It also tended to be created out of locally sourced material (Bolger and Webb 2013, 39). Bolger and Webb have identified ten different ceramic wares from the from the 3rd Millennium BC: Red on White Ware, Red Monochrome Painted Ware, Dark Monochrome Ware, Coarse Ware, Spalled Ware, Coarse Painted Wares (Monochrome and Patterned), Red and Black Stroke-Burnished Ware, Red Monochrome Painted Ware, and Red Polished Ware. (Bolger and Webb 2013, 41-44). However, the majority of ceramic material at *Palloures* is either Red on White Ware or Red Monochrome (Düring et *al* 2018, 475), meaning that the main focus of this thesis will be on these two styles.

3.2 - Forming of Chalcolithic Vessels

Ceramic vessels from the Chalcolithic were formed with the use of three different primary techniques that are named in the site report of Lemba-*Lakkous* (Peltenburg 1985). In the ceramics section of this report, the three techniques are named by Stewart as direct modelling, manipulation and artificer methods (Stewart 1985, 267). It is worth noting that all pottery that was made during the Chalcolithic was handmade (Bolger and Webb 2013, 41).

Direct modelling is the first technique mentioned. A lump of clay is placed in the hand and is pressed and rotated, which can sometimes leave visible thumb marks in the base of the vessel. This is most comparable to the pinching technique which is described by Rye as

probably the simplest pottery forming method that leaves little markings, a small surface finish and fairly regular wall thickness (Stewart 1985, 267; Rye 1985, 70).

The second technique referred to by Stewart as 'manipulation' is where the clay can be manipulated into shapes before being used to construct the pot. Coiling was a commonly used manipulative method by Lemba potters. This involves the stacking up of uniform rolls of clay and subsequently smoothed down to create a vessel. This method generally leads to regular variations in wall thickness, but this can be hard to recognise in Chalcolithic pottery as coils are pressed together during shaping (Stewart 1985, 267; Rye 1981, 67-70).
The final method of production mentioned is the artificer technique. This involves any technique that includes the use of additional tools to help form the vessel. This includes moulds, and Stewart mentions that baskets were sometimes used to act as a mold as for some vessels. Another artificer method of pottery making during the Chalcolithic is the 'ghost rim' technique. This is described by Stewart as "*an inner skeleton of finer clay which has skins of clay applied on either side on the interior and exterior in a sandwich method, (and) would require some form of bats to consolidate the "skins" of clay*". This implies that beating with opposing force was used, which uses a tool to pat the clay on the outside of the vessel, and another tool is held inside the vessel to refine the shape and consolidate the layers of clay (Stewart 1985, 267; Rye 1981, 73).

3.3 - Chalcolithic Pottery Wares

During the Middle Chalcolithic there were a number of pottery wares in production, namely: Red-on-White, Red Monochrome Painted, Dark Monochrome, Coarse Ware and Spalled Ware (Bolger and Wedd 2013, 41-42). However, the most popular Middle Chalcolithic ware from *Palloures* was Red-on-White ware; the following section will focus on this one.

Different styles of Red-on-White pottery wares have appeared in Cypriot history since the Late Neolithic in the 5th Millennium BC. This pottery style developed over the centuries, and during the middle Chalcolithic, Red-on-White pottery was distinguished by a distinct pattern of decoration, and can be seen at other Chalcolithic sites such as Lemba-*Lakkous* or Kissonerga-*Mosphilia* (Bolger and Webb 2013, 41). Bolger and Webb date Red-on-White pottery to ECY1 and ECY1/2.

It is important to be able to define this style of Red-on-White (which was known as Red-on-White lattice at the site of *Kissonerga)* from the different styles to avoid typological confusion (Bolger and Webb 2013, 41). Red-on-White vessels from ECY1 are decorated with a "buff to off-white slip under orangey-red to reddish-brown paint of medium thickness and lustre (and an) extensive range of geometric motifs". Linear, curvilinear and lattice

based motifs are prominent, and surfaces are usually lightly polished (Bolger and Webb 2013, 41; Figure 4). In the 2018 paper summarising the first three years of excavation at *Chlorakas-Palloures*, Paraskeva defines Red-on-White ceramic material from the site as "exterior or interior surface slipped with light/white coloured slip and painted with red paint of slip" (Düring *et al* 2018, 476).

Fig. 4. Examples of Red-on-White pottery ware from *Chlorakas-Palloures.*

The Red-on-White pottery tradition all but disappeared during the Late Chalcolithic and was replaced almost entirely with Monochrome ware styles, and Red and Black stroke burnished ware became the new most prominent fabric in the southwest of the island. Red and Black Stroke-burnished Ware can be recognised from its red to pink fabric, and surfaces are *"red slipped and highly burnished with visible burnishing marks*" (Bolger 2007, 173; Bolger and Webb 2013, 42-45; Figure 3). In a table in the 2018 article by Düring *et al*, Paraskeva places Red and Black Stroke-burnished Ware, along with coarse painted monochrome and Red Monochrome painted wares A and B, as wares with "overarching distinctive characteristics" that all constitute the Red Monochrome ware type (Düring *et al* 2018, 475-476)..

Bolger and Webb offer a broad detailed explanation of the Red Monochrome Painted ware. It is described as a monochrome version of Red-on-White. Surfaces might be unslipped, but "frequently have a buff coloured slip identical to that of Red-on-White ware; orangey-red to reddish-brown paint uniformly applied over a slip". Vessels of this ware type are lightly polished. Red Monochrome occurs in various types throughout the Chalcolithic and even occurred in the Late Neolithic, but the type of Red Monochrome described here refers to that found at the site of *Kissonerga-Mosphilia* (Bolger and Webb 2013, 41). However, this distinction between Red Monochrome and Red Monochrome Painted does not apply at Palloures, since Paraskeva defines Red Monochrome ware from *Palloures* as "exterior or interior surface monochrome painted or slipped with red colour" (Düring *et al* 2018, 476).

Fig. 5. Examples of Red Monochrome pottery ware from Chlorakas-*Palloures*

3.4 - Chalcolithic Shapes

Because the primary focus of this thesis is shapes from *Palloures,* it is imperative to introduce the relevant shapes from both periods. Red-on-White ware pottery shapes correspond to a number of different vessels that are all categorised and listed by Bolger and

Webb (2013) in the ARCANE volume on Cyprus. Red-on-White pottery became more complex in terms of shapes in this period, compared to the Early Chalcolithic. However, it is important to note that it was still produced at a household level (Knapp 2013, 228).

There are a number of shapes from the Middle Chalcolithic that are visible and relevant to the dataset from *Palloures* used in this thesis. The platter is one of the most common shapes in Chalcolithic pottery. This is described as a medium sized bowl with sharply flaring walls. There are a number of bowls that are also visible in the Middle Chalcolithic: the hemibowl, deep bowl, conical bowl, globular bowl, spouted bowl and bucket.

The hemibowl is a small to medium bowl type with a hemispherical body. The wall height can vary and where some are truly hemispherical, some are far deeper. The deep bowl is a medium sized bowl with roughly vertical walls, and some later examples have slightly concave bases. The conical bowl has straight tapering sides and a flat base, and is easy to confuse with the platter shape when looking at the sherds. Globular bowls are deep and wide rimmed with convex walls, and feature lugs midway between the rim and the base. (Bolger and Webb 2013, 42-43; Bolger *et al* 1998, 98).

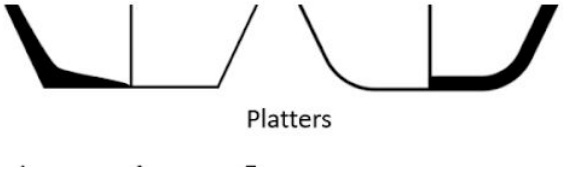

Fig. 6. Schematic representation of platter shapes. Created by Maria Hadjigavriel and Ermina Emmanuel (Hadjigavriel 2019, 83)

Aside from bowls, a couple larger vessel shapes are visible in the Middle Chalcolithic among the corpus of pottery from Palloures. These are the storage jar and holemouth jar. The storage jar is simply a large and deep vessel with convex walls and a flat base. The holemouth jar has three variations that are mentioned in the ARCANE volume, but the only one of these that is visible during the Middle Chalcolithic is the simple holemouth jar. This is a small to medium sized storage vessel with a vaguely globular body and closed rim. The rim of the holemouth jar tends to be far smaller than the maximum width of the body (Bolger and Webb 2013, 42; Bolger *et al* 1998*,* 98)

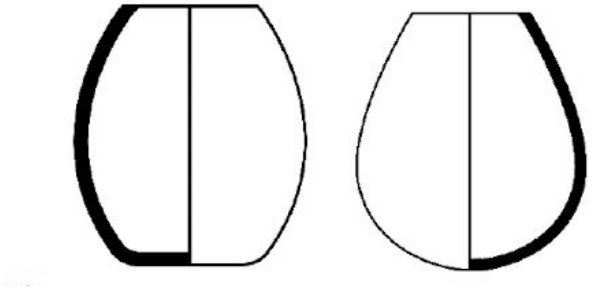

Fig. 7. Two examples of holemouth jar shapes (Hadjigavriel 2020, 2).

The final Middle Chalcolithic shapes that are present at *Palloures* are the tray, goblet and flask. The goblet is thought to be a drinking vessel, with an open rim, a globular body and a pedestaled base. Flasks are small and medium sized closed vessels, also with a globular body, but with a pointed base and a long neck. Finally, trays are open vessels with a circular shape and vertical walls with varying height, often with lugs underneath the rim and a generally thin base.

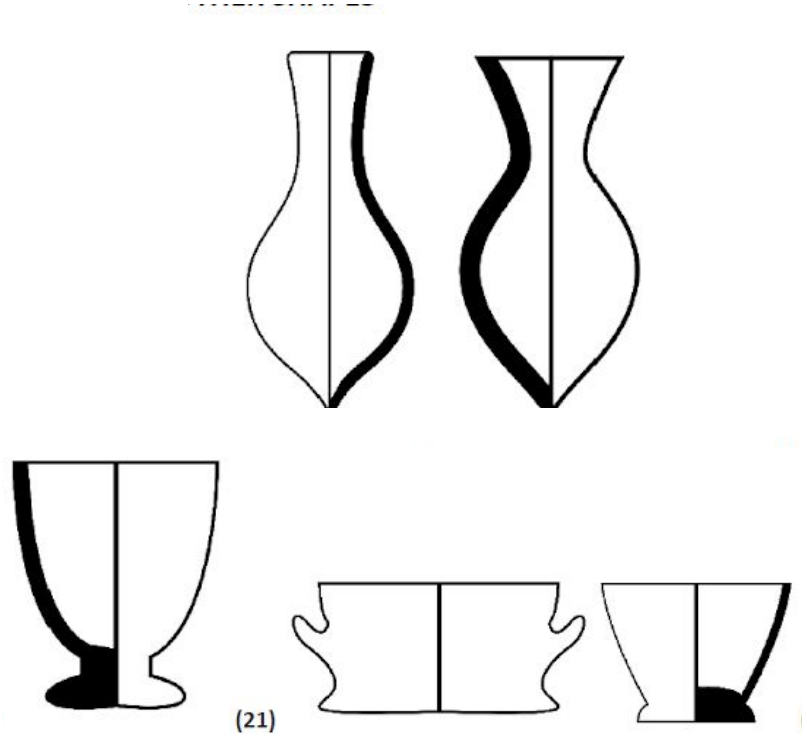

Fig. 8. Examples of flask (top), goblet (left) and tray (right) shapes (Hadjigavriel 2020, 3).

The Middle Chalcolithic was also the period where exceptional pottery, specifically anthropomorphic and zoomorphic vessels, was first seen to occur. The anthropomorphic vessels are hollow figurines with the human features of a face and a body that are rare and found in ritual and burial contexts at Chalcolithic sites on the Ktima lowlands. They are exclusively found in Red-on-White ware style (Bolger and Webb 2013, 44). A number of these anthropomorphic figurines depict females in different positions. It is believed that these figurines are associated with childbirth and were used in ceremonies relating to female fertility (Peltenburg 1991a, 24). Zoomorphic vessels are even rarer than anthropomorphic ones, with only two known examples, both in Red-on-White ware and both found at Souskiou-*Vathyrkakas*. The best preserved example resembles a “bird-like creature” and was likely also associated with ritual context (Bolger and Webb 2013, 44). An exceptional example of ritual ceramic from the Middle Chalcolithic was discovered in a pit in Kissonerga-*Mosphilia*. This was a ceramic model of a circular Chalcolithic building, complete with a door, doorway, hearth and partition ridges on the floor. This is a unique example of Chalcolithic pottery, and no other similar artefact has since been discovered.

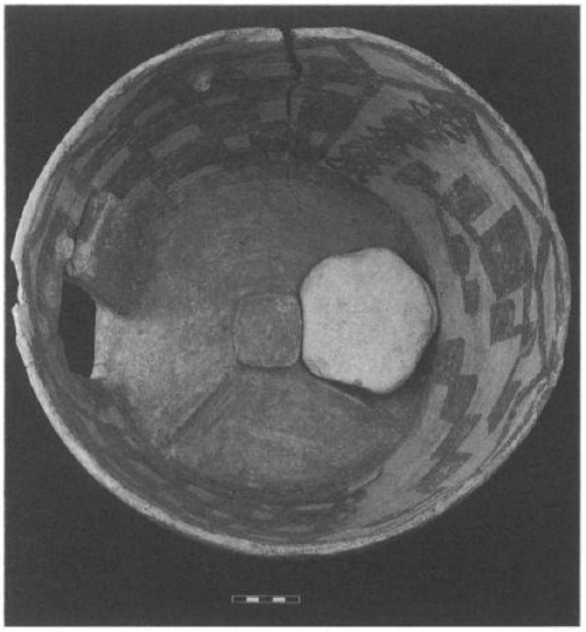

Fig. 9. Kissonerga-Mosphilia Red-on-White house model (Peltenburg 1991, 25)

Ceramic technology evolved across Cyprus in the Late Chalcolithic. An increase in scale and quality of pottery production is visible, and a higher degree of standardisation in shapes can be seen (Bolger 2007, 174). Vessels from the Late Chalcolithic also display a far greater range of shapes and production of different styles than the Early and Middle periods

and there was a far higher degree of standardisation across the Island (Bolger and Webb 2013, 45).

Shape forms of Red and Black stroke burnished ware include platters, spouted flasks and bottles; flasks with a pointed base; hemispherical, ovoid, triangular, conical and deep bowls; hole-mouth, spouted and storage jars. Red Monochrome vessels also have a variety of shapes, although somewhat smaller, featuring the spouted jar; globular, deep, spouted and hemi bowl; flask with pointed base; platter and barrel (Bolger and Webb 2013, 42-44). A lot of these vessel shapes are the same or similar to ones from the Middle Chalcolithic that were explained above. However, there are a few shapes from the Late Chalcolithic Corpus from Palloures that have not yet been covered. These are the ovoid and spouted bowl, and the spouted jar.

Finally, spouted bowls are similar to deep bowls in shape, but feature a short cylindrical spout below the rim. Ovoid bowls are small deep bowls with an ovoid body, and often have a single tab lug underneath the rim. The spouted jar is a variant of the holemouth jar. The features of this shape are the same as a holemouth jar, except for a diagonal tubular spout below the rim which can be between five and fifteen centimetres long (Bolger and Webb 2013, 43-44).

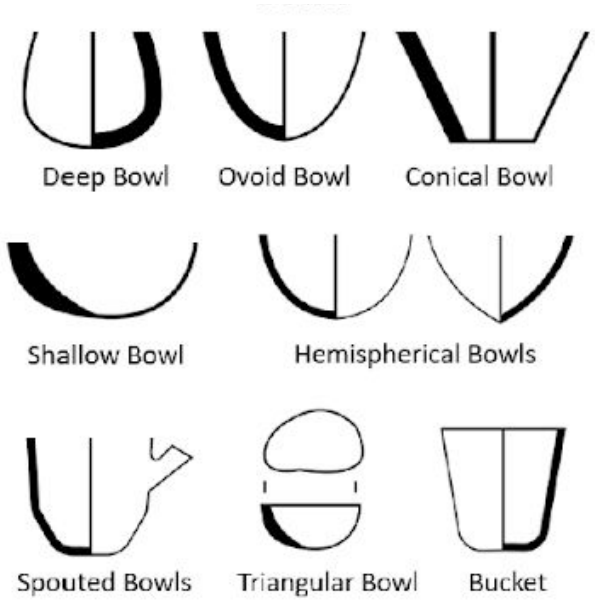

Fig. 10. Schematic representation of bowl shapes. Created by Maria Hadjigavriel and Ermina Emmanuel (Hadjigavriel 2019, 83)

4 - Form and Function

4.1 - Form and Function

The form and the function of a vessel are inherently interrelated. Certain aspects of vessels are determined by their intended function. Orton and Hughes mention that the functions of pottery containers can be divided into three broad categories: storage, processing (including cooking), and transfer (including serving and eating) (Orton and Hughes 2013, 247). Each of these three categories contains certain characteristics. A vessel used for cooking would usually be open in shape and have a thin base, and have to take heat distribution into account, whereas a storage jar would have to have the capacity, stability and strength taken into consideration, and would have a totally different set of specifications and criteria to meet (Orton and Hughes 2013, 83, Bolger *et al* 1998, 214). Size of a vessel can sometimes be related to function. For example, a storage jar would tend to be large whereas a serving vessel would usually be smaller. However there can be many reasons for variations in the size of vessels, so it is probably less of an important factor (Orton and Hughes 2013, 247). Use of these broad categories and classifications can be used help to explain the characteristics and function of a vessel, but they do not provide immediate indication of the vessel function (Orton and Hughes 2013, 252)

Generally, there is always going to be some sort of flaw when it comes to the classification of pottery shapes. The primary problem is that of variation. Standardisation of ceramic measurement when producing any form is in relation to the potter's own body, as opposed to something more strict like a ruler. Measurements are usually taken from the hand, from widths between different fingers. Therefore, if two potters are producing the same form of pottery then there is bound to variation due to the relative size of their hands (Rye 1981, 58-59).

Each vessel is unique in form unless it is produced in a mould but these and these forms must still be grouped together for understanding and for categorisation (Orton and Hughes 2013, 82). This uniqueness is indeed the case for Cypriot Chalcolithic pottery the majority was produced by hand (Bolger and Webb 2013, 41). However, the standard method for variation in pottery form is to create a form type-series, where each example of a pottery type "*represents a group of vessels that are considered to be more or less the same in shape"*, which thankfully what has been created in the in the ARCANE volume by Bolger and Webb. All possible forms of Chalcolithic pottery from ECY1 through to ECY3 have been recorded and described in what Orton and Hughes refer to as a 'form type series' (Bolger

and Webb 2013, 41-44; Orton and Hughes 2013, 83). These pottery forms are described in greater detail in sub-chapter 3.4.

Additionally, the form and function of vessels has been taken into account when it comes to the contemporary ceramic material from the sites Kissonerga-*Mosphilia* and Lemba-*Lakkous*. It is mentioned in the *Lemba Archaeological Project Volume 2*, that the functions of pottery vessels can be inferred from their characteristics. However, it is also stated that at least in the case of Kissonerga-*Mosphilia*, it is not always possible to determine the specific function of all vessel types, since "*the form of a vessel does not always provide sufficient clues concerning its function"* (Bolger *et al* 1998, 123). Despite this, the 'Lemba Archaeological Project' volume that reports Kissonerga-*Mosphilia* has grouped the forms summarised by Bolger and Webb into five functional categories related to different aspects of usage. These categories will be summarised in the following sub-chapter.

4.2 - Previous research on form and function

As mentioned previously, Diane Bolger and Jennifer Webb have created a repertoire of shapes for Cypriot Chalcolithic pottery, based on the extensive ceramic evidence from Kissonerga-*Mosphilia* and Lemba-*Lakkous,*, as well as a couple of other local sites (Bolger and Webb 2013, 41). Additionally, Edgar Peltenburg, along with a number of other archaeologists who researched the Chalcolithic on the island, have published the results of the excavations at Lemba-*Lakkous* and Kissonerga-*Mosphilia* in the Lemba Archaeological Project volumes one and two (Peltenburg 1985; Peltenburg 1998). These volumes contain crucial information that relates to the topic of form and function of Chalcolithic pottery from sites that were contemporary with Chlorakas-*Palloures*, and will help with the analysis of the results.

"*When dealing with a collection of vessels… it is natural to group similar items together and separate them from the groups from which they differ"*, and It is reasonable to divide an assemblage into basic functional classes which might then lead to knowledge of the activities carried out at the sire (Orton and Hughes 2013, 81; 190). When combining this idea with the differences in periodisation of Chlorakas-*Palloures*, it can be assumed that the difference between Middle and Late Chalcolithic pottery can demonstrate the differences in pottery use between the two periods.

In the chapter by Bolger *et al* in the site report for Kissonerga-*Mosphiia,* (Bolger *et al 1998),* the form and function of Chalcolithic vessels is discussed in some detail. This volume focuses on the material from Kissonerga-*Mosphilia*, and has categorised pottery vessels

from this site into five basic functional classes based on typological information (Bolger *et al 1998*, 123).

The first of these functional groups is food preparation and service. This includes vessels that are used to prepare, serve and distribute food and drink. These shapes can be broken down into a number of sub-categories. The platter, bucket and all variations of bowl are used for the preparation, serving and distribution of food. Spouted vessels are used for the preparation of liquid, jars and jugs for the distribution of liquid, and the goblet and drinking cup shapes are used for the consumption of liquid. It is also mentioned that these shapes may have doubled as temporary storage containers but their overall size and shape suggests that the primary function was food preparation or service (Bolger *et al* 1998, 123).

The second and third functional groups are vessels that are intended for liquid and dry storage. Liquid storage vessels are usually closed shapes with thinner and more porous walls. These vessels can be divided into two subgroups based on size. The first of these groups is medium sized vessels that can be moved around, such as the flask and storage jar shapes. The second group is much larger stationary vessels that were probably intended for long term storage like the holemouth storage jar. Dry storage are generally stable vessels with board bases, thick walls and open shapes to allow for accessibility to whatever is being stored. Shapes that fit into this category include the storage jar or the barrel (Bolger *et al* 1998, 124)

The fourth category mentioned is cooking. These vessels are usually round in shape and for the even distribution, and thin for the rapid transmission of heat. The only vessels that were likely used for cooking are the tray and deep tray, despite their flat bottoms. Perforated lugs for suspension suggest that the baggy holemouth jar shape was also employed for cooking, but this is only speculation (Bolger *et al* 1998, 214)

The fifth and final category is vessels that are involved in ritual or ceremony. This category is based less on function and far more on the find context and morphology. Anthropomorphic vessels are included in this category, alongside the spouted bottle and jar, purely due to their discovery exclusively in graves. (Bolger *et al* 1998, 123-124). These five functional groups will be used when it comes to analysing the data, in order to group the pottery sherds and assess the distinction between pottery usage in the Middle and Late Chalcolithic.

4.3 - Ceramics at other sites

The main shapes seen in the ceramic material in Lemba-*Lakkous* include several types of bowl, with emphasis on the hemispherical bowl, shallow bowls and buckets. Storage,

spouted and holemouth jars are present among the corpus, and two types of flask can be seen: spouted flasks with a flat base, and pointed base flasks with a thin neck and no spout .

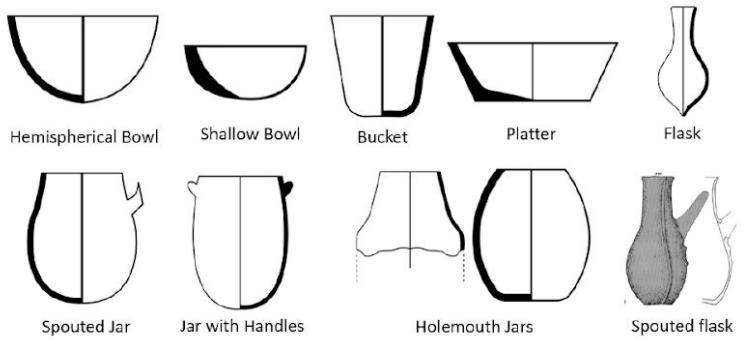

Fig. 11. Schematic representation of the main shapes of RB/B vessels in Lemba-Lakkous (Created by Maria Hadjigavriel and Ermina Emmanuel after Stewart 1985, 262) Hadjigavriel 2019, 85).

In Kissonerga-*Mosphilia*, the most common styles of vessels are open shapes, like bowls and platters. The most frequently occurring shape at *Mosphilia* was the hemibowl shape, although the deep, ovoid, conical and spouted bowls were also common. Flasks, storage jars and holemouth jars were also manufactured. There are certain technological developments that can be seen in the Late Chalcolithic phase of Kissonerga-*Mosphilia*. These are the spouted bottles, spouted jars, mostly with tubular spouts, triangular bowls and stemmed cups (Bolger *et al* 1998, 95, 121-122)

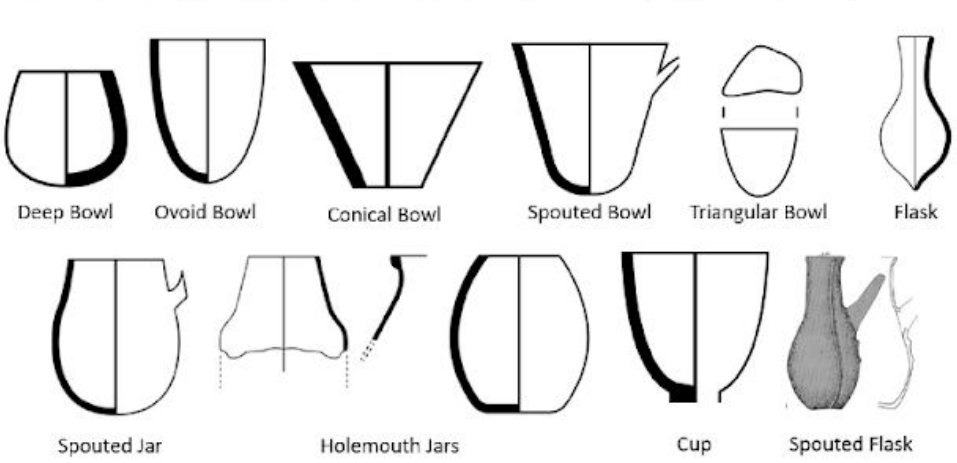

Fig. 12. Schematic representation of the main shapes of RB/B vessels in Lemba-Lakkous (Created by Maria Hadjigavriel and Ermina Emmanuel after Stewart 1985, 262) Hadjigavriel 2019, 85).

Based on this information, the primary functional category at place in both of these Chalcolithic sites is food preparation and service. The majority of bowl shapes implies that there was a production focus on these vessels specifically.

5 - Methodology

5.1 - Biases and limitations in Chalcolithic pottery study

Bolger and Webb present a number of problems and limitations of ceramic evidence from the third Millennium BC in Cyprus in the ARCANE volume. The key issues that may impact this study, along with smaller issues in the data analysis, will be briefly summarised here.

A key issue with pottery study and archaeology in general in Cyprus, is that of the Turkish occupation of the northern part of the island. The occupation has meant that a large portion of the island has been inaccessible for research since 1974. Prior to this, there were very few known sites that dated to the Early/Middle or Late Chalcolithic, so knowledge of Chalcolithic pottery production from the northern half of the island simply does not exist (Bolger and Webb 2013, 40). This means that our knowledge of the Chalcolithic in Cyprus is based entirely on the non-occupied part of the island, and information for island wide trends is based entirely off the south. There could be a wealth of knowledge buried in the north that could drastically change how we would see the period.. Despite this however, there is fantastic knowledge that has been compiled on the development of third millennium pottery in Cyprus, especially in the south and southwest of the island where *Chlorakas-Palloures* is located.

The other important problem that directly affects the site of *Chlorakas-Palloures* is the very shallow stratigraphies that are characteristic of prehistoric sites in Cyprus which can supposedly be attributed to constantly shifting settlement patterns (Bolger and Webb 2013, 40). This is the case for the majority of sites located on the Ktima lowlands, including *Chlorakas-Palloures*. This site specifically is surrounded by urban construction which has left a considerable mark on the landscape and site, and some artefacts have been moved out of context due to a land consolidation programme that took place in the 1970s. This included merging a number of small plots into larger ones and cutting terraces into the hill which spread the soil downward, distributing artefacts and exposing archaeological walls and paved surfaces. (During *et al* 2018, 468-469). Urban development at *Chlorakas-Palloures*, combined with a shallow stratigraphy means that some of the artefacts discovered in the years of excavation may have been removed from their original context already.

5.2 - Dataset and Methodology

The dataset that will be used for this thesis is the ceramic material that was excavated and processed at *Chlorakas-Palloures* between the years 2015 and 2017. However, it is worth noting that there is still a lot of pottery that has not yet been processed from these three excavation seasons. Specifically, the focus will be on the shapes of diagnostic sherds from trenches BT13, BU12, BU13, BV13 and BW14 (see fig. 1 for location in the field).

According to the documentation system at Palloures, trenches are subdivided into units and lots. A trench unit can be any stratigraphic layer in the ground, but can also be an intrusion in the soil. This can come in the form of a pit, a cut in the soil or, the wall or floor of a house or even a burial if one is discovered. Each individual trench features its own unit system, with unit one tending to be the uppermost layer of soil, and the highest number of unit corresponding with the last unit that was discovered. Lots are any excavated section of the trench, and can be a single large and important find, or a five metres squared area dug out of a unit. Unit numbers are unique to the unit across the excavation, which means that two trenches cannot contain the same unit number. These are used for the categorization and contextualisation of the excavation material. Both the lots and the units are recorded in the *Palloures* on site in the excavation database, and described in detail for clarity later on.

Find material in the field is divided by lots. All of the ceramic material from a single lot is collected into a sealable plastic bag with the trench, unit and lot numbers written on it. These find bags are collected together in a bucket after the unit is finished, ready to be taken back to the home base of the site. Once returned to the home base, the ceramic material (and other excavation material) is washed carefully with water and light brushes, left to dry in the sun and then returned to a sealable bag with a unique number (Düring *et al* 2018, 475).

When it comes to processing the pottery, the sherds from each bag are sorted into groups based on their fabrics, and then subdivided into groups based on ware and surface. Details of the ceramics are entered and recorded into a pottery database, created specifically for *Palloures* for the purpose of recording and analysing data. Sherds that display a visible rim, handle, base, spout, or that have decorative motifs (diagnostic sherds) are then photographed and sketched for their use in future research (Düring *et al* 2018, 475). This thesis will deal with a small proportion of these diagnostic sherds from the five trenches previously mentioned.

Fig. 13. An example of a diagnostic photograph from the *Palloures* dataset

The drawing of the diagnostic sherds takes place at the home base of *Palloures*. The participants of the excavation spend some hours in the afternoon with a select amount of sherds, drawing them to scale and annotating the drawings with annotations.These annotations always include the trench, unit and lot number, and the majority also feature information about the type of ware, periodisation and which shape the diagnostic sherd demonstrates. The diagnostic sketches were then scanned into a computer file, alongside photographs of all of the relevant diagnostic sherds.

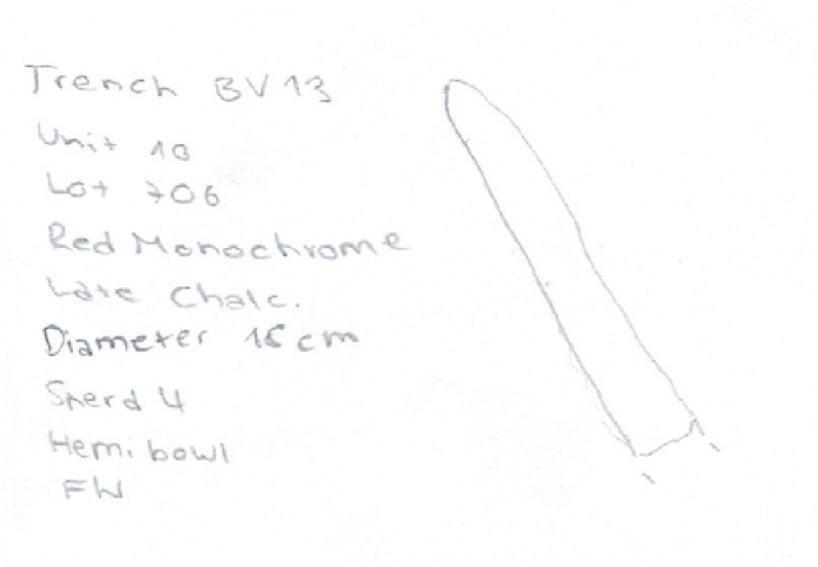

Fig. 14. An example of a diagnostic sketch of a rim from the *Palloures* dataset

This thesis will deal with the photographs and sketches of the diagnostics (which have since been scanned into computer images) of the ceramic material from the five trenches previously mentioned. The data from the diagnostic sherds will be entered into a

database, constructed for the purposes of this thesis. The following fields will be present in the database: trench number, lot number, unit number, ware type, period and shape.

The trench, unit and lot numbers are all present on the diagnostic drawings, so this will all be entered immediately. Additionally, if the ware type, period and shape are present in the annotations of the diagnostic sketches then these will also be entered.

If the ware type and subsequent periodisation of the sherd is not present on the annotations, then the diagnostic photographs can be examined. With the use of other diagnostic photographs and the table detailing ware types by Paraskeva in *Düring et al* (2018, 476), the ware type and periodisation can usually be ascertained. If not however, then it will be marked as 'x' in the database.

If the pottery shape is not present in the diagnostic sketches, then it can also be obtained with relative simplicity. The range of shapes for both the Red-on-White and Red Monochrome ware types was listed and described in the section of this thesis entitled 'Chalcolithic wares'. Bolger and Webb (2013) describe all visible shapes from the Middle and Late Chalcolithic, and which shapes correspond to which ware types. Additionally, the pottery shapes repertoire that is used on site at *Chlorakas-Palloures* (Hadjigavriel 2020) has been provided for use as part of this thesis. The combination of these two sources means that the pottery shape can generally be worked out and entered correctly into the database. If this is not the case then again, it will be entered as 'x'.

When it comes to the data processing, the main fields that will be used are the ware type, periodisation and shape. The sherds will be broken down into the three different period entries (Middle Chalcolithic, Late Chalcolithic, x) so the differences can be displayed. The range of shapes from each of these periods will be shown which will allow for an analysis of the range of shapes from both periods and a comparison between the two. This will in turn be compared with the shapes repertoire from Kissonerga-*Moshilia* and Lemba-*Lakkous.*

5.4 - Limitations with the Dataset

The larger problems that face the majority of Chalcolithic archaeological sites in Cyprus were covered above. These all have the potential to impact the dataset use in these thesis. However, alongside these larger problems is a number of smaller ones that are specific to the *Palloures* dataset.

The primary limitation of the dataset is that it is most likely not representative of the site as a whole. Seventeen trenches were excavated between the 2015 and 2017 seasons of excavations at *Palloures* (During 2019, 2), and five more were opened on a new field in the season of 2019. Of these trenches, thousands of ceramic sherds were taken out of the

ground and by no means have all of them been processed yet. This thesis deals with only 219 diagnostic sherds from five of the seventeen trenches that have been fully excavated. Therefore there is no way that this thesis can offer a clear and sound conclusion on the differences in the use of ceramics between the Middle and Late Chalcolithic at *Palloures*. This is not a problem as the aim of this thesis is to assess the current dataset presented, but it means that the results of the data can only give an indication of technological development at the site.

Another limitation facing the dataset in use is that of ceramic ware type and shape interpretation. As mentioned in the sub-chapter above, participants of the *Palloures* campaign sometimes annotate their diagnostic pottery drawings with the type of ware and the shape that the diagnostic sherds appear to correspond with. The majority of the time there is no issue, but it can be the case that either of these fields has been written down incorrectly. This can be due to a number of reasons, but the outstanding one is that of subtle difference. Ware types tend to be fairly obvious, but it seems reasonable that one ware type could be mixed up with another during the drawing process. The same is even more applicable for the different sherd shapes. For example, the rim of a platter could easily be confused with the rim of a conical bowl. This means that there is a possibility that some of the data could be entered into the database incorrectly. However, this is only the case with a very small percentage of the dataset, and should therefore not create too much of an issue.

6 - Results and Discussion

6.1 - Database results

The research questions '*Which vessel shapes can be most commonly seen in the Middle Chalcolithic phase at Chlorakas-Palloures?'* and '*Which vessel shapes can be most commonly seen in the Late Chalcolithic phase at Chlorakas-Palloures?'* are the focus of this following sub-chapter.

The database study conducted yielded a number of results and can be used to analyse the pottery sherd information in a number of different ways. Of the 219 pottery sherds that were entered into the database, 115 of them can be dated to the Late Chalcolithic, 70 date to the Middle Chalcolithic, and 46 of the sherds are not solidly dated so aaer therefore marked as 'x' in the database. The remainder of this results section will focus on the pottery sherds that

can be dated in either of the two periods, as the sherds that are undated serve no purpose when looking at the use of pottery in the Chalcolithic.

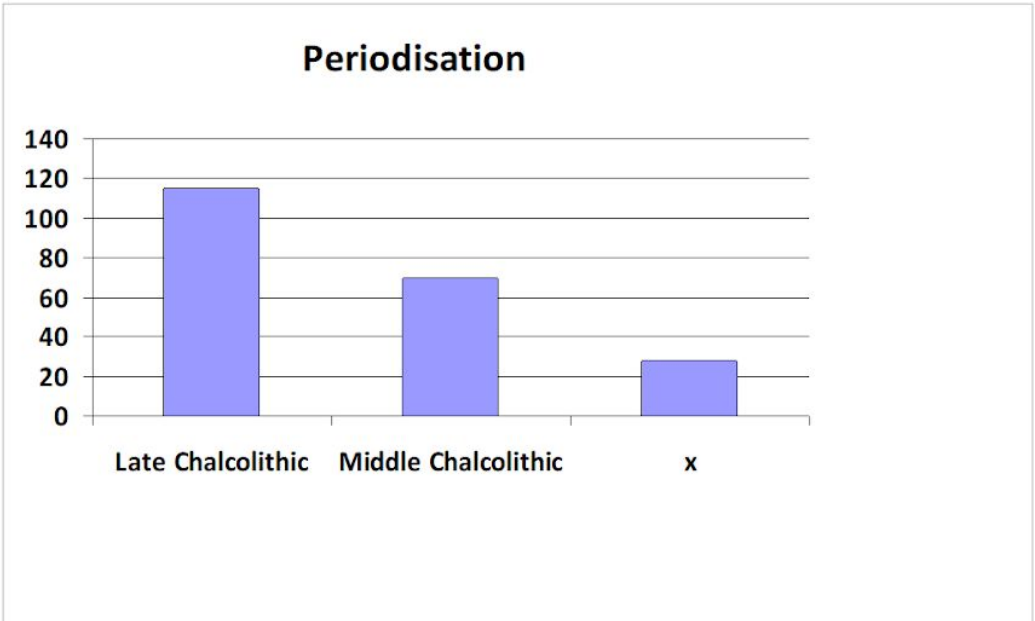

Fig. 15. Chart showing the differences in sherd periodisation at *Palloures*

A more concise breakdown of the trenches and periodisation is as follows. In trench BT13, there were 6 that dated to the Middle Chalcolithic and 18 sherds that dated to the Late Chalcolithic. Trench BU12 had 17 sherds dating to the Late Chalcolithic and 37 to the Middle Chalcolithic. This was the only trench where the amount of sherds from the Middle outweighed the amount from the Late. Trench BU13 contains the opposite, only 3 sherds from the Middle Chalcolithic and 32 sherds from the Late. Trench BV12 contains the most diagnostic sherds from any of the trenches, and boasts 24 sherds from the Middle Chalcolithic and 40 sherds from the Late Chalcolithic, making it the trench with the most sherds from this period. Finally, trench BW14 contains 8 sherds dating to the Middle Chalcolithic and none to the Late.

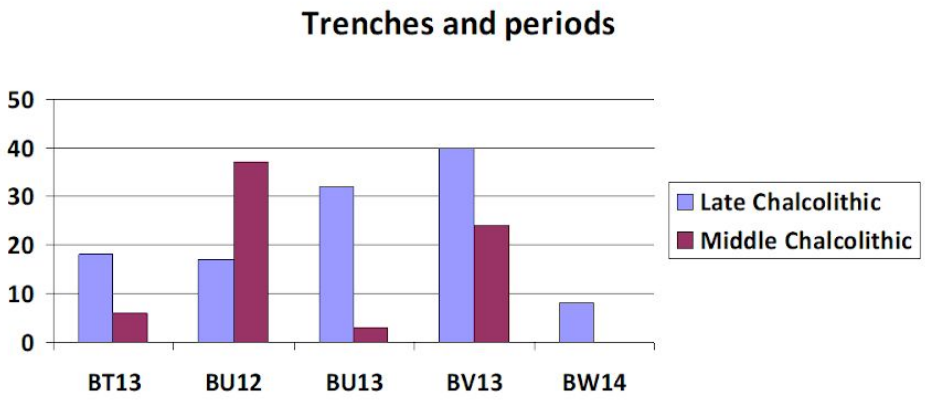

Fig. 16. Chart showing the amount of sherds that date to either the Middle or Late Chalcolithic in the five trenches at *Palloures*.

Of the 70 sherds from the site that appear to date to the Middle Chalcolithic, 16 cannot be identified as corresponding with any vessel shapes. 12 of these 16 are decorated body sherds that are recorded in the diagnostics, but unfortunately do not give much indication as to what sort of vessel they may have come from. This is because the diagnostic drawings and photographs are focusing on the decoration of the sherds rather than the shapes. The remainder of these 16 shapes are simply unidentifiable and are therefore marked as 'x' in the database. Importantly, there is a singular anomaly ceramic among the diagnostics, and this is the legs of a figurine from the Middle Chalcolithic. This will also not be included in the following summary of different shapes, but will still remain important. This however means that 17 sherds from the Middle Chalcolithic are not represented in the following paragraph.

The database analysis of the Middle Chalcolithic ceramics shows that out of the 63 sherds that had a conclusive shape, the most commonly seen shape is that of the hemibowl with 13 sherds corresponding. Following this, both the platter and the bucket had 11 sherds each. Holemouth and Storage jars are both somewhat represented among the corpus with 6 sherds each, and the five remaining shapes that were visible yielded only one or two results each. In answer to the first sub-research question, '*Which vessel shapes can be most commonly seen in the Middle Chalcolithic phase at Chlorakas-Palloures?',* the most commonly seen shapes in the corpus of Middle Chalcolithic pottery are the platter, hemibowl and bucket.

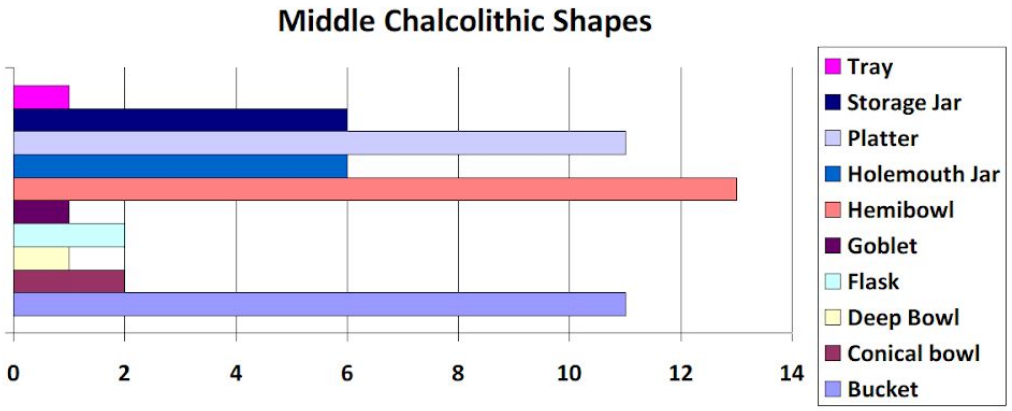

Fig. 17. Range of shapes from the Middle Chalcolithic Corpus

Out of the 115 sherds that can be dated to the Late Chalcolithic, only 10 of them are unidentifiable shapes. Three of these are body sherds which cannot be identified as shapes, and the remaining seven have been marked as 'x' in the database. This leaves 105 sherds with a conclusive shape to analyse, which is significantly more than the amount that dates to the Middle Chalcolithic.

The three most commonly seen shapes that date to the Late Chalcolithic are the bucket with 24 results, the platter with 23 and the hemibowl with 21. This answers the second sub-research question, '*Which vessel shapes can be most commonly seen in the Late Chalcolithic phase at Chlorakas-Palloures?'*. Following these three was the holemouth jar, which had a total of 9 results in the database and the ovoid bowl with 7. The remaining eight vessel shapes present in the Late Chalcolithic ceramic material from the site all have five or less results. It is important to note that five of the shapes visible in the Late Chalcolithic data have been entered into the database as simply 'open storage vessel' and 'bowl'. These sherds could not be specified to their specific vessel shapes, but it did not seem beneficial to discount them from the results.

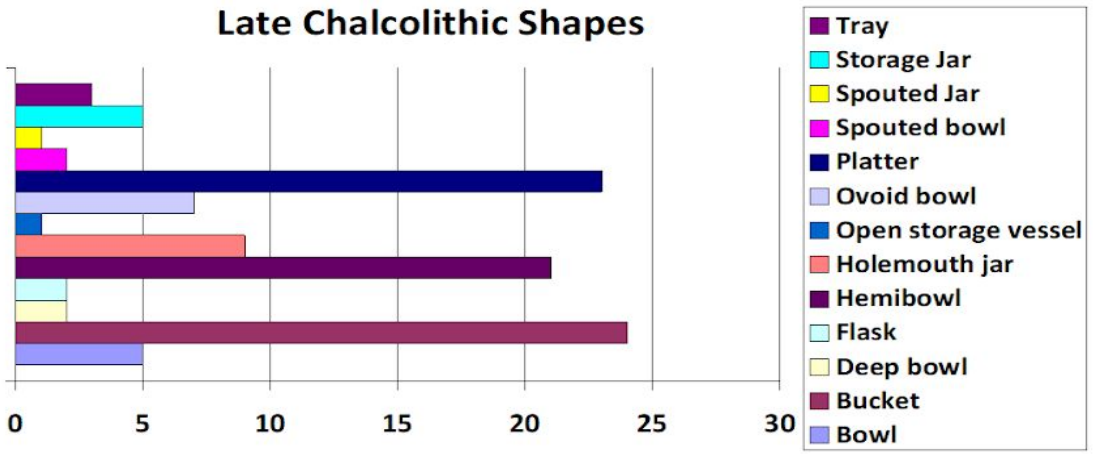

Fig. 18. Range of shapes from the Late Chalcolithic corpus

6.2 - Results comparison

The research questions, '*What can these vessel shapes tell us about the individual periods?'* and 'how does the *Palloures* corpus compare to other LAP sites?' are the focus of the following sub-chapter.

Interestingly, the hemibowl, bucket and platter are the same three shapes that are most commonly seen in the corpus of Middle Chalcolithic ceramics material. The main difference between the two periods is that the Late Chalcolithic had a slightly greater variety of shapes that could be seen. There are two shapes from the Middle Chalcolithic that are not visible in the Late Chalcolithic repertoire; these are the conical bowl and the goblet.

However, the Late Chalcolithic corpus displays three shapes that are not visible in the Middle Chalcolithic. These are the spouted jar, spouted bowl and ovoid bowl. Although the spouted bowl was visible in the Middle Chalcolithic shape corpus from Kissonerga-*Mosphilia*, the spouted jar and ovoid bowl are both vessel shapes that only became visible in the Late Chalcolithic (Bolger and Webb 2013, 42). This alone demonstrates that the corpus of pottery visible at *Palloures* at least indicates technological development consistent with contemporary sites. Aside from this, the vessel shapes from the dataset can tell us very little about differences in use between the individual periods.

When the results of the dataset are compared with the most common ceramic vessels seen at Kissonerga-*Mosphilia* and Lemba-*Lakkous,* the results are fairly in line. The most common shape that was seen at Kissonerga-*Mosphilia* was the hemibowl (Bolger *et al* 1998, 123). This is also the most common shape across the whole *Palloures* dataset, with a

total of 34 entries seen across the Middle and Late Chalcolithic corpus. Furthermore, Bolger states that Kissonerga-*Mosphilia*, the most common shapes of vessels are open shapes, like bowls and platters, but storage jars and flasks were produced (Bolger *et al* 1998, 95, 121-122). The case is almost exactly the same for the site of Lemba-*Lakkous,* with bowls being most commonly seen, but storage vessels and flasks are visible (Stewart 1985, 262). This demonstrates that the sample of vessel shapes from *Palloures* is similar to the most popular shapes at contemporary sites.

7 - Conclusion

In Chapter one of this thesis, the following research question was posed: *What can pottery shapes in the Middle and Late Chalcolithic material contexts from* Chlorakas-Palloures *tell us about pottery use and production?* In the previous chapter, the four sub-research questions were explored to help answer this question.

The three vessel types that are most commonly seen among the dataset all correspond to the functional group of food preparation and service, presented by Bolger *et al* (1998, 123). The platter, bucket and all variations of bowl fit specifically into the sub-category of vessels used for the preparation, serving and distribution of food. This indicates that the primary vessel usage during both the Middle and Late Chalcolithic was indeed food preparation and service. The presence of different storage jars in both the Middle and Late Chalcolithic sherd corresponds with the two functional groups of dry and liquid storage (Bolger *et al* 1998, 123-124). This tells us that storage of food was also a necessity in both the Middle and Late Chalcolithic periods at *Palloures*, but the main focus of both pottery use and production in the two periods was on vessels for food preparation and service. This result answers the research question that was proposed at the beginning of this thesis and is an answer that is in line with the corpus of Chalcolithic pottery from both Kissonerga-*Mosphilia* and Lemba-*Lakkous.*

As a note to end on, it seems necessary to reiterate that the sherds that were studied and analysed for this thesis may not be representative of the whole site of Chlorakas-*Palloures*. Many sherds have still not been processed, and there are thirteen trenches worth of diagnostic sherds from the first field excavated at *Palloures* that were not covered in this thesis. Additionally there are ongoing excavations that may open up many more trenches and expand the site far beyond its current scope in the years to come. This thesis introduces

the idea and presents results based on the limited dataset. However, future research on the shape, function and use of vessels from the Chalcolithic period in Cyprus may, and most likely will, reveal wildly new and important discoveries far beyond this thesis about life at *Palloures.*

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List of figures