Funerary Evidence for Social Ranking at Mochlos During the Early Minoan Period

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Abstract

This thesis looks at the Island of Mochlos and the conditions surrounding the creation of a socially ranked society during the Early Minoan period. This paper focuses on the funerary complexes and off-island materials in order to argue that the developing intra and inter-regional maritime trade network influenced the creation of a stratified society. By reviewing this evidence I show how foreign objects and materials shaped the hierarchy of this society.

Biographical Sketch

Jenna Bittenbender is currently a Masters student at Cornell University. In the Fall of 2016 she will graduate with a MA in Archaeology, with a focus in Archaeological Science and Eastern Mediterranean Archaeology. Jenna is a member of several professional organizations, such as the Archaeological Institute of America and The Institute of Nautical Archaeology.

For the past four summers Ms. Bittenbender has given service to the field. She has spent two consecutive summers at Gournia, Crete, one summer at Maroni-Vournes/Tsaroukkas, Cyprus, and Azoria, Crete. These experiences provided Ms. Bittenbender with invaluable insight to the discipline of Archaeology. She looks forward to future seasons in the field.

Dedication

This work is dedicated to my mother, Jacqueline Michelle Bittenbender-Williams. You have been my inspiration and motivation, and for this you have my deepest gratitude.

Acknowledgements

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1 Introduction

A socially ranked society is one in which the "Vertical relationships are set up, maintained, and sanctioned, in other words institutionalized..." (Legarra Herrero 2012: 330). These vertical relationships are highlighted by individuals who maintain similar characteristics in age, sex and, or social function, but share a dissimilar or unequal degree of social, economic, or ideological power (Legarra Herrero 2012). It has been argued that Mochlos developed a socially ranked society early in Minoan history, possibly earlier that anywhere else in Eastern Crete. This argument is based on more than a century of research, with particular emphasis on the tombs, domestic spaces at the site, and the degree of wealth contained therein (Whitelaw 2012: 236-242; Soles and Davaras 1992; Branigan 1991; Seager 1912).

According to Murphy (2011), social ranking is an unstable phenomenon that requires constant manipulation and maintenance. Murphy considers the social mechanisms that reinforce these systems, and states that the most permanent way for a pre-modern society to convey the visual metaphors of hierarchy is through the expression of social ideology on the landscape and in mortuary practice (Murphy 2011). Murphy stresses the landscape as an active stage on which community members embed and reinforce social paradigms from the present moment and through deep time (Murphy 2011). For pre-modern societies, visible funerary complexes represent some of the most powerful social spaces in which living and deceased individuals could visually express their personal or communal associations, and thereby reinforce social organization (Murphy 2011). These visual markers disrupt the landscape and impact the way pre-modern communities interacted with their surroundings and each other (Murphy 2011). In the case of Mochlos the structures there consist mostly of roofed house/rectangular tombs that had a comparatively low range of visibil-

ity on the landscape. These mortuary structures were intended to be visible within the community that was using them. This suggests that the people of Mochlos were expressing their social ideology on the landscape, in order to impact the belief systems and social order of others within the same community. For archaeologists working in prehistoric communities, mortuary contexts serve as one of the most sensitive barometers for identifying the social organization and complexity within a community (Murphy 2011). By teasing apart specific aspects of the mortuary complex, we can answer questions pertaining to the organization of prehistoric groups.

Material wealth does not equate to social status (Legarra Herrero 2012), however, there are several facets within mortuary practice that do present a strong correlation between identity, rank, and societal organization (Wason 1994: 87-101). According to Wason, we can observe social organization through the contextualization of six characteristics: tomb form, collective burial, quantity of grave goods, quality of grave goods, spatial relationships among burials, and distinctions between age and sex (Wason 1994: 87-101). In order to demonstrate that a vertically stratified society existed at Mochlos, I will analyze five of these characteristics in relation to the available tomb data. Unfortunately this paper will not contain a study of the age or sex, as the skeletal remains are fragmentary, poorly preserved, and do not yield enough information for this inquiry. Analysis of the available data will reveal the presence of a ranked society. I will look more closely at these features within the tombs at Mochlos in order to discern the point at which a socially unequally settlement emerged. The evidence suggests that this site had a vertically ranked society in place by the beginning of the Early Minoan II period (2650-2450/2350 BCE)*.

I also argue that the complexity at Mochlos follows most closely the model

*All figures pertaining to chronology have been taken from Manning 1995

of the clan or kin-based corporate group in a stateless society. This model highlights the unequal ranking within the nuclear family unit, and also identifies inequality across the multiple family units within the larger community. I additionally hypothesize that contact and trade with foreign communities outside of Crete facilitated the development of this social complexity. I will argue that direct and indirect interaction with the Cyclades and Near East allowed the inhabitants at Mochlos a unique opportunity for exchange and competition that is necessary for the creation of identity and rank under the clan or kin-based settlement model. By analyzing the Early Minoan tombs and funerary deposits at this site, I will highlight the importance of these foreign objects. This study will add to the discussion of Minoan social complexity, while simultaneously highlighting the importance of exotic materials in the creation of identity and social status in a prehistoric community.

Mochlos has been the subject of survey, excavation, and research for over a century (Legarra Herrero 2014; Runnels *el al.* 2014; Whitelaw 2012; Cherry 2010; Carter 2004; Soles 1992; Soles and Davaras 1992; Branigan 1991; Latham and Hood 1955; Hawes 1912; Seager 1912; Hawes *el al.* 1908). This paper will begin with a brief survey of the research conducted at Mochlos, with particular emphasis on the tombs.

2 History of Research

In 1908 Seager uncovered the EM II–LM III settlement and cemetery on Mochlos (Watrous, Haggis, and Nowicki 2012: 4; Soles and Davaras 1992; Branigan 1991; Seager 1912). While the excavation methods were good for their time, Seager did not publish much of his work. Most of his records were reviewed and published several decades later by Jeffrey Soles (Watrous, Haggis, and Nowicki 2012: 4; Soles 1992; Soles and Davaras 1992). In the early half of the 1950's

Nicholas Platon carried out a series of rescue excavations on the mainland settlement opposite of Mochlos (Soles and Davaras 1992). In 1952 Sinclair Hood and John Latham conducted an underwater survey of the channel between the island and mainland (Latham and Hood 1952). In the 1970's Jeffrey Soles and Costas Davaras began a long-term project at Mochlos and Gournia (Watrous, Haggis, and Nowicki 2012: 4; Soles 2003). During this investigation, Papadakis excavated the LM III tombs on the mainland, opposite of Mochlos (Watrous, Haggis, and Nowicki 2012: 4). After these investigations, Soles and Davaras conducted three phases of research on the island of Mochlos. The first was from 1989-1994, and the second from 2004-2005 (Soles 2009). The third and final phase began in 2010, however this consisted mostly of post excavation research and publication work (Watrous, Haggis, and Nowicki 2012: 3-6). The focus of this paper rests on the tombs recovered from the island, and the primary research produced by Seager, Soles, and Davaras.

To date there are twenty-eight excavated tombs on the island of Mochlos, all of which fall into three distinct styles; roofed house/rectangular tombs, rock shelters, and a cist burial (Murphy 2011). The roofed house/rectangular tomb is a locally derived mortuary complex that consists of a rectangular shape, supported by natural or man-made walls (Legarra Herrero 2014: 22-23; Legarra Herrero 2012). The rock shelter is a pan-Cretan tomb style that was used predominantly during the Neolithic and Early Minoan period (Legarra Herrero 2012). This style of interment is described as a small cavity in the rock, which is normally natural, though it may contain man-made modifications (Legarra Herrero 2014: 22-23). The cist burial is a style seen infrequently on Crete, as this is predominantly a Cycladic method of interment (Legarra Herrero 2012; Soles 1992). The cist burial is a subsurface rectangular space that is usually lined with stone slabs (Legarra Herrero 2014: 22-23). The majority of the

interments were roofed house tombs, followed by rock shelters, and a single cist burial (Murphy 2011; Soles 1992; Seager 1912). Dating the tombs at Mochlos is a difficult task, as these spaces were often reused in later periods and contain a medley of materials from the EM, MM, and LM phases (Legarra Herrero 2014: 95-104). Subsequent interments and architectural additions have disturbed some of the previous contexts. From the few that are sealed, Seager concluded that the initial phase of use began during the EM II period (2650 BCE- 2200/2150 BCE) (Soles 1992).

In 1908 Seager exposed and cleaned twenty-three "tombs." Seager assigned a tomb number to each room contained within the same structural unit (Soles 1992). This is problematic because it inaccurately inflates the number of funerary structures that were originally excavated. "Tombs" I/II/III are different compartments in the same structural unit. This is also true of "Tombs" IV/V/VI and "Tombs" XX and XXI. (Soles 1992: 42). Of the twenty-three "tombs" excavated by Seager, only eighteen are distinct spaces. In 1976 Soles and Davaras cleaned the original "tombs" and uncovered additional funerary structures on the island (Soles 1992). The two archaeologists located sixteen of Seager's published "tombs" (Soles 1992). Ultimately they were unable to find one rock shelter and the only cist burial, both of which they believed to be in the South Slope Cemetery (Soles and Davaras 1992). Seager identified "Tombs" I/II/III and IV/V/VI as being substantially wealthier than all of the other tombs (Seager 1912: 6). This observation was based on the quality and quantity of the grave goods associated with the Western Terrace Tombs. From this observation Seager proposed that there was social and economic disparity amongst the interred individuals at Mochlos (Seager 1912: 6-10).

In later excavations Soles and Davaras uncovered an additional ten tombs

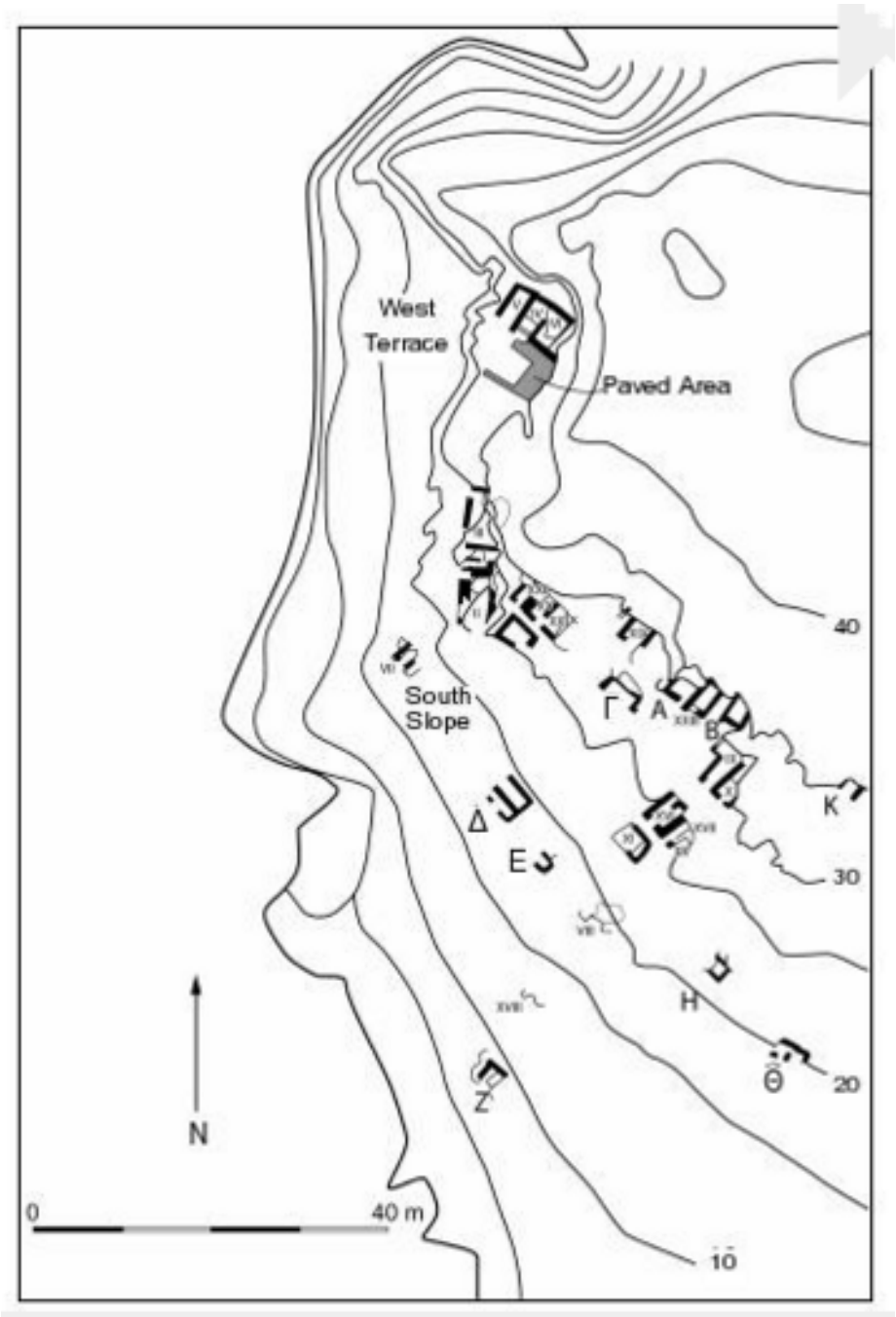

Figure 1:

The Tombs on Mochlos. From Soles 1992

(Soles 1992). These structures were labeled with Greek characters, so as to keep them distinct from the "tombs" published by Seager. The excavations undertaken by Soles and Davaras maintain the presence of two spatially distinct cemeteries (Legarra Herrero 2014: 98; Soles 1992; Seager 1912: 9). Current authors agree that there is an economic and social disparity between the tombs in the Western Terrace Cemetery, and those on the South Slope (Legarra Herrero 2014: 97; Murphy 2011; Soles 1992; Seager 1912: 11). This current view is based on the quality and quantity of grave goods suggested by Seager (1912), and the architectural elaboration and energy expenditure found in the Western Terrace Tombs (Murphy 2011). Recent researchers have also highlighted the location and points of access as factors that indicate control, competition, and prestige of space (Legarra Herrero 2014: 97; Murphy 2011). According to Wason (1994), these are just a few of the factors that connote hierarchy in a mortuary context.

3 Settlement Size and Social Structure

Findings from the 2012 Gournia survey indicate that the Mirabello Bay Region was settled during the Final Neolithic phase (3300-3100/3000 BCE) (Tomkins 2007). This area is geographically defined by the Diktean Mountains to the West, the Thriphti Mountains to the East, the cities of Sitia and Malia in the North, and the city of Hierapetra in the South (Watrous, Haggis, and Nowicki 2012: 10).

The survey project created an arbitrary scale by which to categorize and compare the settlement sizes (Watrous, Haggis, and Nowicki 2012: 17-20). The 2012 survey workers used hectares (ha.) to defined the settlement size from smallest to largest. One hectare is equal to 10,000 square meters or 2.471 acres. The smallest unit within the survey was the "field site"" which encompassed

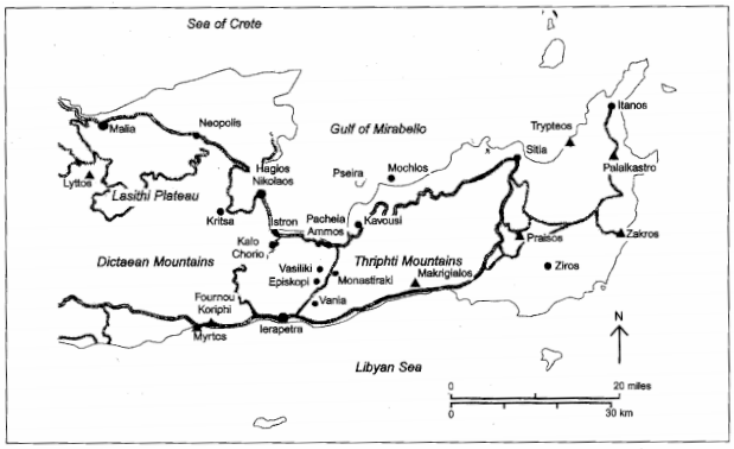

Figure 2:

Map of the Mirabello Bay Region. From Watrous, Haggis, and Nowicki 2012

approximately 0.1 ha. The next largest site was defined as the "farm," which spanned 0.1-0.2 ha. The third largest in their scale was the "hamlet," which ranged between 0.2-1.0 ha. The next largest site was defined as the "village" and comprised 1.0 ha. or more. The largest and final site in their scale was defined as the "center" and contained 10 ha. or more of space (Watrous, Haggis, and Nowicki 2012: 17-20). According to the report, the Final Neolithic remains contained four settlements: one hamlet, one farm, and two field sites (Watrous, Haggis, and Nowicki 2012: 17). The surveyors also observed a sparse distribution of hamlets, and small farms with relatively large spaces between each site. Within the sites the surveyors found loom weights, stone tools, and other objects associated with means of local production (Watrous, Haggis, and Nowicki 2012: 20). Based on the distribution of settlements on the landscape and objects associated with the sites, the researchers concluded that the Final Neolithic society in the Mirabello Bay Region was agriculturally self-sufficient and dependent on household labor (Watrous, Haggis, and Nowicki 2012: 17-20). According to the report, the settlement sizes suggest a small population

between 2-4 nuclear families engaged in mobile subsistence strategies, which included hunting/gathering, small scale farming, and some tending of livestock (Watrous, Haggis, and Nowicki 2012: 17-20). Based on settlement pattern, low population density, and site organization, it was further concluded that there was no prevailing social hierarchy within the individual sites or across the wider region (Watrous, Haggis, and Nowicki 2012: 20).

During the EM I-EM II, (3100/3000 BCE-2200/2150 BCE) settlements in the Mirabello Bay region increased considerably; from four sites in the Final Neolithic, to thirty-eight during the EM I-II phases (Watrous, Haggis, Nowicki 2012: 21). This growth is impressive, however the development of these settlements took place over the span of seven to eight centuries. So, while this expansion is dramatic, it did not happen as a sudden boom. Rather the establishment of these sites occurred in an incremental fashion, making it difficult to conscribe them to a definite period of settlement or length of habitation. For this reason the thirty-eight site are lumped together as EM I-EM II. The thirty-eight settlements comprised of three villages, fourteen hamlets, nine farms, and twelve field sites (Watrous, Haggis, Nowicki 2012: 21-24). The surveyors also observed several new patterns within the area. The most relevant observations being that the settlers chose to utilize different parts of the landscape, specifically the coast, valley bottom, and higher mountainous areas (Watrous, Haggis, Nowicki 2012: 21-31). Other sites that have a similar settlement pattern include Priniatikos Pyrgos and Kephala Petras (Molloy et al., 2014; Papadatos and Tomkins 2013). The second most relevant observation is that some sites had specialized functions and served as production centers in the region (Watrous, Haggis, Nowicki 2012: 21-31). In addition to these patterns, the researchers observed a relationship of continuation and augmentation of the previous FN settlements (Watrous, Haggis, Nowicki 2012: 21-24).

The EM III period, (2200/2150 BCE-2050/2000 BCE) is extremely difficult to separate from the MM IA phase. This lack of a clearly defined stratigraphy has produced what is affectionately referred to as the "EM III Controversy;" which is named for the contentious divide it has caused in Minoan scholarship (Momigliano 2007: 79; Watrous 2001: 752). The problem in identification began when Sir Arthur Evan's identified a deposit of EM III pottery from the *Palace of Minos,* that did not exist anywhere else on the island (Momigliano 2007: 79). This problem extends further still; the EM III period does not have a unified style or chronological phase anywhere outside of Crete (Cherry 2010). The inability to link this phase to another site on Crete, or further afield has caused some to reject the notion of an EM III phase all together (Momigliano 2007: 79-81). After decades of research (Cherry 2010; Momigliano 2007: 78-96; Watrous 2001; Watrous 1998; Manning 1997), "some kind of consensus has been reached" (Momigliano 2007: 79). In general, the time period is acknowledged as being extremely complex and subsequent surveys, excavations, and restudy of Evans' work has produced more EM III data (Momigliano 2007: 79-81; Watrous 2001: 717-753). Most researchers agree on the presence of the EM III period, however this agreement appears hesitant. When authors publish on this topic, they often refer to this phase as a transitional period, and label it as "EM III/MM IA" "Early MM IA", "EM III Late" (Momigliano 2007: 79).

The Gournia, Kavousi, and Vrokastro surveys all exhibit instances of smaller EM II sites being abandoned during the EM IIB-EM III periods (Watrous, Haggis, Nowicki 2012: 36; Haggis 2015; Hayden 1990). These findings parallel with the recession that is seen in the southern mainland and Cycladic islands during this time (Manning 1997). However, this is not a pan-Cretan phenomenon. At Knossos there appears to be major building work and a substantial expansion during the EM III (Cherry 2010; Watrous 1998; Manning 1997).

The excavation reports from the island of Mochlos coincide well with the findings from the Gournia and Kavousi surveys. The vertical record reveals the presence of Final Neolithic pottery sherds found in the lowest strata of the town, and beneath some of the tombs on the western façade of the island; particularly Tomb V (Soles and Davaras 1992; Branigan 1991). Unfortunately these finds are in extremely poor condition, or come from contexts of debatable integrity (Soles and Davaras 1992; Branigan 1991). Though Final Neolithic pottery was recovered these remains are insufficient for extrapolating an estimation of population density or settlement size during this period. For Mochlos the EM II period is the first instance of large-scale occupation on the island (Soles and Davaras 1992). Based on tomb use and the density of grave goods, Branigan hypothesized that Mochlos' population peaked during the EM II-EM III periods (Branigan 1991). It is likely that Mochlos had a specialized function as a trade outpost, as the surrounding area does not provide enough arable land or fresh water to sustain the population. It is feasible that the inhabitants of Mochlos chose to settle the island for trade while cooperating with neighboring communities for farming and agricultural needs. Whitelaw projected that the site reached a maximum of 0.8 ha during the EM II-EM III periods. From the 0.8 ha settlement size, a minimum of fifty-five houses, and an estimated nuclear family of 4-6 members, Whitelaw placed the population of this site to be between 220 and 330 individuals (Branigan 1991; Whitelaw 1983). These figures were based on similar settlement patterns and estimations for Myrtos and Gournia (Whitelaw 1983). Using the same model as Whitelaw, Branigan factored in an additional twenty houses and increased his population estimation to be between 300 and 470 inhabitants (Branigan 1991).

Soles believes that the family is the major unit present on Mochlos. His reasoning is that the tombs and landscape could not have supported more than

the family unit. According to Soles,

> The sheer number of tombs on Mochlos, 24 house tombs representing only some portion of the original number of tombs, most of them in use at the same time, also points to the family as the unit of burial, at least on Mochlos, since the community could not accommodate 24 fraternities and the settlement area could probably not have accommodated many more than 300 individuals, or about ten individuals per tomb, each used by an extended family (Soles 1992: 254).

While it is true that the space on the island is limited, I believe that the EM II settlement on Mochlos was a socially complex entity that closely mirrors the clan or kin-based corporate group described by Johnson and Earle (1987: 131-159). Though Johnson and Earl developed their model from studies on Pacific island communities, their research is relevant to the Aegean and can be applied here. Under the proposed model multiple clans exist coterminously, and each functions as a unit within the economic, political, and ceremonial activities of the community (Johnson and Earle 1987: 146). The clan may range in population density, though it tends to be relatively low (Johnson and Earle 1987: 139). The clan community has a higher population density and lives in more tightly packed units than the family-level society, yet the clan population is expected to be smaller than the figures seen in the corporate group or Big Man Collectivity (Johnson and Earle 1987: 138-144). However, environmental and epidemiological factors impact the population and distribution of bodies on the landscape (Johnson and Earle 1987: 139). Clans also define ownership rights and restrict access to land (Johnson and Earle 1987: 146). Resource acquisition is imperative for clan growth, therefore a clan based community naturally fosters a high level of competition between the different groups living within the same region (Johnson and Earle 1987: 144-152). Lastly, the clan model emphasizes the importance of networks outside of the immediate community. According to

Johnson and Earle,

> Beyond the local group no institutional structure exists, although there are frequent interactions. Individuals build networks of interpersonal ties through marriage and exchange outside their local group. These ties act as means of personal and group security: they are used to obtain spouses, trade goods, allies in warfare, and refuge in the case of defeat. Since these external contacts are both made and reinforced on ceremonial occasions, a person's participation in intergroup ceremonies is central to his networking strategies (Johnson and Earle 1987: 147).

All of these characteristics that Johnson and Earle (1987) use to define a clan may be observed in the tombs on the island. On Mochlos there are twenty-eight tombs, the largest and most wealthy reside within Western Terrace Cemetery. This area is the smallest and has one entry point, indicating that the area was physically restricted. It is likely that the two tombs represent at least two elite family groups that claimed ownership and control over the space in the Western Terrace. The low rate of interment (less than ten to fifteen individuals per century) indicates that the population density was relatively low (Soles 1992: 252-253). The population was likely in the 220-330 range that Whitelaw proposed (Whitelaw 1983). The ability to be buried in one of the Western Terrace Tombs would have been an inherited privilege dependent on family ties or clan membership. Wealth and the degrees there within are measured through the presence of valuable raw materials and finished products; which include gold, ivory, amethyst, and finished goods such as the silver cylinder seal and dog shaped container lid (Seager 1912: 12-79). Prestigious objects and materials were found in the highest density in the Western Terrace, however gold objects were also found in Tomb XIX in the South Slope (Murphy 2011). This indicates that all individuals and families were capable of participating in off-island trade networks, however some were clearly more successful than others

(Murphy 2011). The disparity in consumption would have reinforced social differences and rank over time as the wealthier groups performed funerary ceremonies that acknowledged their individual or communal success, and solidified their clan union over time. I propose that the EM II and EM III societies on Mochlos are extremely complex and encompass many facets that are archaeologically obscured or difficult to recover. Reducing this society down to one model is problematic, though it does serve in helping to understand some of the social relations that are present. I argue that the model proposed by Johnson and Earle (1987) most closely resembles the archaeological remains. I propose that the EM II clan or kin-based society continued into the EM III period.

The archaeological remains indicate that Mochlos continued to prosper during the EM III period. In 1992, Soles and Davaras wrote that the EM II–EM III phases on Mochlos, "flourished as a major center of population on Crete" (Soles and Davaras 1992: 417). This conclusion was based on the continued use of the tombs on the island, and several large building projects that date to this time (Legarra Herrero 2014: 104-107; Manning 1997; Soles and Davaras 1992). In the most recent iteration of this argument, Legarra Herrero analyzed the tombs on Mochlos, and found that the interment practices and types of grave goods show little variation from the preceding period, though the rate of deposition decreased (Legarra Herrero 2014: 106). From this Legarra Herrero reasoned that there was a cultural continuity between the EM II and EM III inhabitants of the island (Legarra Herrero 2014: 106). Based on this new research I believe Mochlos continued to prosper and be inhabited by the same kin-based groups that existed in the previous period.

4 Trade and Political Economy

"The political economy is the material flows of goods and labour through a society, channeled to create wealth and to finance institutions of rule" (Earle and Kristiansen 2010: 7). Trade goods are especially important to the political economy, as these objects can be more tightly controlled by the individuals or groups that have access. "Forms of local and regional identities in material culture are thought to signal a symbolic demarcation of political and perhaps ethnic identities linked to the formation of more hierarchical and bounded forms of political power" (Earle and Kristiansen 2010: 5) To understand the development of stratification at Mochlos, this paper will look more closely at the political economy and the impact of foreign trade at this site.

During the Early Neolithic larger islands like Cyprus, Crete, Corsica, Sardinia, and Sicily began to figure prominently in the Mediterranean (Broodbank 2013: 187). Their geographical location provided marine short-cuts which were utilized to create contacts on opposing shores and figuratively shrink the waters that lay between them (Broodbank 2013: 187). International connectivity emerged, ushering in the expansion of long-distance exchange networks; particularly in metalwork (Earle and Kristiansen 2010: 4). By 5000-4500 BCE the Balkans were trading copper and gold into the Aegean (Boodbank 2013: 236). In the Levant the record shows specialized and exotic objects with far flung origins; like the site of Ein Gedi where a stone vessel of probable Egyptian provenance was recovered (Broodbank 2013:243). For the first time, Crete is included in one of the "Major Interaction Zones" (Broodbank 2013: 204). This particular interaction zone encompassed the modern Greek mainland to the north and west, the coast of modern Turkey to the east, Crete to the south and all of the islands in between; essentially the Aegean Basin (Broodbank 2013: 204). At this time Knossos was the main point of contact on Crete (Broodbank

2013: 204). Several centuries later (3500-2200 BCE) the major zones of maritime interaction change; on Crete the major points of contact on the island now include Knossos, Malia, Phaistos, Myrtos, and Mochlos (Broodbank 3013: 259). Major developments were also happening in Western Crete, but these are beyond the scope of this paper. Changes in maritime interaction can be traced through many different resources, however the presence of obsidian is uniquely important to Crete, as this resource is not indigenous to the island. The high density of obsidian found on Mochlos makes this site archaeologically visible as a node of maritime interaction. By tracing the presence and flow if this resource, we will gain a clear view of the changing points of maritime interaction.

The Gournia surveyors found a cache of obsidian at the Final Neolithic Site, 98 (Watrous, Haggis, and Nowicki 2012: 20). The presence of obsidian at site 98 archaeologically corroborates the shifting points of maritime contact, and highlights the introduction of international connectivity during the Neolithic and Bronze Age on Crete. There were several sources of obsidian in antiquity, however at this time the major resource centers supplying obsidian to the Aegean were at Adamas and Demenegaki, on Melos (Molloy et al. 2014). Site 98 proves that communities within the Mirabello Bay Region had long-range contact outside of Crete; specifically with the Cyclades (Carter 2004).

It is my position that Mochlos was a major foci of trade in the Aegean during the EM I-EM II phase. According to Watrous, economic power was concentrated at Mochlos, Vasiliki, and Priniatikos Pyrgos during the EM II period (Watrous, Haggis, and Nowicki 2012: 31). Mochlos was the seat of maritime trade power, Vasiliki produced and distributed fine pottery, and Priniatikos Pyrgos produced and distributed coarse-ware vases (Watrous, Haggis, Nowicki 2012: 31). Excavators at Mochlos found the largest EM II cache of obsidian outside of Melos.

Building N contained over 12,000 pieces of obsidian, and Building B2 had 251 pieces (Carter 2004). The Building N deposit included cores, flakes, and blades, though the latter were under represented, likely due to use elsewhere in the settlement (Carter 2004). Like at site 98, these lithics are from a site on Melos. The provenance and density of the assemblage validates the argument that Mochlos was a major gateway through which this resource flowed. Though it can not be definitively stated whether the inhabitants of Mochlos were actively quarrying the obsidian, or trading with Cycladic partners. Carter presents a strong case for the inhabitants of Mochlos exploiting the resources on Melos directly (Carter 2004). Carter argues the population size, geographical location, and technological advancement of the community indicate the people's ability to organize and undertake long distance travel and resource acquisition (Carter 2004). However, Broodbank argues that Mochlos, along with several other coastal EBA sites, was a foci of maritime trade (Broodbank 2000: 284-286). According to the latter, Cycladic peoples are thought to have had contact with Crete from an early date (Early Neolithic) (Broodbank 2000: 113-117). Roughly sixty Cycladic LN and FN island sites have been recovered in the south-east Aegean, many of which act as jump off points into the Cyclades (Broodbank 2000: 133). "Thera and Melos were the most favorable jump off points for voyages to Crete..." (Broodbank 2000: 288). Early Cycladic colonization efforts and maritime exchange roped Crete into this established Aegean trade network. In Broodbank's view, the contact between the Cyclades and Mochlos resembled a trade relationship (Broodbank 2000: 113-117).

Within the tombs on Mochlos, foreign materials such as gold, silver, obsidian, ivory, electrum, amethyst, and finished products such as Cycladic stone wares and a Syrian cylinder seal evidence a high degree of off-island exchange with communities in the Cyclades, Attica, Near East. As objects were entering the

Aegean, most were captured and consumed close to their initial entry points (Broodbank 2000: 285). Objects were frequently traded into the Aegean, but as of the 2000 publication, not a single Aegean finished artifact has been discovered east of an imagined vertical line between Troy and Rhodes (Broodbank 2000: 285). Broodbank argues, that even if direct voyages occurred in either direction, their impact was minimal, for the Aegean is better classified as a distant margin rather than an integrated periphery (Broodbank 2000: 286-287). Based on these authors' research and the archaeological remains, we can deduce that Mochlos was a major foci of trade and long-range maritime interaction within the Aegean network, acquiring goods from the Cyclades and to a lesser degree, the Near East (Broodbank 2013: 259; Broodbank 2000: 279-289; Carter 2004).

According to Cherry,"The situation in EM II represents an expansion and intensification of these [EM I] patterns, leading to the complex intermingling of regionally distinct cultural traits, as well as interchanges of finished goods and raw materials" (Cherry 2010: 116). Renfrew calls this interregional interaction in the EB II the "International Spirit" (Cherry 2010: 116; Renfrew 1972: 451-455). However Cherry deconstructs this term more thoroughly and states that,

> Although the phenomenon is a real one, the term is perhaps unfortunate, implying the existence of sustained, very long-range contacts. In reality it is limited to islands within, or lands bordering, the Aegean Basin; it is much stronger in the south than in the north; and it occurred between regions that, at this stage, are not markedly different in terms of social complexity (Cherry 2010: 116).

Indeed, the archaeological remains at Mochlos support Cherry's statement. Excavators have recovered many more objects of Cycladic origin, than of Syrian or Balkan provenance. From the physical evidence it appears that interaction with communities in the Near East was minimal and not direct.

During the EM IIB-EM III period there seems to be diminished contact between Crete and its former trade partners (Cherry 2010; Whitelaw 2004; Manning 1997). Cherry summarizes that it, "seems to have been a dislocation of Cretan interactions with those areas with which it had been in close communication during the mid-third millennium" (Cherry 2010: 122). It is difficult to say if this lack of contact was due to instability on Crete or elsewhere in the Aegean (Manning 1997). It is equally as difficult to say whether this period is one of decline, due to the fact that many of the sites on Crete have diverging narratives of expansion or contraction. Watrous argues that the MM IA material at Mochlos has been incorrectly ascribed to the EM III period (Watrous 2001:717-751), however a more recent assessment by Legarra Herrero reveals that Mochlos did in fact experience an EM III phase (Legarra Herrero 2014: 104-107). This argument is based on the presence of White-on-Dark Ware found in the tombs on both the Western Terrace and South Slope Cemeteries. All of the datable tombs that have an EM II origin continued to be used during the EM III, and Tomb XII may have been constructed during the EM III phase (Legarra Herrero 2014: 106, 265-273). Unfortunately, many of the EM III contexts were unsealed, and characterizing a typical EM III deposit is difficult, due to the similarities between EM II and III materials (Legarra Herrero 2014: 106). Though the EM II and III materials are similar, the MM I mortuary behaviour and material are very different, and therefore easily distinguishable from the preceding periods (Legarra Herrero 2014: 106). Evidence from the site suggest that the inhabitants of Mochlos were still acquiring large quantities of non-domestic raw materials such as obsidian, copper, lead, and silver (Whitelaw 2004). This pattern speaks to the general decline of trade in finished products, and the possible growth of Mochlos as a production center (Whitelaw 2004). According to Whitelaw, during the EM III period Mochlos served as

both a node of access for raw material, and a point of specialized production for bronze-smithing, gold-smithing, and stone vase manufacture (Whitelaw 2004).

The site's advantageous position on the northern shore, coupled with the island's long history of maritime involvement in the Aegean Interaction Zone (Broodbank 2013: 259), allowed the inhabitants to adapt to the changing conditions of the EM III period. This paper has demonstrated that Mochlos was well connected with off-island contacts through the Aegean Basin network; now we will transition to a discussion on how these trade goods impacted the inhabitants of Mochlos. The following section will look more closely at the architecture, objects, and locations of the tombs.

5 The Tombs and Mortuary Evidence

Architecture and Spatial Relationships Among Burials

The Western Terrace Cemetery is located in a narrow area between two rock cliffs to its North and East, and the bay to its West (Soles 1992). The narrow terrace is 45.70 m long and ranges between 3-10.60 m in width (Soles 1992). The space is limited and access to this area is naturally restricted by a single entry point on the southern portion of the island. The tombs are located approximately 22-28m above sea level and have a north-south orientation (Soles 1992). Tombs I-VI are located in the Western Terrace Cemetery; however these comprise of only two distinct spaces; Tombs I/II/III, and IV/V/VI. The structures from the Western Terrace Cemetery are the largest and most architecturally significant on the island. The complexes here do not conform to a standardized size. For example, Tomb I/II/III measures 3m x 1.10m/1.80m x 5.60m/1.70m x 3m, respectively. Tomb IV/V/VI measures 2.20m x 1.75m/5m x 1.40m/3.90m x 1.80m respectively. The tombs here were constructed with locally derived, monolithic slabs of green and, or purple schist. The stone was

cut along even lines of fracture, which produced a flat smooth surface (Soles 1992). There is a perceptible alteration between the green and purple slabs, which was an intentional decorative feature (Soles 1992). Within this cemetery, Tombs IV/V/VI have almost completely freestanding walls. Architectural sophistication is also seen in the internal doorways, recesses, additional rooms, and an exterior altar (Murphy 2011). The altar outside of complex IV/V/VI has a parallel in the Gournia Tomb II, both of which are possibly associated with ancestor veneration (Soles 1992). The Gournia II tomb is a contemporary house tomb/rectangular funerary structure located at the EM II site of Gournia, approximately 22km by land.

The South Slope Cemetery is located southeast of the Western Terrace Tombs (Soles 1992). The cemetery here is constrained by a low bedrock cliff to the northeast, a drop in bedrock to the northwest, and the ocean on the southwest. This cemetery is approximately 35m above sea level and contains nearly 2,000 square meters of space. This area is nearly three times the size of the Western Terrace Cemetery, and contains twenty-six of the recovered structures. Tombs VII-XXIII are located in the South Slope Cemetery. The tombs here are structured on seven successive natural bedrock terraces with an east-west orientation. In contrast to the tombs in the Western Terrace Cemetery, the tombs in the South Slope Cemetery are rigid in their physical parameters. The tombs are 1m x 2m, with little more than a few centimeters of deviation (Seager 1912: 15). According to Seager, "it is probable that all were intended to be about the same size" (Seager 1912: 15). These tombs are usually single room structures, though tombs XIX and XX/XXI contain more than one chamber. The South Slope tombs had few alterations or additions in the interior or exterior of the structure. The tombs here are mostly built of stone sockels and have a mudbrick superstructure (Murphy 2011; Soles 1988). Tombs XXII and XX/XXI

were built with the natural rock face as a wall, however they are the exceptions to this rule. Visual elaboration on the interior and exterior of mortuary space reinforces status distinction (Wason 1994: 76-84). According to Tainter,

> In a system of hierarchical ranking, increased relative ranking of status positions will positively co-vary with increased members of persons recognizing duty-status relationships with individuals holding such status positions. [This] entitles the deceased to a larger amount of corporate involvement in the act of interment, and to a larger degree of disruption of normal community activities for the mortuary ritual (Tainter 1977: 332).

Funerary elaboration can require greater resources, time, and, or labor. These are a few of the factors that comprise energy expenditure in a mortuary context. Funerary elaboration is a product of energy expenditure, which is positively correlated to the deceased's social rank during life (Wason 1994: 76-84). This theory acknowledges outliers and individual differences, but when multiple burials or cemeteries are taken together an undeniable pattern of energy expenditure and social rank emerges (Tainter 1977). The high quantity of tombs on Mochlos yield a robust dataset, and from this we do observe a higher degree of energy expenditure in the Western Terrace Cemetery.

Quality and Quantity of Grave Goods

The objects found in the tombs reveal further qualitative and quantitative differences between the two cemeteries. The Western Terrace Cemetery contained the greatest preponderance of grave goods; including gold and objects or materials of off-island origin. Some of the objects that highlight off-island interaction from the tomb complex I/II/III include: a green steatite dog shaped jug cover, a short copper dagger, a copper cutter with ivory handle, a silver cylinder seal, an electrum bead, a small amethyst bead, a chalcedony seal, an

ivory cylinder seal, and over 100 gold objects (Legarra Herrero 2014; Seager 1912: 18-42). Tomb IV/V/VI contained a similar caliber of objects: a small terracotta head, two bronze knife blades, a small silver cup, a tiny bronze lion, a small copper cutter with ivory handle, and 86 gold objects (Legarra Herrero 2014; Seager 1912: 40-56). The tombs in South Slope Cemetery contained some off-island items, but they appear nowhere near the same frequency or quality as those in the Western Terrace Cemetery. The off-island objects were not restricted to one group or segment of the population, however their distribution shows that there was an unequal degree of accessibility. **Figure 4** contains a graph that shows a distribution of the objects by tomb. **Figure 5** is a graph that contains a breakdown of the off-island materials associated with each tomb. It should be noted that the object count for tomb XXIII is high, this is because one gold necklace was found here. The necklace is composed of many tiny gold beads, "no bigger than a pin head" and each bead is catalogued as one object (Seager 1912: 79). The objects in the tombs show that those buried in the Western Terrace Cemetery had more gold, and off-island deposits.

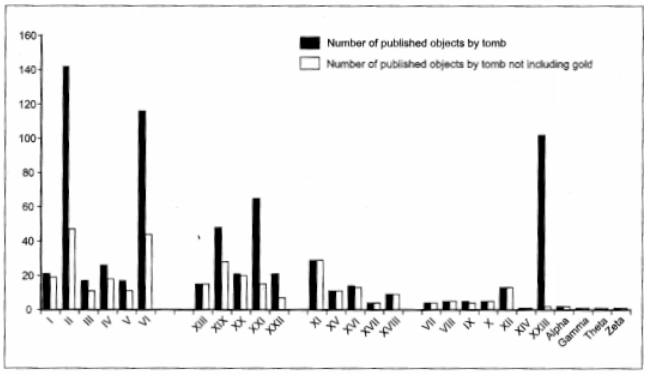

Figure 3:

Number of Objects per Tomb. From Legarra Herrero 2014

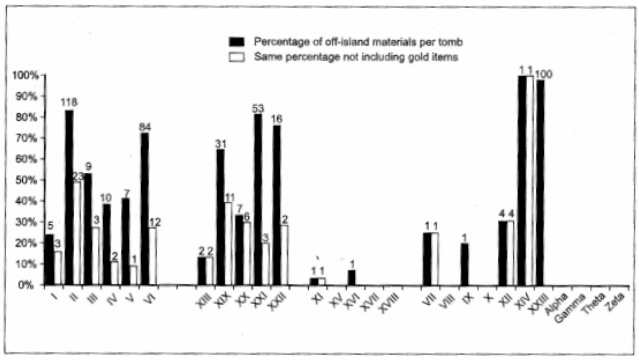

Figure 4:

Off-Island Materials in the Tombs at Mochlos. From Legarra Herrero (2014)

Burial Style

Unfortunately, the tombs at Mochlos do not yield enough human remains to recreate the rate of interment or extrapolate further on the burial dynamics within the cemeteries (Legarra Herrero 2014: 95-104). Many tombs lacked skeletal remains, and if remains were present they were poorly preserved fragments and, or date to a later period of reuse. The cleaning of burial spaces to make way for new interments is a common phenomenon in Eastern Crete during the EM Period. This practice is also found in the nearby tombs on Pseira (Betancourt 2011).

On the South Slope the initial excavator found that the tombs contained the bodies of individuals from secondary burials (Seager 1912). The preservation of these tombs was poor, and they did not yield much more osteological evidence. The best preserved human remains come from unit I in Tomb I/II/III in the Western Terrace Cemetery. From this context Seager found fragments of at least thirty skulls (Legarra Herrero 2014: 104). In most cases the bones were piled at one end of the tomb so that the rest of the chamber was left vacant (Seager 1912). This is argued to be associated with an afterlife belief in which

the newly deceased member transitions from an individual to become part of the collective group of ancestors (Betancourt 2011).

From the EM remains available, the researchers have interpreted the low rate of interment within the tombs as an indication of familial use, and the high quantity of tombs as an indication of nuclear family use (Legarra Herrero 2014 103-104; Murphy 2011). In addition to this, Legarra Herrero, Murphy, and Soles have proposed that tomb interment was not contemporary, but rather successive over multiple generations (Legarra Herrero 2014: 103-104; Murphy 2011; Soles 1988). If tombs were used by nuclear families over generations, then the ability to be buried within the space was an inherited privilege, and a social marker (Murphy 2011; Soles 1988). According to Voutsaki, "the introduction of multiple tombs brings about stricter demarcation of the burying group and denotes an increased emphasis on descent" (Voutsaki 1997: 39). Access to these burial spaces is likely to have been dependent on descent and kinship ties.

A discussion of the settlement size, political economy, and mortuary evidence reveals a strong case for the presence of a clan or kin-based society being in place on Mochlos during the EM II period. Now we turn to a discussion of off-island materials and objects and how they impacted this development.

6 Discussion

I hypothesized that the creation of social hierarchy was facilitated by trade relationships between the inhabitants at Mochlos, contacts in the Cyclades, and to a lesser extent the Eastern Mediterranean. It is through these relationships that the inhabitants of Mochlos were able to acquire foreign goods with which they created, displayed, and over time institutionalized a set of ideological, social, or political differences between themselves. This section of the paper serves to

explore how the use of these objects can assist in creating an institutionalized hierarchy.

The assemblages recovered from the tombs reveal that the inhabitants of Mochlos had strong exchange interactions in the in the Cyclades and further afield in the Aegean Basin (Broodbank 2013: 259). According to Appadurai, "economic exchange creates value. Value is embodied in commodities that are exchanged." (Appadurai 1986: 3). Appadurai explores the idea of value further and asserts that value is ascribed to objects that are difficult to attain or that resist our desire to possess them (Appadurai 1986: 3). Wason too agrees on this issue of availability and states that exotic materials and objects, "may well be status markers, for often they are not things which just anyone can have" (Wason 1994: 67). Possession of an object, the physical aspect of ownership is important to the creation of value, but perhaps more importantly there is the possession of knowledge; particularly over the means of object production and consumption (Appadurai 1986: 6-16).

The ability to possess esoteric knowledge pertaining to production or consumption of a commodity is an exclusionary device that creates social and political distinctions between individuals of the same community (Appadurai 1986: 6-29). Esoteric knowledge and accessibility are two major factors that imbue an object with power; for these elements directly affect the flow and acquisition of commodities (Knapp 1998). According to Manning and Hulin, "Major centers in the Aegean and Cyprus were motivated in seeking and developing contacts with the ancient orient at least partly because local elites sought to enhance their social and political position through such associations and material correlates" (Manning and Hulin 2005: 275). By using foreign objects, individuals were able to visually perform and display their esoteric knowledge, and privi-

laged associations with outside and less accessible communities. This outward display of esoteric affinity aids in creating qualitative differences between individuals with similar characteristics, and confers symbolic and, or ideological difference to those who possess the object or knowledge (Legarra Herrero 2016). However, to build value in an object there must be more than the act of exchange and knowledge of production and consumption. A sense of "otherness" is also essential. According to Knapp,

> The otherness associated with experiencing the exotic should also include the realm of conceptual (geographic) distance and the people or goods located in such places. Knowledge of these domains, furthermore, forms an essential aspect of their exotica controlled and manipulated by elites to legitimize and maintain their politico-ideological status (Knapp 1998: 195).

Manning and Hulin add to this idea of "otherness" by stating that,

> Otherness" includes, "sets of reciprocal relationships in which certain iconography, images, objects, artists, or ideas were exchanged into local contexts. The encoded elements and values traded rested on the contradiction of both common inter-elite modalities and recognized transferences of skills and renown, as well as the use of acquisition from a distance to create localized "otherness" and exclusivity (Manning and Hulin 2005: 275).

These views of otherness maintain that value is created through distance. Distance is valuable because it is an esoteric and nonlocal resource that accords tangible and intangible symbolic associations. Transversing distance is physically and/or spiritually dangerous, it requires a high degree of effort and specialized knowledge (Helms 1988: 80-81). If space is valuable, then true value lies in the individual's ability to control the flow and contact of the object. The objects and modes of exchange must be tightly controlled by the elites to

create an optimal equilibrium between those with access, and those without. In a case study of of the Massim Group of Islands off the eastern tip of New Guinea, Appaduari discusses *Keda*, the trade route. Keda is the physical path of trade that objects must travel for exchange, but it is also the metaphorical path to power, wealth, and reputation for the men who handle the commodities. The Keda must be realigned, manipulated, and protected so that the physical and abstract path may be prosperous (Appaduari 1986: 18-29). This situation is mirrored in the Aegean and Eastern Mediterranean: "Elites controlled and employed the outcomes of trade and movement, with the corollary that they had to control and downplay the role of their agents"(Manning and Hulin 2005: 271). In order to create and maintain value, elites had to restrict access from their agents and establish methods of maintaining these political or ideological boundaries.

According to the two definitions on "otherness," value is also established when the object has recognized meaning and simultaneously possess an exotic quality. It is the establishment of this liminal trait that conveys a vocabulary of value that is perceived by the elites and non-elites within the same community. Imported objects were subject to the pitfalls of product recognition, and cultural permeability (Manning and Hulin 2005). In order to build value in an object a group has to be willing to embrace the addition of the foreign good into their society. Objects have specific meanings within their own cultural contexts, and often undergo a transformation when put into a new cultural context. In order to transform these meanings, overcome the issue of product recognition, and make them acceptable in new communities, there must be maintenance of social boundaries, and constant or ongoing contact between the trading communities (Knapp 1998). These relationships are often facilitated by trade diasporas who maintain contacts in their homeland and establish long term trade alliances

and communication in their host land (Curtin 1984: 6). Elites can set these relationships up by engaging in frequent exchange and restrict access to these networks and objects.

Value must also be perceived and agreed upon by the elite and non-elite in order to encode the object with symbolic meaning. When one group does not consent to this unspoken agreement of value, the object may no longer keep its position as a prestigious item or material. Objects have social lives, and these existences are fluid. Objects become commodities, undergo processes of metamorphosis, and become ex-commodities quite easily (Appadurai 1986: 3-29). Construction of value is a codependent relationship where there must be competition amongst individuals and groups for the commodity. The sustained accumulation and manipulation of the desired object produces social leverage, which evolves into institutionalized social inequality (Halstead 1995; Halstead 1982). As Voutsaki and others have argued, public acts must be performed in order to convert economic value into social distinction (Murphy 2011; Voutsaki 1997; Appadurai 1986). Institutions are built materially and symbolically; the process of making involves intentional actions by participants (Earl and Kristiansen 2010: 9). These public acts are formally called Tournaments of Value (Appadurai 1986: 21). According to Appadurai,

> Tournaments of value are complex periodic events that are removed in some culturally well defined way from the routines of economic life. Participation in them is likely to be both a privilege of those in power and an instrument of status contests between them. The currency of such tournaments is also likely to be set apart through well understood cultural diacritics... Finally, though such tournaments of value occur in special times and places, their forms and outcomes are always consequential for the more mundane realities of power and value in ordinary life. (Appadurai 1986: 21).

Funerary rituals are tournaments of value. These events only occur when a living member of the community transitions into a deceased member. These occasions are periodic, culturally well defined, and outside of the normal routine of everyday life. These occasions provide participants a socially acceptable time to exploit objects for the purpose of sending and receiving messages (Appadurai 1986:21-31). As discussed earlier, funerary elaboration and ritual are among the most powerful ways in which an individual from a prehistoric community may convey wealth, value, and social distinction (Murphy 2011). The gold objects, silver cylinder seal, ivory, and other off-island objects were valuable commodities that were used by the inhabitants of Mochlos in their tournaments of value to reinforce identity and relay ideas of social order.

Borja Legarra Herrero sees the EM IIB–EM III period as one of change in the general social organization of Minoan culture, and has argued that the changes in off-island trade networks at the end of EM IIA were the major causes for the social restructuring of Cretan communities. Legarra Herrero supports this argument by pointing out that Archanes in Central Crete, experienced social change and the development of hierarchy in EM IIA that was caused by new trade networks and the use of off-island prestige materials (Legarra Herrero 2012). According to Legarra Herrero, " It would seem that throughout Crete, but particularly in the north-central regions, off-island objects were socially significant and may have been important for the general organization of these communities" (Legarra Herrero 2012: 337).

7 Conclusion

The extensive survey and excavation of Mochlos make this site rich for studies within Minoan archaeology. From looking at the architecture, location, and de-

posits I have argued that a clan based society existed at Mochlos during the EM II period. This argument defines the type of complexity, and places this ranked development earlier than most sites within the Mirabello Bay region and the wider Eastern half of Crete. In addition to pinpointing the time period for this development, I looked at trade as a major mechanism by which this development occurred. I have argued that the people of Mochlos began to exploit off-island connections early on in the site's history. As Watrous eloquently states, "Harbors, because of their commercial wealth and exposure to new ideas, have often functioned as agents of social change..." (Watrous 2007: 1). As demonstrated in the paper, the acquisition of foreign materials established a symbolic vocabulary of value, which served to create and reinforce social hierarchy. This display of conspicuous consumption in mortuary contexts is an invaluable ideological tool that can offer political, economic, and social power to those who have access to these resources. Soles and Davaras are correct when they state that, "Mochlos has become a model site for the study of the cultural processes involved in the emergence of civilization" (Soles and Davaras 1992). Research at this site is nowhere near exhausted. Mochlos has still more to offer the archaeological community, especially within the area of trade and social organization.

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