The Lion Temple of Jaffa: Archaeological Investigations of the Late Bronze Age Egyptian

Occupation in Canaan.



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## Abstract

Using the archaeological record, I examine the Lion Temple in the Late Bronze Age Egyptian Fortress in Jaffa (ca. 1500 BCE – 1200 BCE) to investigate if a supposed "Egyptian" temple is indicated by the material culture. Originally, it was thought by Jacob Kaplan, municipal archaeologist of Tel Aviv-Jaffa from 1955 to 1975, that this structure was an Iron Age temple (ca. 1200-1000 BCE) that belonged to the Egyptians before the capture of Jaffa by the Sea Peoples. Instead, extensive analysis of the ceramic assemblage excavated by Kaplan during the 1970 to 1974 field seasons reveals a predominantly Canaanite presence in the Lion Temple and its surrounding area. This finding suggests that the temple was a Canaanite structure and raises questions regarding the nature of Egyptian domination in Jaffa during the Late Bronze Age.

### Introduction

Jaffa, known as Yafo in Hebrew and as "Joppa" in historical texts, is one of the most important ancient ports within ancient Israel. Jaffa is located in the southern Sharon region of Israel on the eastern shore of the Mediterranean Sea, just south of the modern city of Tel Aviv and northwest of Jerusalem. During the Late Bronze Age (1550-1200 B.C.E.), Jaffa served as an administrative center of the Egyptian New Kingdom Empire up until ca. 1150 B.C.E. Despite numerous excavations throughout the 20<sup>th</sup> century and the significant finds that were unearthed from the Late Bronze Age in Jaffa, little analysis has been done on the archaeological material. Among the finds, one that remains most enigmatic is the structure identified as the Lion Temple, after a lion's skull was unearthed within its vicinity. Originally, it was thought by Jacob Kaplan, municipal archaeologist of Tel Aviv-Jaffa from 1955 to 1975, that this structure was an Iron Age temple (ca. 1200-1000 BCE) that belonged to the Egyptians before the capture of Jaffa by the Sea Peoples.

In order to clarify the context of the supposed "Egyptian" Lion Temple and to understand the nature of the Egyptian occupation more thoroughly, extensive analysis of the ceramic assemblage from Area A from the 1970 to 1974 field seasons was conducted during the 2011 field season in Jaffa. This assemblage reveals a predominantly Canaanite presence in the Lion Temple and its surrounding area suggesting that the Temple was a Canaanite structure and this conclusion raises questions regarding the nature of Egyptian domination in Jaffa during the Late Bronze Age.

### **History of Jaffa in the Late Bronze Age**

Geographically, Jaffa is built upon a ridge that measures 40 meters (130 feet) high, offering a commanding view of the coastline that was ideal for guarding against invaders and trade ships

arriving at the harbor (Tel Aviv University n.d.). Due to this strategic location, Jaffa has been continuously settled since the Middle Bronze Age (2100 BCE – 1550 BCE) (Peilstöcker, Martin, and Aaron A. Burke 2009, p. 4). The Egyptian occupation of Jaffa began during the New Kingdom period (1550-1070 BCE) after Thutmose III (1482-1428 BCE) conquered Jaffa around 1460 BCE, which was recorded on his topographical list of presumably captured towns (Burke and Lords 2010, p. 11). After roughly 60 years of occupation, the Canaanites led an insurrection against the Egyptian fortress ca. 1400 BCE, which was recorded in the Egyptian tale called "The Capture of Joppa" (Burke and Lords 2010, p. 11).



Figure 1: At the foot of this ridge is where the ancient port stretches out. This port is protected by a rocky reef, which acts as a natural defense against storms as well as potential military assaults. In addition to this, Jaffa's proximity to important sites such as Gezer, Lod, Beth-Shemesh, and Jerusalem made it a tactical location to connect with various trade routes along the Mediterranean Coast and throughout the Levant (Peilstöcker and Burke 2009, p. 79).

In this tale it is written that the Canaanite inhabitants had successfully rebelled against the Egyptian invaders and forced them to leave the city. Shortly after this success, the Canaanite rebel leader, identified in "The Capture of Joppa" only as "the Enemy of Jaffa," met with the Egyptian garrison commander Djehuty outside the city walls. During this meeting, the Canaanite rebel leader became extremely drunk, which gave Djehuty the opportunity to take advantage of

him. He clubbed him on the head with a scepter, which left the Canaanite Rebel leader unconscious, and then handcuffed him to prevent his escape. Djehuty then gathered his garrison of 700 men and devised a plan to trick the Canaanite inhabitants using a ruse similar to the Trojan Horse of Troy. Djehuty had the Canaanite Leader's charioteer convinced the inhabitants of Jaffa that when their rebel leader returned, he would bring with him Egyptian prisoners and plunder. Instead, Djehuty loaded several carts with baskets that secretly contained his soldiers. When Djehuty had his soldiers deliver the "plunder," the Canaanites were not aware of the deception and allowed them entry into the city without question. Once the Egyptians were completely inside the city gates, the soldiers sprang forth from the baskets and recaptured the city from the Canaanite rebels (Peilstöcker and Burke 2009, p. 68).

Although the validity of the specifics of this tale are uncertain, it is clear from other Egyptian historical records that Jaffa was indispensible to the Egyptians. It was essential for the Egyptians to maintain control of Jaffa predominantly because of the opportunities Jaffa presented for land and sea trade routes. An example of this is seen among the remains from King Akhenaton's Palace in Egypt, where hundreds of 14<sup>th</sup> century B.C.E. clay tablets referred to as the Amarna Letters were discovered (Burke and Lords 2010, p. 14). Egyptian officials and city governors in Canaan had these tablets dispatched to the King of Egypt to inform him on administrative matters, most often on issues of supplies. From one of the two letters dealing directly with Jaffa, it was concluded that "the King of Egypt maintained royal granaries in the city, which implies that Jaffa was the next important supply depot after Gaza on the land and sea route northward to Syria and Mesopotamia" (Kaplan, Jacob 1972 a, p. 79).

It is not entirely clear as to why the Egyptians officially evacuated their administrative center in Jaffa but in a correspondence from Aphek dated to ca. 1230 B.C.E., it is arguable that

Jaffa continued to play an important role up to collapse of the Late Bronze Age (Burke and Lord 2010, p. 14). Overall, archaeological finds reveal that the Egyptians occupied Jaffa for more than 250 years or until the mid 12<sup>th</sup> century B.C.E. (ca. 1150 B.C.E.) (Burke and Lords 2010, p. 10). This makes Jaffa an important case for understanding the cultural dynamics of a colonized state and specifically, how the nature of the Egyptian occupation changed over the course of this period.

## **Theoretical Question**

In the past century, there has been a new effort among archaeologists to incorporate a stronger theoretical base into their work. This is especially true with various archaeological sites in the Southern Levant where archaeologists are employing social theories to explain the nature of subjugated territories in the southern Levant. These theories have been limited in their scope though, in that they focus on a specific stage of an occupation as opposed to the changing dynamics of the colonized state over the period of the occupation. In recent publications by Carolyn Higginbotham and Anne E. Killebrew, they present two different theories: the elite emulation model and administrative imperialism. Both essentially describe one stage of the Egyptian occupations throughout Canaan but do not focus more broadly on how the colonized territories evolved over the course of those occupations and in particular, on the dynamic nature of the Egyptian dominance in Canaan towards the end of the Late Bronze Age. A focus on the evolving nature of an occupied territory is pertinent for understanding the archaeological record in Jaffa, specifically for unraveling the context of the Lion Temple, which was constructed in the Late Bronze Age and roughly 160 years into the Egyptian occupation. Using Higginbotham and Killebrew's theories, the ceramic assemblage excavated from the Lion Temple and its surrounding area should reflect a strong Egyptian presence. Instead, extensive analysis of the

ceramic assemblage excavated reveals a predominantly Canaanite presence in the Lion Temple and its surrounding area, which questions the nature of Egyptian domination in Jaffa during the Late Bronze Age.

In Carolyn Higginbotham's book titled, *Egyptianization and Elite Emulation in Ramesside Palestine*, she presents the elite emulation model. This model is similar to the idea of Core-Periphery Interaction, which "examines the patterns of relationship that develop between powerful and/or prestigious centers of civilization and the areas peripheral to them" (Higginbotham 2000, p. 6). Essentially, the subservient "periphery" groups establish themselves around the dominant "core" group with whom they answer to and in return obtain needed resources or protection. In the elite emulation model, "the peripheries of prestigious cultures sometimes derive a legitimating function from the core cultures" (Higginbotham 2000, p. 6). This means that within the peripheral group the social elites will look to increase their social standing by adopting various symbolic motifs from the core group. According to Higginbotham, they will manipulate these motifs and reintroduce them into their own group where they will gain their own cultural context and meaning while subsequently increasing the power of the individual who is exploiting the motif and associating himself with its message.

Although this theory presents an interesting model for social interaction within a colonized state, there is little evidence of "elite emulation" among the material culture recovered thus far at Jaffa. Most of the Egyptian ceramics that have been unearthed at Jaffa have been identified as either imported or locally produced. There have been a very small number of ceramic shards recovered that were identified as "Egyptianized<sup>1</sup>" but it is statistically insignificant and cannot adequately prove that elite emulation was occurring. If this model were

<sup>&</sup>lt;sup>1</sup> "Egyptianized" refers to ceramic sherds that are locally produced but carry "Egyptian" traits. The specifics of these characteristics are explained in the "Methods" section of this paper.

Egyptian motifs that were incorporated in some manner (whether in architecture, ceramics, stamped-seals, etc.) in the archaeological record. It may be argued that the reason for this is because the cultural material examined came from the Egyptian fortress and not a Canaanite community located on the periphery. Although this may be true, there is nonetheless an abundant number of Canaanite ceramics that were uncovered in area A that do not exhibit any "Egyptian" features. Surprisingly, the Canaanite presence is actually stronger in the archaeological record in regards to quantity than that of the Egyptians in area A. In addition to this, it may be argued that the Canaanites, over a period of time, became the dominant force and the Egyptians became "the periphery". Again, there is no indication that there was a Canaanite influence on the Egyptian's traditional style forms, colors, shapes, etc.

Therefore, it must be assumed that the interactions between the Egyptians and Canaanites did not amount to a set social structure with an elite dominant core and a subservient peripheral group. Interaction between the two groups may have been more relaxed and less distinguishable than what the elite emulation model allows for. This is not to rule out the model just because there is no archaeological evidence to support it. It does mean, however, that it cannot be considered as a possible explanation for the Egyptian occupation in Jaffa nor for understanding the context of the Lion Temple.

In Anne E. Killebrew's work titled *Biblical Peoples and Ethnicity; An Archaeological Study of Egyptians, Canaanites, Philistines, and Early Israel, 1300 BCE – 1100 BCE*, she argues against Higginbotham's elite emulation model, explaining that "Egyptian domination of Canaan was neither by direct rule nor by elite emulation" but instead, described the Egyptian presence in Canaan during the New Kingdom era as "formal," or an example of Administrative Imperialism

(2005, p. 53). Administrative Imperialism is a term coined by Ronald J. Horvath, who breaks down the concept of imperialism into two categories: Administrative Imperialism and Informal Imperialism (Killebrew 2005, p. 53). Administrative Imperialism is defined in Killebrew's work as "a form of intergroup domination in which formal (direct) controls over the affairs of the colony exist through a resident imperial administrative apparatus" (2005, p. 53).

Although this model accurately reflects what the historical records state about the Egyptian occupation in Jaffa, it only explains the economic and political state of Jaffa in the time subsequent to Egypt's conquest. Horvath's administration imperialism model does not take into account the gradual decline of the "administrative apparatus" power and how that would affect the cultural dynamics of the colonized state. In other words, it does not take into account the New Kingdom's inability to maintain control towards the end of the Late Bronze Age as its power began to wane or as acculturation takes hold. It also must be noted that since the Egyptians occupied Jaffa for around 250 years, it can safely be argued that the social structures enforced at the beginning of their occupation and the types of social interactions they had grew and evolved over that time.

Overall, it is not conclusive that the Egyptians always had an administrative center in Jaffa nor is there enough evidence to believe that the Egyptians always maintained complete dominance over its Canaanite inhabitants. The ceramics excavated from area A in the 1970 to 1974 seasons reveal a more dominant Canaanite presence in the archaeological record than that of the Egyptians, suggesting that during the Late Bronze Age, the Canaanites were a more prevalent force in Jaffa. It has been argued that the absence of Egyptian material culture does not indicate a decline in Egyptian dominance in the region but that instead, is indicative that the Egyptians used the local Canaanite material as opposed to producing their own. Although this is

probable, it may be argued that the archaeological record would have nonetheless, revealed a high number of Egyptian vessels that were unique to the Egyptian culture, such as the Egyptian flowerpots. Egyptian flowerpots were commonly used for beer and bread production during the New Kingdom era (1550-1070 BCE) in Egypt (Burke and Lords 2010, p. 18). There were a significant number of flowerpots excavated by Kaplan from the 1955-1958 seasons but there is a rare occurrence of these vessels in the ceramic assemblage from the 1970 to 1974 seasons. This is probably due to the fact that Kaplan excavated to a deeper depth in the 1955 to 1958 seasons than the 1970-1974 field seasons, which suggest that the flowerpots uncovered in the 1955 to 1958 seasons were from an early phase of the Egyptian occupation. In addition to this, if the Egyptians were a consistent dominant force in Jaffa, then the ceramic assemblage from 1970 to 1974 seasons, which is predominantly service ware (i.e., bowls), would arguably have a larger amount of Egyptian flowerpots, especially considering that flowerpots would have likely been associated with dinning. The absence of culturally unique Egyptian vessels, such as the Egyptian flowerpots, from the 1970 to 1974 ceramic assemblage, further reinforces the notion that the nature of Egyptian dominance had changed over the course of their roughly 250 year occupation of Jaffa.

# History of Archaeological Research in Jaffa

Archaeological work in Jaffa began most notably in 1948 under the direction of P.L.O. Guy, who was Director of Excavations and Surveys for the Israel Department of Antiquities. Guy's excavation goal was to locate the remains of Late Bronze and Iron Age settlements. After conducting only two field seasons, he passed away in 1952 without reaching this goal (Peilstöcker, Martin, and Aaron A. Burke 2009, p. 17). Excavations continued under the direction of Bowman, Isserlin, and Rowe in 1952 on behalf of the University of Leeds, England,

but stopped shortly thereafter when they failed to find any significant findings pertaining to the Biblical era (the Bronze and Iron Age) (Peilstöcker, Martin, and Aaron A. Burke 2009, p. 18).

Excavations then resumed in 1955 with archaeologist Jacob Kaplan, a native of Tel Aviv and a Ph.D. graduate from Hebrew University. He was the sole excavator in Jaffa from 1955 to 1975 and also conducted excavations throughout the city of Tel Aviv. In 1961, he established the Jaffa Museum of Archaeology, which still houses several of his finds from his excavations in Jaffa (Peilstöcker, Martin, and Aaron A. Burke 2009, p. 19). In addition to this, he also created the "'archaeological reserve' system... which prohibits any excavations for development purposes (salvage excavations) on the tell" (Peilstöcker, Martin, and Aaron A. Burke 2009, p. 19).

Overall, Kaplan was passionate about the archaeological work he conducted and made significant measures to protect the archaeological sites as well as make his findings easily accessible to the public. Despite these initiatives, Kaplan never made a strong effort to fully analyze and publish his findings with the exception of a series of preliminary reports. For the three decades following completion of excavations in Area A in 1974, Kaplan's work went seemingly unnoticed in the archaeological community (Burke and Lords 2010, p. 3).

### **Data Set**

Beginning in 1970, Kaplan resumed his excavations in Area A (Figure 2), excavating further west into the Egyptian fortress than what he had previously done in his 1955 to 1958 field seasons. It was during this 1970 to 1974 field seasons that Kaplan discovered the Lion Temple as well as an extensive ceramic assemblage throughout Area A. For the purpose of understanding the context of the Lion Temple and furthermore, the nature of the Egyptian occupation in Jaffa during the Late Bronze Age, I focus my analysis on the ceramic collection from the Lion Temple

and its surrounding area.

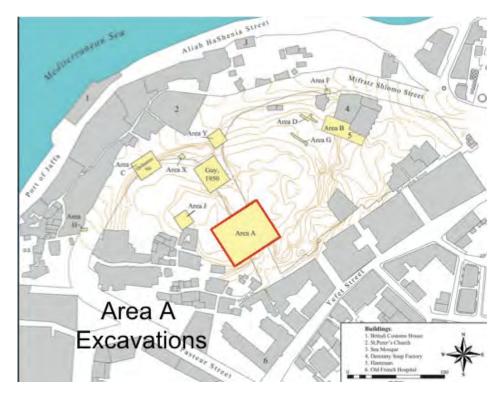


Figure 2: This image is of Jacob Kaplan's excavation plan for the Tell of Jaffa, where he identified each of his excavation areas using an alphabet labeling system. The data collection that is used for the analysis presented in this paper was excavated from Area A.

# Lion Temple

In Jacob Kaplan's preliminary notes published in 1972, titled *Excavations in Tel Aviv-Jaffa*, he writes of his discovery of a "plaster floor" underneath a layer of fallen bricks, where in the southwestern corner he found an "offering stand" and in the south-eastern corner of this structure, he discovered the skull of a lion and "near the mouth was found one half of a scarab seal" (p. 10). From these few findings he concluded in his report that: "Evidently a lion-cult must have been practiced in the temple; moreover the finding of the scarab seal half so near the lion skull would indicate that this skull was exhibited intact with its skin and mane bedecked with various ornaments which must have been torn off hastily when the temple was abandoned; all that remained apparently, was the scarab seal half" (10).

Needless to say, Jacob Kaplan had a very active imagination. There are several problems with Kaplan's initial analysis: The first is that the presence of *one* lion's skull does not indicate a "lion cult" took place within the vicinity. Although the skull of a lion is a unique find in the archaeology of the southern Levant, analysis of the lion skull alone cannot determine if the lion skull served a religious, political or other purpose. Furthermore, the lion's skull by itself cannot reveal if it was associated with Egyptians, Canaanites, or any other ethnic group that interacted in Jaffa. It is also impossible to determine the purpose of the half scarab seal within the building, but it may be said with certainty that the scarab was not attached to the lion's mane. Faunal analysis performed by Ed Mahar over the 2011 field season revealed that there were cut marks for decapitation and cut marks for skinning exhibited on various parts of the skull. Therefore, the skull was not left with its skin and mane intact and adorned with "various ornaments" but, instead, had been skinned before it was abandoned in this structure.

In this same report, Kaplan further describes the ceramics uncovered in the Lion Temple as being sparse, stating that there was very little pottery found on the floor of the temple but "it was enough to permit us to date the [Lion Temple] to the late 13<sup>th</sup> –early 12<sup>th</sup> century B.C.E. (10). Kaplan further argues that the construction of this temple is "contemporary with the invasion period of the Sea Peoples, prior to the Philistine occupation of the Tel Aviv-Jaffa part of the coast" (10). This was later proved wrong when Professor Ze'ev Herzog of Tel Aviv University, continued excavations in 1999 in area A. On the Department of Archaeology for Tel Aviv University's website, Professor Herzog writes, "The "Lion Temple" was attributed by Kaplan to the Iron Age I (1200-1000 BCE; pre-Philistine Period), however, when the remains were re-exposed in 1999 it became apparent that the building was partly overlaid by a massive brick wall, made of grey bricks that are identical to the repaired part of the Stratum IVA (Late

Bronze IIB; 1300-1200 BCE) gate". Therefore, because part of the temple was, as they discovered, partially destroyed by a LB IIB brick structure that overlaid it, the temple itself must then date to the Late Bronze Age IIA (1400-1300 B.C.E.). This puts the construction of the temple in the same time period as the Egyptian occupation in Jaffa and can arguably serve as an insight into the question of the nature of the dynamics of the Egyptian occupation via analysis of the cultural material that was excavated from the temple.

# Ceramic Assemblage

I specifically focus my analysis on the ceramic assemblage excavated by Jacob Kaplan during the 1970 to 1974 field seasons in Area A. This assemblage comes from the area Kaplan expanded in an effort to reveal larger portions of the Late Bronze Age Egyptian fortress. In addition to examining the ceramic assemblage for the whole of the expanded portion of Area A, I focused specifically on squares I2 and I3. These two squares make up the general area of the floor of the Lion Temple and also possessed the largest quantity of ceramics within Area A from the 1970 to 1974 field seasons.

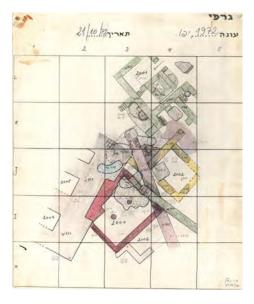


Figure 3: This is of a map of Kaplan's excavation plan of area A, which displays how he divided the area into a grid system that he then identified by letter and by number. The Lion Temple is outlined in red and is located in squares H3, I2, I3, I4, J2 and J3.

#### Methods

The main method for identifying the ceramics from the 1970 to 1974 field seasons was by careful examination of each and every each pottery shard in the collection. This ceramic assemblage consists mainly of Canaanite and Egyptian pottery sherds but also includes Mycenaean, Philistine, and Cypriot ware as well. Almost all of the Egyptian and Canaanite pottery discovered in the assemblage was locally produced (with the exception of only a few identified Egyptian imports). All Mycenaean, Philistine, and Cypriot vessels were imported into the region through trade and were typically easy to distinguish and identify. The Egyptian and Canaanite vessels on the other hand, were more difficult to separate, especially among bowls.

To resolve this problem and identify other non diagnostic pottery sherds, five different forms of analysis were used including examination of the various forms of the vessels, determination of the fabric (the material it is made out of), identification of clay preparation (how much water and temper was mixed in with the soil), examination of the production techniques, and identification of the different styles of decoration.

# Canaanite v. Egyptian Vessels

Examining the form of the vessel was applicable when presented with a pottery sherd that was either part of a rim or a base. "Body" sherds, or sherds that have broken off from the walls of the vessels, were typically too generic to be able to distinguish and were usually discarded unless they possessed some other identifiable feature about them. Within this assemblage, the most common Canaanite vessels were simple bowls with either plain rims or everted rims (a rim that protrudes out and away from the bowl). The walls of these bowls were usually curved or straight and almost all Canaanite bowls possessed an elevated disk-base (a ring that runs in a circular motion on the bottom of the bowl to allow it to sit steadily on a surface) (Amiran, Ruth p. 162).

Rarely, a Canaanite bowl would have a simple flat base or a round base but this was not common. The most common Egyptian vessel forms were also simple bowls that are similar to Canaanite vessel form except it typically possesses a flat base (as opposed to a disk-base). Again, occasionally the base would be round, but this was rare within the Jaffa Egyptian bowl assemblage. Egyptian pottery vessels, particularly bowls, typically had simple or everted rims and straight or curved walls (Figure 4) (Amiran, Ruth p. 162).

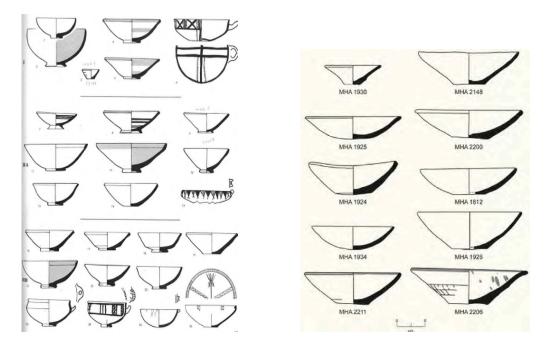


Figure 4: This ceramic assemblage comes from the 1955 to 1958 excavations in Jaffa. The Canaanite bowl assemblage is on the left and the Egyptian bowl assemblage is on the right.

Clay types were also useful for distinguishing between Canaanite and Egyptian vessels from the Late Bronze Age. Egyptian vessels produced in Egypt were typically made from one of two types of material: Nile silt clay or Marly clay. Nile silt clay is a plastic clay that contains a large amount of silica and iron oxide, which usually leads to a reddish color when dry (Serpico, Margaret p.1). Marly clay is a stone-like clay and is rich in calcium carbonates and turn to a pale yellow, green, or white color after firing (Serpico, Margaret p.1). Usually, Marly clay deposits can be found on the desert edge near limestone outcroppings whereas the Nile silt clearly comes

from along the riverbed of the Nile. Egyptian vessels produced in Jaffa though, along with Canaanite vessels, typically were made from limestone and coastal quartz (Serpico, Margaret p.1). Often coastal quartz possesses microfossils that derive from shallow water algae and planktonic foraminifera (Serpico, Margaret p.1). There is usually a difference in color and it can vary from white to cream to dark gray. The majority of the Late Bronze Age pottery assemblage is made from this type of material, including the majority of the Egyptian ware produced in Jaffa.

Instead, clay preparation is a much clearer identifier than just examining the material composite alone. The process for creating clay is simple: select the material, soak it in water, mix in tempering material (sand, straw, etc.), knead it, and then form it into a lump. Clay preparation is conducted similarly almost everywhere throughout the Eurasian continent but what distinguishes different ceramic assemblages from another is what type of temper is used, how much is used, and how the clay is constructed. For instance, in Canaanite ware, typically only a small amount of temper material is added, except when creating cooking pots. This was probably due to the fact that cooking pots had to be durable enough to withstand repeated exposure to heat and for carrying large quantities of food or liquid. In addition to this, Canaanite ware varies little in regards to what type of temper and how much of it is used. Egyptian ware instead, possesses a higher quantity of organic temper (specifically straw) in the clay preparation and the clay is worked so that it appears finer (i.e., to make it less "chunky" and with fewer imperfections) (Serpico, Margaret p.1). This resulted in a higher quality of ceramic vessels that were individually distinct from one another and also distinguishable from Canaanite vessels.

In addition to clay preparation, Canaanite ware had distinct production techniques.

Typically, Canaanite ware were mass-produced, which at that time, would have involved several potters working for the same shop (Golden, Jonathen p. 89). Most of the vessels were wheel-

made and had a sloppy appearance. The vessels were also very rough and course, especially in comparison to the imported vessels in the region (Amiran, Ruth p.182). Canaanite ware also copied Cypriot and Mycenaean vessel forms, which were brought into Jaffa by the Mediterranean Sea trade. Imported Cypriot vessels were easy to distinguish from Canaanite copies because Cypriot vessels were almost always handmade whereas Canaanite copies were typically wheel-made (Amiran, Ruth p. 182). Mycenaean vessels were also easy to distinguish from Canaanite copies because Mycenaean vessels were typically well made and very fine. Similarly, Egyptian ware was finer in comparison to Canaanite ware (Amiran, Ruth p. 182). Egyptian ware possess clay that had been thoroughly worked during the preparatory phase and while on the wheel, was pressed thin and then smoothed out again. Egyptian vessels also possess a distinct trademark "of strong wheel marks in the form of concentric circles on the bases [that] occurred when the vessels were cut by a secondary trimming or when the vessel was string-cut from the wheel" (Burke, Aaron Alexander, and Krystal V. Lords 2010, p. 14). This was unique among the pottery assemblage and was a distinct Egyptian trait the ceramic assemblage.

The simplest method to identify pottery sherds was by decoration. Egyptian ware had three typical styles: red "lipstick" rim, splash decoration, and red burnish ware (Figure 5) (Burke, Aaron Alexander, and Krystal V. Lords 2010, p. 14). The red "lipstick" rim was a very simple design where red paint was applied strictly to the rim of the bowl. Red splash decoration was a technique that would be done on the outside and/or on the inside of the vessels and was created by literally splashing red paint across the surface to create a spotted effect. Red burnish ware was created when rubbing hard, red clay across the surface of the vessel to give it a smooth, uniform appearance.



Figure 5: The image on the left is an example of a vessel with a red "lipstick" rim; the image in the middle is of a vessel with splash decoration; the image on the right is of a vessel with red burnish ware. The Egyptian vessels pictured here were not excavated from Jaffa.

Canaanite ware on the other hand, expanded out beyond red paint and burnish to include more unique styles. Canaanite ware used three specific designs that distinguished it from Egyptian and other imported wares: the Palm Tree and Ibex motif, chocolate-on-white ware, and Bichrome ware (Figure 6) (Amiran, Ruth p.161). The Palm Tree and Ibex motif was a style that was copied from Mycenaean ware, which often employed animal motifs (Amiran, Ruth p.182). The Palm Tree and Ibex motif was common among Canaanite ware, which depicted a Palm tree between two Ibexes. The chocolate-on-white ware consisted of vessels that had been painted white and then had specific designs drawn on them with brown paint. The most unique Canaanite vessels were those that possessed a Bichrome style, which consisted of images drawn specifically in red and black paint. An example of this is displayed in figure 6, which is a depiction of a bearded Canaanite man that was excavated in Beth Shean by the Hebrew University (Mazar, Amihai 2007).



Figure 6: The image on the right is of the Palm Tree and Ibex motif (Amiran, Ruth p.161); the image in the middle is an example of chocolate-on-white ware; the image on the left of the Canaanite bearded man is an example of Bichrome ware (Mazar, Amihai 2007). The vessels pictured here were not excavated from Jaffa.

## Function Classification

After examing the entire 1970-1974 pottery assemblage, it was clear that the majority of the vessels excavated were in some way associated with serving of food, although, this is difficult to prove because of the way in which Kaplan conducted his excavations. Kaplan did not always clearly describe in his preliminary reports exactly how he excavated nor did he always specify everything that he found. Therefore, within this ceramic assemblage, it is not clear if the vessels recovered were near a firing pit or any other type of distinguishable feature that could be associated with the vessels. In addition to this problem, Kaplan and his team had washed all the pottery thoroughly, which made residue analysis impossible with this collection. Therefore, to determine the classification of the vessels by the function they served, analysis was conducted on each individual sherd to identify their form, clay type, clay preparation, production techniques, and decoration. Although this analysis may appear limiting, it in fact provided clear distinctions between the vessels that allowed them to be classified into six categories. The first three are associated with food service, including: service, preparation, and storage wares. In addition to these three cateogires were also other vessels that were unique and could not be classified within the same realm as food, including lamps and cosmetic/medicial Cypriot jugs. A more detailed description of these classifications is given in the Data Analysis section of this paper.

## **Data Analysis**

## Ceramic Function

Service ware was the most abundant type of vessel found among the 1970-1974 ceramic assemblage. Almost all of the service ware identified within this assemblage were small bowls (sized to fit in the palm of a hand) with a wide opening (Figure 7). This suggests that these bowls

were designed for individual use as opposed to serving a large group of people in a family style of dining. They also did not possess any unique clay types or clay preparation and the majority of the vessels were produced hastily with uneven sides and rims. This suggests that these vessels were designed for everyday use as opposed to ceremonial or other special uses which would most likely have required finer ware. The majority of the bowls within this assemblage did not possess any decoration with the exception of a few imported bowls such as the Cypriot "Milk Bowls" or Egyptian produced bowls that displayed a red "lipstick" rim, splash decoration, and red burnish styles.



Figure 7: This is an example of a Late Bronze Age bowl with an everted rim. The bowl featured in this picture was not excavated from Jaffa.

Preparation ware consisted solely of wide bowls with large openings and thick walls (Figure 8). This suggests that these vessels were cooking pots because the large openings would have allowed for easy access to the contents being cooked within the bowl and the thick walls would have been necessary to withstand the high temperatures from cooking. In addition to this, the clay preparation used for these vessels always involved more temper in the clay mixing than other vessels. This suggests that these vessels were built to be stronger for handling high temperatures repeatedly over a long period of time. Although these vessels included handles (to allow for easy transport, particularly when its contents were hot), handles to cooking pots did not appear in this ceramic assemblage. These vessels never possessed any decorations on them to

suggest that they were used for ceremonies or special occasions but several of the sherds possess what appeared to be a dark discoloration that suggests it had been burned. This developed most likely from the bowl being used over a fire or inside an oven for preparing meals. In addition to cooking pots, the ceramic assemblage at Jaffa also includes Egyptian flowerpots. Egyptian flowerpots are v-shaped pots that have punctured holes in their bases (Figure 9). They were made from durable clay that was made with excess temper to make it strong and able to withstand multiple uses. These flower pots were unique among the assemblage because they were a distinct Egyptian style of ceramics that was specifically used for beer and/or bread production, according to historical sources as well as archaeological evidence collected in Egypt (Burke, Aaron Alexander, and Krystal V. Lords 2010, p. 14). The flower pots in this ceramic assemblage were not decorated which suggests that they were used for functional purposes only.



Figure 8: This is an example of a Late Bronze Age cooking pot. The cooking pot featured in this picture was not excavated from Jaffa.



Figure 9a-c: This is an example of Late Bronze Age Egyptian Flower Pots from the New Kingdom era. The flowerpots featured in this picture are from Jaffa and possess a design unique to the Eighteenth Dynasty. Photos by Krystal V. Lords

Storage ware consisted solely of large vessels with thick walls and small openings (Figure 10). These vessels were often taller than the the vessels found among the service or preparation ware, which suggests that these vessels were not designed for any individual service use and its small opening suggest that it was not design to allow for easy access. Typically, the smaller openings would have had lids to provide complete protection from outside contaminants, although lids were not found within this ceramic assemblage. The clay preparation for storage ware usually consisted of a higher amount of temper but not to the same extent as it was for the preparation ware. This showed that storage ware were built not to withstand high temperatures but its thick walls do suggest that it was designed to be durable so as to protect the contents inside while being transported and/or stored. These vessels were usually decorated but, within this assemblage, almost all the storage vessels were not. This implies that the vessels were not meant for display or decoration but were designed to be used for funtional purposes only.



Figure 10: This is an example of a Late Bronze Age storage vessel. The storage jar featured in this picture was not excavated from Jaffa.

Lamps were a unique find among the ceramic assemblage although they were rare in comparison to the other types of vessels found (Figure 11). The lamps unearthed were Canaanite as determined by their clay types (the clay used to make these lamps came from local coastal resources). They are generally molded into a small bowl but then pinched along one side to create what looks like a spout. Typically the bowl would hold a wick inside that would soak in oil. The tip of the wick would stick out of the spout where the tip would be lit to produce light. Often the spout of the lamps would have burned marks, which further provides evidence that it was used for lighting and not cooking purposes.



Figure 11: This is an example of a Late Bronze Age lamp. The lamp featured in this picture was not excavated from Jaffa.

Cypriot jugs, commonly known as Cypriot Base Ring wares or "Bilbils", were imported jugs that were part of the Mediterranean trade network (figure 12). Cypriot jugs often contained either cosmetic (i.e., perfume) or medicinal (i.e., opium) material, which is why they were categorized as "cosmetic/medicinal" within this pottery assemblage (Joblonkay, Darren p. 1). It is not certain if the Cypriot jugs found in Jaffa contained either perfume or opium since residue analysis could not be performed but throughout the Levant and in Egypt, Cypriot jugs have been found at other archaeological sites that did contain traces of opium (Joblonkay, Darren p. 1). Whether or not these activities were ceremonial or recreational has not yet been discussed but the evidence from other sites, especially in Egypt (where they made up one of the largest assemblages of imported wares for the Late Bronze Age), suggest that the opium was for recreational purposes (Joblonkay, Darren p. 1). Therefore, it may be argued that the Cypriot jugs found within the Egyptian administrative fortress at Jaffa also contained opium although there is no effective way to prove this. Essentially, the Cypriot jugs only provide evidence for an extensive trade network and the possibility that other social activities such as opium use took place in Jaffa.



Figure 12: This is an example of Cypriot Base Ring Jug. This jug featured in this picture was not excavated from Jaffa.

## Area A

For the purposes of the argument presented in this paper, I approach the 1970 to 1974 ceramic assemblage from area A in two ways: I review it on a macro level, analyzing the entire assemblage from area A as a whole and then on a micro level, examining loci Sub-2000, 2000, and 1200. The macro analysis consists of a general analysis of the ceramic assemblage over all of area A, whereas the microanalysis will include a much more narrow analysis of the floor and sub-floor of the Lion Temple. To do the microanalysis, I divide the ceramic assemblage into the respective elevation levels according to the loci Kaplan designated during his excavations. This provides a chronological sequence for the cultural material excavated by Kaplan that can also further unravel the nature of the Egyptian occupation throughout the Late Bronze Age in Jaffa.

To clearly examine the site from a macro level, I labeled every pottery bucket<sup>2</sup> of a Late Bronze Age context from the 1970 to 1974 field seasons as either Egyptian or Canaanite. If the pottery bucket under question contained any Egyptian ceramic sherds then the pottery bucket was labeled "Egyptian." The number of pottery buckets with Egyptian material is therefore a maximal representation of the Egyptian presence in Area A. All other pottery buckets that contained Canaanite ceramic sherds are identified as "Canaanite" and also serve as a maximal representation of the Canaanite presence in Area A. The total counts for the number of Egyptian pottery buckets and Canaanite pottery buckets, per square in area A, are presented in table 1.

<sup>&</sup>lt;sup>2</sup> In this context, a pottery bucket is the cultural material excavated from a specific spot within Area A. Typically, there is at least one pottery bucket for every 10 centimeters of earth excavated but Kaplan did not always operate with fixed measurements.

<sup>&</sup>lt;sup>3</sup> The number of identifiable Egyptian ceramics was irrelevant for the purpose of being labeled as Egyptian. The pottery bucket only needed to contain at most, one item that was Egyptian to be labeled as an "Egyptian" pottery bucket. This was done to provide a general overview of the levels of Egyptian and Canaanite cultural material throughout Area A.

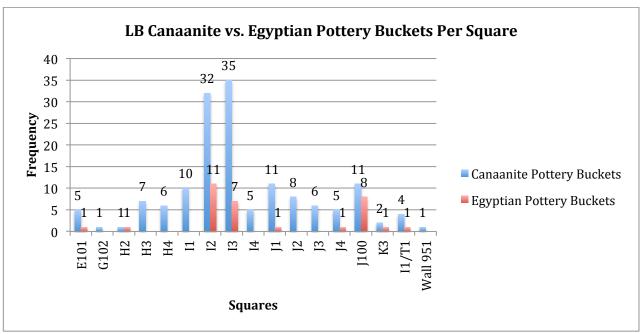


Table 1: This quantified approach to the ceramic assemblage reveals that in every excavation square throughout Area A, there are more pottery buckets that possess no Egyptian cultural material than pottery buckets that do. Or in other words, there is quantifiably more Canaanite culture material present throughout Area A from the 1970 to 1974 excavations than there is Egyptian. In fact, six of the 16 squares, plus Wall 951, did not include any Egyptian ceramic material at all.

This approach to the data, which had never been done before with the 1970 to 1974 ceramic assemblage, is significant because it calls into question the general assumptions made about the Jaffa site in relation to the Egyptian occupation. It has been assumed that the historical record for Jaffa, including the Amarna Text, the Tale of Joppa, etc. in combination with the findings of an Egyptian gate façade and Egyptian cultural material by Jacob Kaplan in the 1955 to 1958 seasons, indicate that Jaffa throughout the Late Bronze Age was under Egyptian rule. It has not been questioned how the nature of this occupation evolved over time and how that may or not may be reflected in the archaeological record. The ceramic assemblage from the 1970 to 1974 seasons, which arguably is derived from the final stages of Egyptian occupation, brings this very issue to light and demonstrates that the nature of the occupation did evolved over time. This is revealed by the weak Egyptian presence in the archaeological record from the 1970 to 1974 field seasons that, in opposition to the historical record and the data Kaplan collected in the 1955

to 1958 seasons, argues in favor of a more prevalent Canaanite population in Jaffa.

The reasons for this change may arguably be because the cultural material excavated by Kaplan in the 1955 to the 1958 field seasons and the 1970 to the 1974 field seasons were at different elevations. This is visible in various topography maps (figure 13) of the site, which show that Area A has a steady incline from where the 1950 excavations took place back further west into Area A, where the 1970 excavations occurred. This, in addition to the fact that Kaplan did not excavate as far down in the 1970 seasons as he had done during the 1950s, could explain why there is a distinct difference in the cultural material recovered within Area A, mainly because Kaplan was excavating in two different time periods of the Late Bronze Age. Therefore, it is arguable that the 1950 excavations in the gate facade of Area A reveal the site's macrohistory and a well-preserved assemblage from the early Late Bronze Age, while the 1970 excavations reveal a well-preserved assemblage of the second half of the Egyptian occupation. In other words, the cultural material from the 1950 excavations are representative of the earlier stages of the Egyptian occupation whereas the 1970 excavations are representative of the later stages. This is highly unlikely though because the Lion Temple, which was dated by Professor Ze'ev Herzog to the Late Bronze Age IIA (1400-1300 B.C.E.), predates the Ramesses II (ca. 1264 -1198 B.C.E.) gate façade that was uncovered during the 1950 excavations. Therefore, elevation differences are not representative of different time periods and cannot be used in explaining the differences in cultural material unearthed in the 1970 to 1974 field seasons.

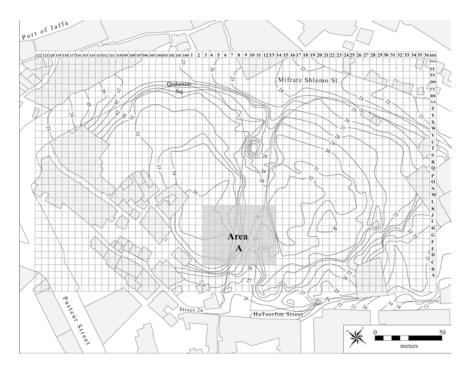


Figure 13: This topography map of the site shows that Area A has a steady incline in elevation from roughly 29 meters to roughly 35 meters at its peak. The 1950 excavations took place in the eastern portion of Area A. The 1970 excavations occurred in the western portion of Area A.

Overall, the ceramic assemblage from the 1970 to 1974 field seasons reveals that the Egyptian occupation is not as dominant as previous scholars have believed it to be. Thus far the archaeological record shows a prevalent Canaanite presence in Jaffa as opposed to an Egyptian one over the space of Area A. This will be further investigated in the microanalysis of Loci sub-2000, 2000, and 1200.

## Locus Sub-2000

To further unravel the nature of the Egyptian occupation in Jaffa, the ceramic assemblage is broken down by loci and elevation level. Kaplan identified the floor of the temple as locus 1200 that is roughly from an elevation of 28.7 to 28.5 meters above sea level. The subfloor to the Lion Temple is identified as locus 2000 and is roughly an elevation of 28.5 to 28.26 meters above sea level. Any ceramic excavated at an elevation below 28.26 meters and was identified as a Late Bronze Age sherd is considered to be below the subfloor of the temple. Any ceramic excavated

at an elevation higher than 28.7 meters and is identified as a Late Bronze Age sherd is considered to be above the occupational debris of the Lion Temple. I will examine each loci beginning with the lowest elevation (i.e., the earliest time period) to the locus with the highest elevation (i.e., the latest time period), in order to analyze the history of the square in a chronological manner.

Locus Sub-2000 (28.26 meters and				
lower)				
Туре	Canaanite	Cypriot	Egyptian	Grand Total
Base Ring Jug		2		2
Bichrome Body Sherd	1			1
Cooking Pot	3			3
Everted Bowl	5			5
Jar	7			7
Krater	1			1
Lamp	1			1
Painted Body Sherd	2			2
Painted Simple Bowl	5			5
Red-Slip Carinated				
Bowl			1	1
Simple Bowl	10			10
Grand Total	35	2	1	38

Table 2: This table presents the ceramic assemblage from below the subfloor of the Lion Temple or identified in this essay as "Locus Sub-2000." All pottery sherds presented in this table were identified as Canaanite, Cypriot, or Egyptian and categorized by "type" (i.e., the function they served). This table represents the total number of pottery sherds for both squares I2 and I3 that were excavated at the elevation of Locus Sub-2000.

Table 2 presents the ceramic assemblage collected from below the subfloor of the Lion Temple, below the elevation of 28.26 meters above sea level. The ceramics in this assemblage are significant in that a disproportionate number of the sherds are Canaanite, which suggests that the historical context for this elevation predates the arrival of the Egyptians. There is one residual pottery sherd that does not predate the arrival of the Egyptians, which is the Red-Slip Carinated Bowl. Again, red slip is indicative of Egyptian influence since it was a common decorative characteristic of Egyptian ceramic ware. The appearance of only one is not statistically significant though and is not valuable to the analysis. Overall, the most common type of ware is

bowls, which account for 35 of the 38 ceramics. From this number, it would be easy to suggest that activities in Area A are associated with service activities such as dinning but it is difficult to deduce if these sherds are primary refuse (deposited in the location of use) or secondary refuse (trash) generated in another area. It is possible that much of the material used in this analysis was used elsewhere on the site and later deposited in this area. The only way to properly solve this issue would be to expand the excavations of the site to expose larger amounts of the occupational debris. Nonetheless, a significant analysis may be made from the trash left behind by a group of people and is arguably more reflective of their activities as a whole group as opposed to an individual focus on one unit of occupation such as a living quarter.

*Locus* 2000

Locus 2000						
(28.5-28.26 meters)						
						Grand
Type	Canaanite	Cypriot	Egyptian	Mycenaean	Unknown	Total
Base Sherd				1		1
Base Ring II Jug		9				9
Bichrome Krater	1					1
Bowl		1		1		2
Carinated Bowl	3					3
Decorated Body Sherd	4				3	7
Everted Bowl	27					27
Everted Bowl w/ Splash						
Decoration			1			1
Flat Base Bowl			7			7
Flower Pot			2			2
Inverted Rim Bowl	3					3
Inverted Red Rim Bowl			1			1
Jar	19					19
Ledge Rim Bowl			2			2
Low-Disk Base				1	1	2
Painted Body Sherd	1					1
Painted Simple Bowl	54					54
Cooking Pot	3					3
Simple Bowl	45					45
Simple Bowl with Splash			2			2

Decoration						
White-Slip Body Sherd (Milk Bowl)		9				9
Red-Slip Body Fragment				1		1
S-Shaped Bowl		2				2
Vat		1				1
Grand Total	160	22	15	4	4	205

Table 3: This table presents the ceramic assemblage from the subfloor of the Lion Temple or identified in this essay as "Locus 2000." All pottery sherds presented in this table were identified as Canaanite, Cypriot, Egyptian, Mycenaean, or Unknown and categorized by "type" (i.e., the function they served). This table represents the total number of pottery sherds for both squares I2 and I3 that were excavated at the elevation of Locus 2000.

Table 3 presents the ceramic assemblage collected from the elevation of the subfloor of the Lion Temple, Locus 2000, located between 28.5 and 28.26 meters above sea level. The ceramics in this assemblage are significant because despite the emergence of an Egyptian presence in the archaeological record, the Canaanite presence continues to dominate the record, with Canaanite-identified pottery sherds representing 78 percent of the assemblage for locus 2000. This is surprising because it was expected that some type of cultural material would have accompanied the arrival of the Egyptians or that after some time of residing in the area, more "Egyptianized" ceramics would emerge in the archaeological record. It may be argued that when the Egyptians arrived in Jaffa, they used the Canaanite ceramics for their own purposes as opposed to creating their own. It is impossible to determine within this ceramic assemblage specifically which group used what vessels (which is difficult to do with any ceramic assemblage). Instead, I argue that a dominant Egyptian presence would be accompanied by a larger number of vessels that are unique to the pottery assemblage such as the Egyptian flowerpots. Egyptian flowerpots are unique in that they were used specifically for beer and bread production and only occur in pottery assemblages where the Egyptians were an occupying force. Therefore, it may be suggested that the small number of flowerpots in this ceramic assemblage for locus 2000 is indicative of a tenuous Egyptian presence in the area and that perhaps they

were not the dominating force as portrayed in historical sources. Furthermore, Egyptian ware represents only 7 percent of the ceramic assemblage for Locus 2000 as opposed to Cypriot ware, which represents 11 percent of the assemblage. This is incredibly surprising due to the fact that the "ruling" group, who had conquered Jaffa, represent the archaeological record to a lesser degree than the people from the Island of Cyprus, who *never* dominated Jaffa during the Late Bronze Age. Overall, what may be argued about this assemblage, with little hesitation, is that it reveals trade was prevalent during this time, considering the presence of Mycenaean ware in addition to the Cypriot and Egyptian ware.

*Locus 1200* 

Locus 2000 (28.7-28.51 meters)					
	Canaanite	Cymriot	Egyption	Myganggan	Grand Total
Type  Page Ping Pody Shord	Canaanne	Cypriot	Egyptian 3	Mycenaean	3
Base Ring Body Sherd			3	1	1
Bowl Carinated Bowl	2			1	2
	<u>Z</u>				
Cooking Pot	<u>l</u>				1
Decorated Body Sherd	<u>l</u>				1
Everted Bowl	5				5
Flat base Bowl			1		1
Inverted Bowl	1				1
Jar	2				2
Krater	1				1
Painted Body Sherd	1				1
Painted Simple Bowl	2				2
Red Splash Decorated Bowl			1		1
Red-Slip Bowl			1		1
Simple Bowl	14				14
Vat	1				1
White-Slip Body Sherd (Milk					
Bowl)		3			3
Base Ring Fragment	1			1	2
Base Ring II Jug		1			1
Ledge-Rim Bowl			1		1
Grand Total	32	4	7	2	45

Table 4: This table presents the ceramic assemblage from the floor of the Lion Temple or identified in this essay as "Locus 1200." All pottery sherds presented in this table were identified as Canaanite, Cypriot, Egyptian, or

Mycenaean and categorized by "type" (i.e., the function they served). This table represents the total number of pottery sherds for both squares I2 and I3 that were excavated at the elevation of Locus 1200.

Table 4 presents the ceramic assemblage collected from the elevation of the floor of the Lion Temple, Locus 1200, located between 28.7 and 28.51 meters above sea level. This ceramic assemblage arguably may be associated with the period following the earliest Egyptian presence. Similar to Loci Sub-2000 and 2000, there is a stronger Canaanite presence in the ceramic assemblage than Egyptian, with Canaanite-identified vessels accounting for 71 percent of the assemblage for Locus 1200. This is unique because the Lion Temple floor was identified by Kaplan to be an Egyptian occupation due to the fact that he unearthed an Egyptian scarab near the skull of the Lion. Considering Egyptian ware only represents 15 percent of the ceramic assemblage in Locus 1200 though, the archaeological questions this assumption. Instead, the Egyptian scarab appears to be residual and perhaps discarded in this area but not associated with the Lion Temple in any significant way. It is also important to note that the ceramic assemblage for Locus 1200 is significantly smaller than the assemblage for Locus 2000 by 160 vessels. The comparison between both Loci suggests that this area in general was not a waste area or where the local inhabitants discarded their cultural material. Perhaps this could have been the case specifically for Locus 2000 but it also is a possibility that it was an area with a lot of social activity. Overall, if this Locus represents the period following the earliest Egyptian presence then it is arguable that the temple was constructed in the Late Bronze Age IIA (ca. 1400-1300 BCE) and did not have a Late Bronze Age IB (ca. 1460-1400 BCE) precursor during the earliest Egyptian phase. This would further suggests that the temple was an Egyptian structure considering the Egyptians were, according to historical texts, occupying Jaffa by the Late Bronze Age IIA. The archaeological record, however, simply does not reflect this and instead suggest

the Canaanite inhabitants were the prevalent group in Jaffa. This evidence questions the overall nature of the Egyptians dominance in Jaffa, particularly only a few decades into their rule.

### Conclusion

In conclusion, the absence of details in earlier publications and a careful consideration of the evidence from the 1970 to 1974 archaeological record, reveals, in the end, that it is nearly impossible to call the Lion Temple Egyptian but instead suggests that it was a Canaanite structure. Furthermore, the evidence clearly shows that the temple is not an Iron Age structure but rather seems to reflect the middle of Egyptian occupation during the 14<sup>th</sup> century (1400 to 1300 BCE). Overall, the ceramic assemblage from the 1970 to 1974 excavation seasons reveals a dominant Canaanite presence as opposed to an Egyptian one, which brings into question the entire nature of the Egyptian occupation in Jaffa. Some possible explanations for this are that the Canaanite population was more resistive to Egyptian domination than what the historical records suggests. This would require further analysis of the stratigraphy of the site to investigate for destruction layers that could indicate social conflict and support this theory. Another possible explanation would be the integration of the Canaanites into the Egyptian population that did not result in acculturation. This could be feasible but it is very difficult to prove this through the archaeological record. Again, there is no simple method for determining (if any at all) which group of people utilized what items within an archaeological site. This is even more difficult if there is no evidence for acculturation or emulation to map the cultural changes of two groups interacting over a period of time. There is the possibility that the Egyptians occupying the fortress were "Canaanized," in what could be considered a reversed Emulation Model. Arguably, the Egyptians could have adapted themselves to the Canaanite lifestyle as opposed to maintaining their own. This is highly unlikely especially considering the rich Egyptian material

found in the 1955 to 1958 excavations in Jaffa. Finally, there is the explanation that the Egyptians simply utilized the Canaanite material upon their arrival in Jaffa. This is also highly unlikely due to the fact that the Egyptians did not conquer Jaffa in one swooping try. There were several skirmishes between the Canaanites and the Egyptians that spanned several decades before the Egyptians seized permanent control of the site in roughly ca. 1460 BCE. With numerous periods of unrest over the span of several years, it is safe to argue that the Egyptians would have had to been self-reliant and produced their own material or rely heavily on trade. It may be said that they Egyptians continuously re-conquered Canaanite territory to acquire the supplies they needed to sustain themselves. This again does not seem plausible considering the Egyptian fortress was an administrative center and would have needed some level of peace and stability to operate the Jaffa Port and the trade networks affiliated with this site.

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Appendix I

Locus Sub-2000 Below Subfloor of Temple (Any PB Below 28.26 Meters)

Classificatio	n Type	Function	Elevation	Pottery Bucket #
Canaanite	simple bowl	service	28.1	1974.054
Canaanite	painted simple bowl	service	28.1	1974.054
Canaanite	cooking pot	preparation	28.1	1974.054
Canaanite	simple bowl	service	28.24	1974.092
Canaanite	simple bowl	service	28.24	1974.092
Canaanite	simple bowl	service	28.24	1974.092
Canaanite	painted simple bowl	service	28.24	1974.092
Canaanite	painted simple bowl	service	28.24	1974.092
Canaanite	jar	storage	28.24	1974.092
Canaanite	painted body sherd	unknown	28.24	1974.092
Canaanite	everted bowl	service	28.1	1974.192
Canaanite	jar	storage	28.1	1974.192
Canaanite	simple bowl	service	28	1974.012
Canaanite	simple bowl	service	28	1974.012
Canaanite	simple bowl	service	28	1974.012
Canaanite	everted bowl	service	28	1974.012
Canaanite	lamp	lamp	28	1974.012
Canaanite	krater	storage	28	1974.012
Canaanite	jar	storage	28	1974.012
Canaanite	simple bowl	service	28	1974.098
Canaanite	jar	storage	28	1974.098
Canaanite	jar	storage	28	1974.098
Canaanite	bichrome body sherd	unknown	28	1974.098

Canaanite	simple bowl	service	28.12	1974.213
Canaanite	simple bowl	service	28.12	1974.213
Canaanite	everted bowl	service	28.12	1974.213
Canaanite	everted bowl	service	28.12	1974.213
Cypriot	base-ring base jug/juglet	cosmetic/medicinal	28.12	1974.213
Cypriot	base-ring base jug/juglet	cosmetic/medicinal	28.12	1974.213
Canaanite	jar	storage	28.12	1974.213
Egyptian	RSB carinated bowl	service	28.12	1974.213
Canaanite	cooking pots	preperation	28.12	1974.213
Canaanite	cooking pots	preperation	28.12	1974.213
Canaanite	painted simple bowl	service	27.96	1974.219
Canaanite	painted simple bowl	service	27.96	1974.219
Canaanite	everted bowl	service	27.96	1974.219
Canaanite	painted body sherd	unknown	27.9	1974.222a
Canaanite	jar	storage	27.9	1974.222a
Canaanite	painted body sherd	unknown	27.56	1974.228
Canaanite	simple bowl	service	27.56	1974.228
Canaanite	simple bowl	service	27.56	1974.228

# Appendix II

<u>Locus 2000</u> Subfloor of Temple (Any PB Between 28.5-28.26 Meters)

Classification	Type	Function	<b>Elevation</b>	<b>Pottery Bucket #</b>
Egyptian	flat base (bowl)	service	28.5	1974.017
Egyptian	flat base (bowl)	service	28.5	1974.017
Canaanite	everted bowl	service	28.5	1974.017
Canaanite	everted bowl	service	28.5	1974.017
Canaanite	everted bowl	service	28.5	1974.017

Cypriot	white-slip body sherd (milk bowl)	service	28.5	1974.017
Canaanite	carinated bowl	service	28.5	1974.017
Canaanite	painted simple bowl	service	28.5	1974.017
Canaanite	painted simple bowl	service	28.5	1974.017
Canaanite	painted simple bowl	service	28.5	1974.017
Canaanite	painted simple bowl	service	28.5	1974.017
Canaanite	painted simple bowl	service	28.5	1974.017
Canaanite	painted simple bowl	service	28.5	1974.017
Canaanite	painted simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	simple bowl	service	28.5	1974.017
Canaanite	jar	storage	28.5	1974.017
Canaanite	jar	storage	28.5	1974.017
Canaanite	bichrome krater	storage	28.5	1974.017
Canaanite	decorated body sherd	unknown	28.5	1974.017
Canaanite	decorated body sherd	unknown	28.5	1974.017
	flat base (bowl)	service	28.32	1974.017
Egyptian Egyptian	flat base (bowl)	service	28.32	1974.025
<b>0.1</b>	` '			
unknown	low disk base	unknown	28.32	1974.025

Canaanite	everted bowl	service	28.46	1974.035
Canaanite	jar	storage	28.46	1974.035
Egyptian	ledge rim bowl	service	28.46	1974.035
Cypriot	base-ring rim (jug/juglet)	cosmetic/medicinal	28.46	1974.035
Canaanite	painted simple bowl	service	28.34	1974.036
Canaanite	painted simple bowl	service	28.34	1974.036
Cypriot	white-slip body sherd (milk bowl)	cosmetic/medicinal	28.34	1974.036
Canaanite	everted bowl	service	28.34	1974.036
unknown	decorated body sherd	unknown	28.34	1974.036
Canaanite	simple bowl	service	28.43	1974.039
Egyptian	everted bowl w/ splash decoration	service	28.43	1974.039
Canaanite	painted simple bowl	service	28.41	1974.043
Canaanite	painted simple bowl	service	28.42	1974.057
Canaanite	painted simple bowl	service	28.42	1974.057
Canaanite	painted simple bowl	service	28.42	1974.057
Canaanite	jar	storage	28.42	1974.057
Canaanite	everted bowl	service	28.42	1974.057
Cypriot	white-slip body sherd (milk bowl)	service	28.42	1974.057
Cypriot	white-slip body sherd (milk bowl)	service	28.42	1974.057
Cypriot	white-slip body sherd (milk bowl)	service	28.42	1974.057
Cypriot	white-slip body sherd (milk bowl)	service	28.42	1974.057
Egyptian	flower pot	beer production	28.42	1974.057
Canaanite	jar	storage	28.26	1974.069
Canaanite	inverted bowl	service	28.26	1974.069
Cypriot	base-ring rim (jug/juglet)	cosmetic/medicinal	28.26	1974.069
Canaanite	inverted bowl	service	28.36	1974.072
Canaanite	simple bowl	service	28.31	1974.074
Canaanite	simple bowl	service	28.31	1974.074

Equation	simple how with splesh decoration	service	28.31	1974.074
Egyptian	simple bowl with splash decoration			
Egyptian	simple bowl with splash decoration	service	28.31	1974.074
Egyptian	inverted red bowl	service	28.31	1974.074
Egyptian	flat base (bowl)	service	28.31	1974.074
Egyptian	flower pot	beer production	28.26	1974.075
unknown	low-disk base	unknown	28.26	1974.075
Canaanite	painted body sherd	unknown	28.26	1974.075
Canaanite	simple bowl	service	28.26	1974.075
Canaanite	simple bowl	service	28.26	1974.075
Canaanite	rounded bowl	service	28.26	1974.075
Canaanite	rounded bowl	service	28.26	1974.075
Canaanite	painted simple bowl	service	28.31	1974.076
Canaanite	jar	storage	28.41	1974.078
Canaanite	painted simple bowl	service	28.41	1974.078
Canaanite	everted bowl	service	28.41	1974.078
Cypriot	bowl	service	28.41	1974.078
Canaanite	simple bowl	service	28.26	1974.082
Cypriot	base-ring II body sherd (jug/juglet)	cosmetic/medicinal	28.26	1974.082
Canaanite	decorated body sherd	unknown	28.31	1974.09o
Canaanite	painted simple bowl	service	28.31	1974.09o
Canaanite	painted simple bowl	service	28.31	1974.09o
Canaanite	painted simple bowl	service	28.31	1974.09o
Canaanite	everted bowl	service	28.31	1974.09o
Canaanite	jar	storage	28.26	1974.091
Canaanite	jar	storage	28.26	1974.091
Canaanite	simple bowl	service	28.26	1974.091
Canaanite	simple bowl	service	28.26	1974.091
Canaanite	painted simple bowl	service	28.26	1974.091
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Canaanite	carinated bowl	service	28.26	1974.091
Canaanite	painted simple bowl	service	28.5	1974.023
Canaanite	everted bowl	service	28.5	1974.023
Egyptian	flat base (bowl)	service	28.5	1974.023
Mycenaean	bowl	service	28.5	1974.023
Mycenaean	base sherd	unknown	28.5	1974.023
Canaanite	painted simple bowl	service	28.5	1974.038
Canaanite	painted simple bowl	service	28.5	1974.038
Canaanite	painted simple bowl	service	28.5	1974.038
Canaanite	jar	storage	28.5	1974.038
Cypriot	white slip bowl	service	28.38	1973.313
Canaanite	S-shaped bowl	service	28.38	1973.313
Canaanite	S-shaped bowl	service	28.38	1973.313
Canaanite	carinated bowl	service	28.38	1973.313
Canaanite	cooking pot	preperation	28.38	1973.313
Canaanite	everted bowl	service	28.38	1973.313
Canaanite	simple bowl	service	28.38	1973.313
Canaanite	simple bowl	service	28.38	1973.313
Canaanite	cooking pot	preperation	28.38	1973.313
Canaanite	jar	storage	28.38	1973.316
Canaanite	simple bowl	service	28.5	1973.333
Canaanite	painted bowl	service	28.5	1973.333
Canaanite	jar	storage	28.37	1974.065
Canaanite	jar	storage	28.37	1974.065
Canaanite	jar	storage	28.37	1974.065
Canaanite	everted bowl	service	28.37	1974.065
Canaanite	everted bowl	service	28.37	1974.065
Canaanite	everted bowl	service	28.37	1974.065

Canaanite	everted bowl	service	28.37	1974.065
Canaanite	everted bowl	service	28.37	1974.065
Canaanite	everted bowl	service	28.37	1974.065
Canaanite	everted bowl	service	28.37	1974.065
Canaanite	simple bowl	service	28.37	1974.065
Canaanite	simple bowl	service	28.37	1974.065
Canaanite	simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	painted simple bowl	service	28.37	1974.065
Canaanite	vat	storage	28.37	1974.065
unknown	decorated body sherds	unknown	28.37	1974.065
unknown	decorated body sherds	unknown	28.37	1974.065
Cypriot	white slip body sherd (bowl)	service	28.37	1974.065
Cypriot	base-ring sherds (jug/juglet)	cosmetic/medicinal	28.37	1974.065
Cypriot	base-ring sherds (jug/juglet)	cosmetic/medicinal	28.37	1974.065
Cypriot	base-ring sherds (jug/juglet)	cosmetic/medicinal	28.37	1974.065
Cypriot	base-ring sherds (jug/juglet)	cosmetic/medicinal	28.37	1974.065

Canaanite	simple bowl	service	28.46	1974.106
Canaanite	simple bowl	service	28.46	1974.106
Canaanite	everted bowl	service	28.46	1974.106
Canaanite	inverted bowl	service	28.46	1974.106
Canaanite	jar	storage	28.46	1974.106
Cypriot	base-ring fragments (jug/juglet)	cosmetic/medicinal	28.46	1974.106
Canaanite	jar	storage	28.46	1974.11o
Cypriot	base-ring I body sherd (jug/juglet)	cosmetic/medicinal	28.46	1974.11o
Canaanite	painted simple bowl	service	28.28	1974.118
Canaanite	painted simple bowl	service	28.28	1974.118
Canaanite	painted simple bowl	service	28.28	1974.118
Canaanite	painted simple bowl	service	28.28	1974.118
Canaanite	painted simple bowl	service	28.44	1974.124
Canaanite	painted simple bowl	service	28.44	1974.124
Canaanite	everted bowl	service	28.44	1974.124
Canaanite	everted bowl	service	28.44	1974.124
Cypriot	white-slip bowl ("milk bowl")	service	28.44	1974.124
Canaanite	cooking pot	preperation	28.28	1974.125
Canaanite	simple bowl	service	28.28	1974.127
Canaanite	painted simple bowl	service	28.28	1974.127
Canaanite	painted simple bowl	service	28.28	1974.127
Canaanite	painted simple bowl	service	28.28	1974.127
Canaanite	painted simple bowl	service	28.28	1974.127
Canaanite	painted simple bowl	service	28.28	1974.127
Canaanite	everted bowl	service	28.28	1974.127
Canaanite	everted bowl	service	28.28	1974.127
Canaanite	simple bowl	service	28.37	1974.202
Canaanite	simple bowl	service	28.37	1974.202

Canaanite	simple bowl	service	28.37	1974.202
Canaanite	simple bowl	service	28.37	1974.202
Canaanite	painted simple bowl	service	28.37	1974.202
Canaanite	painted simple bowl	service	28.37	1974.202
Canaanite	painted simple bowl	service	28.37	1974.202
Egyptian	RSB body fragment	unknown	28.37	1974.202
Canaanite	jar	storage	28.37	1974.202

Appendix III

Locus 1200 Floor of Temple (Any PB Between 28.7-28.51 Meters)

Classification Type Fu		<b>Function</b>	Elevation	Pottery Bucket #
Canaanite	jar	storage	28.59	1971.515
Canaanite	cooking pot	preparation	28.57	1974.009
Canaanite	simple bowl	service	28.57	1974.009
Canaanite	simple bowl	service	28.57	1974.009
Canaanite	simple bowl	service	28.57	1974.009
Canaanite	everted bowl	service	28.57	1974.009
Canaanite	everted bowl	service	28.57	1974.009
Canaanite	everted bowl	service	28.57	1974.009
Cypriot	white-slip body sherd (milk bowl)	service	28.57	1974.009
Cypriot	base-ring body sherd (jug/juglet)	cosmetic/medicinal	28.57	1974.009
Cypriot	base-ring body sherd (jug/juglet)	cosmetic/medicinal	28.57	1974.009
Cypriot	base-ring body sherd (jug/juglet)	cosmetic/medicinal	28.57	1974.009
Canaanite	vat	storage	28.57	1974.009
Canaanite	simple bowl	service	28.54	1974.01o
Egyptian	flat base bowl	service	28.54	1974.01o
Canaanite	everted bowl	service	28.54	1974.01o

Canaanite	painted simple bowl	service	28.54	1974.01o
Canaanite	simple bowl	service	28.55	1974.011
Canaanite	simple bowl	service	28.55	1974.011
Canaanite	everted bowl	service	28.55	1974.011
Mycenaean	bowl	service	28.55	1974.011
Canaanite	jar	storage	28.51	1974.015
Cypriot	base-ring base fragment (jug/juglet)	cosmetic/medicinal	28.51	1974.015
Canaanite	painted body sherd	unknown	28.54	1974.016
Canaanite	simple bowl	service	28.54	1974.016
Canaanite	inverted bowl	service	28.54	1974.016
Canaanite	simple bowl	service	28.7	1974.019
Canaanite	simple bowl	service	28.7	1974.019
Canaanite	simple bowl	service	28.58	1974.024
Egyptian	red-slip bowl	service	28.58	1974.024
Canaanite	painted simple bowl	service	28.58	1974.024
Canaanite	jar	storage	28.58	1974.024
Cypriot	white-slip II body sherd (milk bowl)	service	28.58	1974.024
Egyptian	red splash decoration bowl	service	28.58	1974.024
Canaanite	carinated bowl	service	28.54	1974.032
Canaanite	carinated bowl	service	28.54	1974.032
Canaanite	Krater	storage	28.54	1974.032
Canaanite	decorated body sherd	unknown	28.54	1974.032
Cypriot	base-ring base jug/juglet	cosmetic/medicinal	28.66	1971.504
Cypriot	base-ring I body sherd jug/juglet	cosmetic/medicinal	28.55	1972.329
Canaanite	simple bowl	service	28.55	1972.329
Canaanite	simple bowl	service	28.51	1973.356
Canaanite	simple bowl	service	28.51	1973.356
Canaanite	simple bowl	service	28.51	1973.356

Cyp	oriot white slip bo	wl service	28.51	1973.356
Egy	ptian ledge rim bo	wl service	28.54	1974.288

## Appendix IV

Above Floor of Temple (Any PB Above 28.7 Meters)

Classification Type		Function	Elevation	Pottery Bucket #
Canaanite	red & black body sherd	unknown	29.87	1971.348
Canaanite	red & black body sherd	unknown	29.87	1971.348
Canaanite	everted bowl	service	29.87	1971.348
Canaanite	everted bowl	service	29.87	1971.348
Canaanite	simple bowl	service	29.87	1971.348
Canaanite	jar	storage	29.87	1971.348
Cypriot	Base-ring II Bilbil neck juglet	cosmetic/medicina	1 29.87	1971.348
Canaanite	hemispherical bowl w/ red painted stripes on interior	service	29.87	1971.348
~			•••	10-10-10
Philistine	bichrome krater rim	storage	29.87	1971.348
Canaanite	bichrome painted body sherd	unknown	29.87	1971.348
Egyptian	RSB simple bowl	service	29.87	1971.348
Egyptian	RSB Carinated bowl	service	29.87	1971.348
Egyptian	RSB Carinated bowl	service	29.87	1971.348
Canaanite	cooking pot	preperation	29.23	1971.453
Canaanite	painted simple bowl	service	29.23	1971.453
Canaanite	simple bowl	service	29.23	1971.453
Canaanite	simple bowl	service	29.03	1971.468
Canaanite	painted simple bowl	service	29.03	1971.468
Canaanite	painted simple bowl	service	29.03	1971.468

Canaanite	everted bowl	service	29.03	1971.468
Canaanite	jar	storage	29.03	1971.468
Canaanite	jar	storage	29.03	1971.468
Canaanite	carinated bowl	service	29.24	1971.469
Canaanite	simple bowl	service	29.24	1971.469
Canaanite	simple bowl	service	29.24	1971.469
Canaanite	simple bowl	service	29.24	1971.469
Canaanite	jar	storage	29.24	1971.469
Canaanite	simple bowl	service	28.93	1971.475
Canaanite	simple bowl	service	28.93	1971.475
Canaanite	simple bowl	service	28.93	1971.475
Canaanite	simple bowl	service	28.93	1971.475
Canaanite	simple bowl	service	28.93	1971.475
Canaanite	simple bowl	service	28.93	1971.475
Cypriot	base-ring bowl	service	28.93	1971.475
Canaanite	simple bowl	service	28.77	1971.491
Canaanite	painted simple bowl	service	28.77	1971.491
Canaanite	cooking pot	preperation	28.73	1971.493
unknown	ridge bowl	service	28.73	1971.493
Canaanite	jar	storage	28.73	1971.493
Canaanite	simple bowl	service	28.8	1971.503
Canaanite	simple bowl	service	28.8	1971.503
Canaanite	simple bowl	service	28.8	1971.503
Canaanite	simple bowl	service	28.8	1971.503
Canaanite	simple bowl	service	28.8	1971.503
Canaanite	simple bowl	service	28.8	1971.503
Canaanite	simple bowl	service	28.8	1971.503
Canaanite	simple bowl	service	28.8	1971.503

Canaanite	simple bowl	service	28.8	1971.503
Canaanite	everted bowl	service	28.8	1971.503
Canaanite	jar	storage	29	1973.458
Canaanite	jar	storage	29	1973.458
Canaanite	everted bowl	service	29	1973.458

Appendix V

