Buried History

Journal of the
Australian Institute of Archaeology

2001-2 Volumes 37 & 38

Buried History

Published by:
The Australian Institute of Archaeology
ACN 004 246 682 / ABN 23 004 246 682

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Print Post Approved by Australia Post No.: pp. 343214 / 00003

Printed by Flash Print Australia Ltd,
18-24 Down Street, Collingwood Victoria, 3066

2001-2 subscription:
Australia $25.00; N.Z. A$30.00; Other Overseas A$32.00
Associate Membership (including *Buried History*) $35.00

Cover: The Dome of the Rock, Jerusalem

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ISSN 0007-6260

Editorial

Apologies are offered for the delay in publishing this issue of *Buried History*. It is a double issue and corresponds to two years of publication for which only one year's subscription was charged; the Institute was effectively closed during the period represented by this issue. The Institute is going through a metamorphosis and will be located at LaTrobe University from the middle of 2004 by which time we hope to have dispatched Volume 39.

This edition of *Buried History* introduces changes in format and arrangement. The journal is now an annual and is refereed so that contributors can reference their papers in their *curriculum vitae*. The layout is based on the Archaeological and Anthropological Society of Victoria's journal, *The Artefact,* and we gratefully acknowledge the template provided by Naomi Stevenson who produces that journal. The papers in *Buried History* are intended to be comprehensible by an informed general readership and the range of papers herein is an indication of the scope of the journal.

We begin by paying tribute to Dr John Thompson, the first Director of the Institute. Before setting out on the study of ancient languages and the Old Testament, Dr Thompson trained as a field archaeologist and established the Institute in a professional way.

We are pleased to have a paper from Professor Emeritus David Noel Freedman and Dr Rebecca Frey on the Dome of the Rock. Professor Freedman has been a supporter of the Institute for many years and we shared his dismay when Ariel Sharon provocatively entered the Haram al-Sharif with 1000 security guards, an event that led to the killing of a large number of Palestinians and precipitated the second intifada. The paper is part of a project that Professor Freedman has embarked upon to promote religious tolerance and inclusiveness. He calls the project *The Five Rivers of Paradise*. Professor Freedman and Dr Frey believe that the Dome of the Rock is sacred to the three religions that recognise Abraham and that all three should be welcomed there.

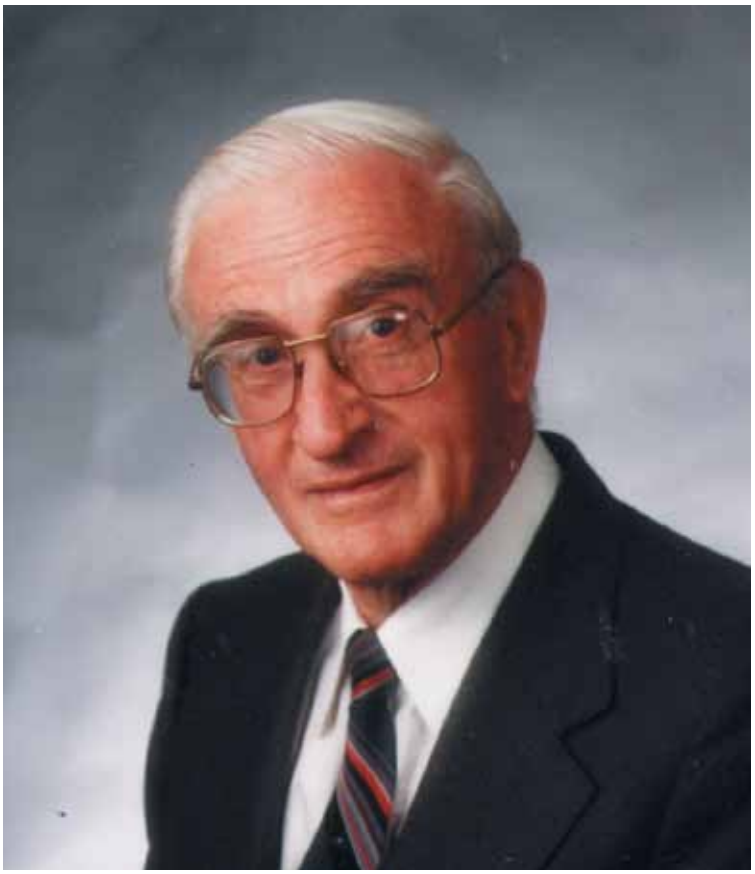
The editor has contributed a report on work undertaken some years ago in the Sacred Animal Necropolis at North Saqqara, Egypt. A preliminary report was published at the time, albeit in German, and is now presented with reference to work published in the field since then.

Matthew Whincop has provided a review of the Philistines' religious culture, as we now understand it. Matthew was the Institute's librarian prior to his departure to the University of Durham where he is undertaking doctoral studies.

Paul Lawrence again contributes a brief communication, this time on a couple of names that may have been lost in the transmission of the Hebrew text of the Old Testament. Paul is a research assistant to Professor Kenneth Kitchen at the University of Liverpool.

The publication of Dr Jenny Webb's 2002 Maurice Kelly Lecture at the University of New England is reviewed by Dr Kathryn Eriksson. Dr Eriksson is attached to LaTrobe University and is part of the International SCIEM 2000 Project (The Synchronization of Civilization in the Eastern Mediterranean in the 2nd Millennium BC).

Christopher J. Davey
February 2004



John Arthur Thompson

24 October 1913 – 23 November 2002

The Reverend Dr John Arthur Thompson died peacefully in Melbourne in November 2002. His friends gathered with Marion, his wife of 62 years, to remember him at a memorial service on 28 November and a number of tributes have been published covering his long and distinguished life. This tribute focuses on John's contribution to the Australian Institute of Archaeology. John was the Institute's first Director, its first President after the death of its founder and its first Fellow.

The minutes of the first Council meeting of the Institute held in the Institute rooms at 174 Collins Street Melbourne on Friday 27 September 1946 at 6:15 pm record that "Mr John A. Thompson, from Brisbane, was present by invitation". Subsequent negotiations led to John's appointment as the first Director of the Institute on 1 January 1947, a post he held for the following ten years.

After completing a Masters degree in Science from the University of Queensland, John had taught science at the Anglican Church Grammar School in Brisbane for eleven years. The reason for appointing a secondary school science teacher as Director is not clear from Institute records, but it turned out to be an inspired choice, even though the Council baulked at holding a public welcoming function for Mr & Mrs Thompson "until the Director is more fully conversant with Archaeology".

At 35 years of age, John was by today's standards a late starter in archaeology. There were no archaeological schools in Australia so on 22 August 1950 John boarded the Strathaird bound for the Middle East. He spent a fortnight in Egypt visiting museums and archaeological sites in and around Cairo and Luxor, before flying to Amman en route to Jerusalem where on 2 October he commenced a year as an Honorary Fellow at the American Schools of Oriental Research. He worked and studied in Jerusalem until the end of May 1951 and then travelled on to Iraq before visiting classical sites in Europe.

While at ASOR John dug with Professor F.V. Winnett, Dr James Pritchard and Dimitri Baramki at Dhiban and Jericho. He worked as a site supervisor and undertook a survey of cisterns in the Dhiban region. He travelled with

Figure 1: *The Dhiban team at Thanksgiving dinner, November 1950. The photo was taken by Dr James Pritchard and includes from the left, John, Father Murphy, Bennie (servant) Ken Ogden, Amil (driver), Omar (cook) and Bill Morton.*

Gerald Lancaster Harding and a team to Jawa and other desert locations in Jordan to record Safaitic inscriptions.

The archaeological experience gained would have been the best available at the time. Kathleen Kenyon was Director of the British School of Archaeology in Jerusalem and Père R. de Vaux was at the École Biblique. The Dead Sea Scrolls had only just been discovered. He spent much time at the Palestine Museum in Jerusalem and travelled widely through Palestine and Jordan. This activity meant that John spent up to a year away from his wife demonstrating his commitment to this new discipline. John knew the clear bright mornings of Jordan, the dust and heat of the day in the trench, the battles with personal health and stomach problems, and the struggles communicating with workmen in Arabic. As Director of the Institute he was first of all a "dirt archaeologist".

On his return on 22 August 1951, John was equipped to set up the Australian Institute of Archaeology in a professional manner. He systematically catalogued and conserved much of the material acquired by the Institute. His registers are still relied upon today. He organised a library with the most comprehensive range of Near Eastern Archaeological journals in Australia.

Figure 2: *John in front of Cave 1 Qumran, 1951.*

The extent to which John understood Biblical Archaeology may be seen in his book *The Bible and Archaeology* (Grand Rapids: Eerdmans 1962). Most of this book was written during his time at the Institute and had been previously published in three parts from 1957 to 1960. This work was a scholarly exegesis of the field of archaeology in relation to the Bible, as it was understood at that time. John's book

Figure 3: *John setting out on a survey of the Wadi Qelt. He is with Dr Dimitri Baramki.*

is easier to read than its contemporary, Keller's *The Bible as History* (London: Hodder & Stoughton 1956) and it does not make the extravagant claims common in Keller's book. There were many smaller publications prepared by John for the Institute and lectures he gave that culminated in *The Bible and Archaeology.*

A reading of the Council Minutes and Annual Reports of the period give a feeling of frenetic activity. The Institute began to employ people to assist with the lecturing in churches, colleges and schools and the mounting of exhibitions throughout Australia. Some of the exhibitions drew significant crowds and numerous people today still remember these events as their introduction to archaeology.

John was a consummate scholar who was committed to careful analysis and the accurate reporting of results. However there were others associated with the Institute who were enthusiasts with less commitment to scholarly care and who were driven to use archaeology to prove the historical accuracy of the Bible. John was later to write that his time as Director was traumatic and it was no doubt partly the challenge to his academic integrity that caused much of the tension. The long periods of separation from Marion would also have contributed to the trauma. In spite of this he laid the groundwork for the Institute's future operation and his own distinguished academic career in archaeology and Old Testament studies.

The following minute was recorded on 15 February 1957 testifying to the Council's respect for Dr Thompson:-

In Mr Thompson the Institute received a man with a vital Christian experience, which revealed itself in devotion to Jesus Christ and consecration to His service. His qualities of leadership and exact scholarship combined with his Christian character to make him well fitted for his task.

He continually added to his wide knowledge of Biblical history and also engaged in diligent research on Archaeology. For a year he was associated with the American Schools of Oriental Research and assisted in excavations at Roman Jericho and Diban. In recent years he has attained a recognised position of authority as one of Australia's leading Old Testament scholars.

This knowledge has been made available to many through the Institute's program of lectures. Mr Thompson's undoubted ability as a teacher has resulted in opportunities in regular lecturing at the University of Melbourne and Theological Colleges in Victoria and New South Wales. Many other groups such as Bible colleges, church societies and schools have welcomed his ministry in presenting the witness of the Institute.

Mr Thompson has at the same time performed a task of real importance in the direction of the program and staff of the Institute, and in this capacity has earned the unqualified approval of the members of the Institute Council. He has given without reserve in every avenue of service open to him. It would be difficult of overestimate Mr Thompson's contribution to the development of the Institute.

Figure 4: *Excavation at Dhiban in John's Trench.*

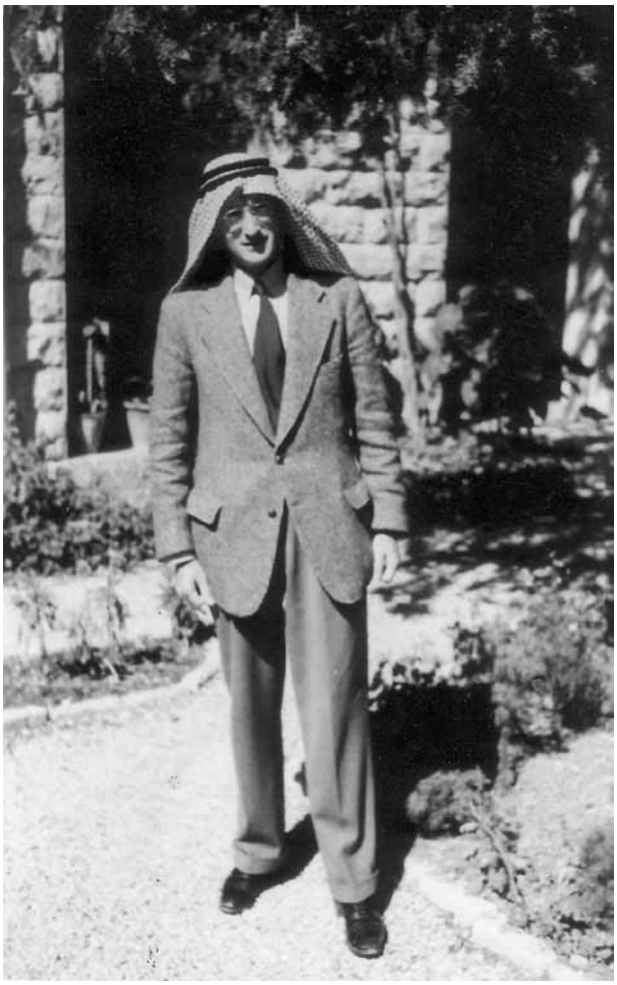


Figure 5: *John in front of the American Schools of Oriental Research in Jerusalem where he was an Honorary Fellow in 1951.*

John's academic career continued with his enrolment in Hebrew I and Geology I at the University of Melbourne in 1947. The following year he did Hebrew II, Arabic I and Syriac. His capacity as a scholar is illustrated by the fact that by 1954 he was lecturing Hebrew at the University. It was the Old Testament that was to capture John's research interest and after he left the Institute he completed a doctorate at Cambridge University entitled *The Vocabulary of Covenant in the Old Testament.* He also wrote commentaries on Deuteronomy (1974), Jeremiah (1980) and 1 & 2 Chronicles (1994).

John returned to Melbourne in 1966 as a senior lecturer at the University of Melbourne and in 1976 he became President of the Institute's Council, a position he held

until 1989. John continued to write prolifically for *Buried History* on matters archaeological. This was not an easy time for the Institute, finances were always limited and there was not the freedom and opportunity of the first decade. He had a clear idea about the direction that the Institute should take, but did not have people of like mind on the Council or on staff. In recognition of his service to the Institute and his standing as a scholar, John was made the Institute's first Honorary Fellow in 1992.

Dr Thompson's influence in the Institute lives on. It was he who inspired the current Director to put aside a career in Mining Engineering and to study Hebrew, Greek and Archaeology at the University of Cambridge and assisted by being one of his referees. The library and collection that John arranged remain the Institute's most valued assets in the Australian context.

The television series, *It ain't necessarily so,* recently screened in Australia revealing that sometimes bitter conflict continues in Archaeology and Old Testament research. In the face of similar conflicts in his day, Dr Thompson demonstrated that careful and honest scholarship endures well after spectacular claims and prejudicial assessments pass. He remains an inspiration that may wisely be followed by all students of archaeology.

Christopher J Davey
Director

DOI: https://doi.org/10.62614/ph97r949

Figure 6: *John mending pots at the Institute in Melbourne.*

The Dome of the Rock

David Noel Freedman and Rebecca L. Frey

DOI: https://doi.org/10.62614/xesse826

Abstract: The history and uniqueness of the Dome of the Rock and its location are discussed. The current building has occupied the site for more time than any other earlier building and has a spiritual significance beyond any one religion. It is argued that the three religions that recognize Abraham should generally accept the building and by so doing find it a unifying feature.

The purpose of this article is to ask some questions and provide some answers, if possible, about the rather strange building now standing on one of the most sacred sites in the world. The building is called variously the Dome of the Rock (Figure 1) or the House of the Holy Shrine/Holy Place, and the place is the al-Haram al-Sharif – The Noble Area. These are the Arabic terms given by those who have long time measured by the tumultuous circumstances of the Near East, ancient and modern, and this temporal fortitude deserves serious attention, if only as examples of endurance and stability in a notoriously unstable environment.

Not only have nations come and gone, and armies trampled this sacred space, but nature itself seems determined to rearrange its own landscape repeatedly if not regularly by

Figure 1: *A general view of the Dome of the Rock. Image: CJ Davey 1974*

governed and built up the complex of structures on which the Dome stands. Before and since, the place has belonged to or been controlled by other peoples and many other buildings have occupied that site. But this building and its sponsorship have been in place for a long time – a very earthquakes of varying intensity – more than one of which have levelled buildings large and small all over Jerusalem – but without noticeably damaging the Dome. The most recent such event occurred on 11 February 2004. However the Dome has not escaped entirely and K. Creswell writes

Figure 2: *The interior of the Dome of the Rock showing part of the rock and the inner octagon. Image: CJ Davey 1974*

that the Dome fell down in 1016 but was restored to its previous condition (1924:13).

The Early Tradition

To begin at the beginning, or even before; the "rock" is itself a prominent feature of Jerusalem and is identified with Mt. Moriah or more exactly, the mountain in the land of Moriah, mentioned in 2 Chronicles 3: 1, and the place where Abraham bound his son Isaac before offering him as a sacrifice to God at his command. While we have no means to confirm or corroborate this identification, it is already made in the Hebrew Bible, and therefore is part of the tradition known to or coopted by Jews, Christians, and Muslims alike.

This association with the Father of the Faithful and the common ancestor, spiritual and physical, is of the highest importance and established the feature of the present building – namely that it is the *martyrium* (or *ciborium,* so named from the Greek *kiborion,* which refers to a drinking cup shaped like the flower of the Egyptian bean) – a building or permanent structure designed to enshrine or memorialise an individual or an event or act of faith of enduring value and importance for those who are heirs to that person, in this case Abraham (= Ibrahim) the ancestor of all Jews and Arabs (= the descendants of Isaac on the one hand and Ishmael on the other – the first two sons of the patriarch) (cf Genesis 22:3, and especially 14 – which connect the mountain to the land of Moriah). The rock – this massive crag – is thus sanctified by an extraordinary and memorable act of piety on the part of the founding father and common ancestor of the two peoples most involved with that site.

Our history of the Temple Mount begins with the work of David and Solomon, the first and last kings of a united Israel in the 10th century B.C.E, and continues to the final and enduring effort of 'Abd-al-Malik, the fifth Caliph who built the Dome of the Rock as an essential part of a larger project on the Haram in the last years of the 7th century C.E..

The First Temple lasted somewhat less than 400 years, if we take its construction from about 967-960 B.C.E and its destruction in 587/6 B.C.E by the Babylonians, the total is about 375 years. The Second Temple lasted somewhat longer, from about 521-515 B.C.E for its construction by Zerubbabel until C.E. 70, when it was destroyed by the Romans. In fact, both Temples were repaired, restored, and even more extensively renovated over time and in the case of the Second Temple, completely remodelled and replaced by the Temple of Herod the Great, but it was and is customary not to consider such peaceful alterations in contrast with the violent destructions that typically mark the end of one temple era and the break before the start of another.

The histories of the first two Temples are similar yet different and not only in detail. It seems clear that the Babylonian destruction was deliberate and intended as retribution and reprisal for the rebellion of the last regent King Zedekiah. Eleven years earlier the city had surrendered peacefully and it and its temple were spared by the same Babylonian monarch. But after the rebellion of Zedekiah – an act warned against and then denounced vehemently and categorically by the great prophets Jeremiah and Ezekiel – the Babylonians exacted their revenge in full and ended the kingdom and its monarchy, destroying both the city and its Temple.

In the case of the Second Temple, the outcome was the same, but the circumstances may have been different. After a prolonged siege, the city wall was breached, the city itself captured, and the Temple burned. According to Josephus, Titus the Roman general and heir to the emperor Vespasian, had promised to spare the Temple but his vengeful army, increasingly frustrated by the years of the siege, simply torched both city and Temple and could not be restrained or controlled. Either way, Titus bears responsibility for the Roman action, although Josephus, as a defender and apologist for the Flavian dynasty, may have adjusted the facts or changed the tone and nuances to modify the picture and make the Roman leader seem more benign than he may have actually been.

In any ease, in 587/6 B.C.E and C.E. 70 the two temples were destroyed by enemy action in violent engagements. As it happens, there was a third temple on the site that we do not include in the account the action of Antiochus IV

Epiphanes who is reported to have erected an altar to Baal Shamayim, Lord of the Heavens, in the forecourt of the Second Temple around 170 B.C.E, or even to have erected a statue of his chief god, Zeus, in the Temple precinct; but the Temple itself remained standing and was restored to proper use by Judas Maccabeus and his successors.

Sixty-five years after the debacle of C.E. 70 the Roman Emperor Hadrian erected a Temple to Jupiter on the site in Jerusalem after the revolt of Bar Kochba. The latter doubtless intended to build a new temple there and work may have begun toward that end. With the defeat of Bar Kochba, Jews were banned from rebuilt city, Aelia Capitolina so called, at the pleasure of Hadrian. Perhaps to mark the complete romanization of Jerusalem C.E. 135 came the construction of a temple or statues to Jupiter, Minerva and Juno.

Our sources vary as to whether this project was one temple to all three deities or whether a separate temple was built for each. Jerome refers to a "statue" to Jupiter, not mentioning either Minerva or Juno: "From the time of Hadrian to the reign of Constantine – a period of about 180 years – the spot which had witnessed the resurrection was occupied by a figure of Jupiter; while on the rock where the cross had stood, a marble statue of Venus was set up by the heathen and became an object of worship. The original persecutors, indeed, supposed that by polluting our holy places they would deprive us of our faith in the passion and in the resurrection."[1] Jerome uses the term "simulacrum" when referring to the monument to Jupiter and "statua ex marmore" when referring to Venus. It is worth noting first of all that he does not use the term "templum," which would refer to a space rather than a likeness and second, that both Minerva and Juno are absent from his account of Hadrian's structures on the mount. Whether temples for these goddesses were built elsewhere, or whether Jerome merely omitted their presence along with Jupiter is open to speculation. Jerome wrote this letter in about C.E.395, 250 years after Hadrian's reorganization of the city.

There are no clear traces of the building projects on the mount commenced by Hadrian in C.E. 135. Exactly where the temple/statue to Jupiter (and Minerva and Juno) was and what happened to it is unclear, but the Third Temple also vanished from the scene. Once the Empire was converted to Christianity under Constantine in 325 there would have been no interest in restoring, repairing, or even preserving such pagan monuments, although in some cases they were or could be converted into churches and later mosques.

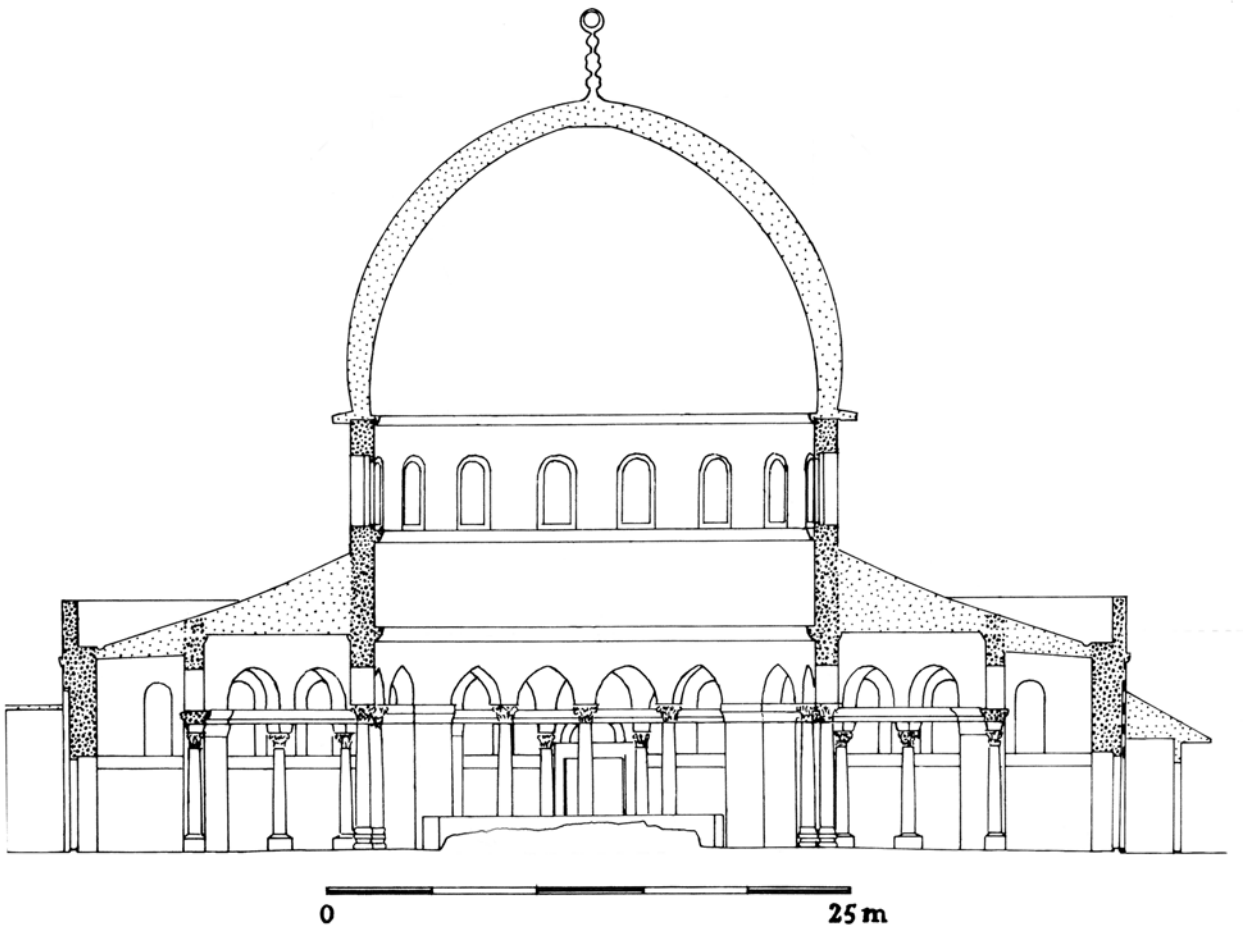


Figure 3: *A section of the Dome of the Rock on its east-west axis(after Richmond)*

Figure 4: *A lithograph of the Haram al-Sharif by David Roberts R.A. in April 1839.*

Once again the Temple Mount was bare of buildings, though travellers enjoyed seeing the remains of "Solomon's Temple" on the site. The Anonymous pilgrim of Bordeaux (333) relates, with a lively imagination, that he could see "two large pools at the side of the temple, that is, one upon the right hand, and one upon the left, which were made by Solomon; and further in the city are twin pools, with five porticoes, which are called Bethsaida (Beth-zatha/ Bethesda). There persons who have been sick for many years are cured; the pools contain water, which is red when it is disturbed. There is also here a crypt, in which Solomon used to torture devils"[2] The pilgrim goes on to describe two statues of Hadrian not far from the stone where the Jews come every year to mourn.

About the same time, Eusebius (ca. 260-340), Bishop of Caesarea, reported that he could see the remains of the sanctuary, and not much later, about C.E. 400, John Chrysostom, the Bishop of Constantinople, said that he, too, could see the foundations of the sanctuary. He refers to the Jews tearing everything down to begin work on the third temple during the reign of Julian the Apostate in C.E. 363 when Jews were allowed back into the city, and plans were made and work begun on building a Jewish Temple on the site. With Julian's death the plans and the work came to nothing; the work had been frustrated even in the months prior to Julian's death. Gregory Nazianzen, John Chrysostom, Ambrose and the philosopher-soldier Ammianus Marcellinus all report that natural disasters attended the attempted construction of the Third Temple, including conflagrations perhaps fuelled by gases trapped in blocked subterranean passages. Gibbon discusses these reports (1920:386-7).

The Muslim Arrival

Except for the brief period during the reign of Julian the Apostate, from the fourth century on the city and land were in the hands of Christians. Then in 638 the Muslims came, and Jerusalem surrendered to the Caliph Othman. The terms of the capitulation were worked out between the Patriarch Sophronius and the Caliph. Full control of the city was ceded to the Muslims while in turn the Christian churches and other properties were spared destruction and despoliation. Nothing was said or determined about Jews, because officially there were none in Jerusalem, having been banished at the end of the Bar Kochba rebellion.

The Temple Mount was bare of buildings, although the ruins and remnants of earlier structures doubtless were on the site. During the intervening centuries since the violent destruction of the Second Temple and the expulsion of the Jews, the Christian community had concentrated attention on particular sites associated with the presence of Jesus in Jerusalem, especially at the place of his crucifixion and resurrection that was dominated by the Church of the Holy Sepulchre, also and perhaps more fittingly called the Church of the Resurrection. There was no special interest in the Temple Mount on their part, although as mentioned above, the Roman Emperor Hadrian, who rebuilt the city from the ground up after the Bar Kochba rebellion, is credited with the erection of a Temple/statue to honour Jupiter and perhaps the goddesses Minerva and Juno. Of the latter nothing remained. Nor did anything remain of the attempted rebuilding of the Third Temple in C.E. 363, although Tuvia Sagiv argues, as does Rivoira followed up in Creswell, that the octagonal structure takes its shape from the Temple to Jupiter, Minerva and Juno erected on the Rock by Hadrian (Sagiv; Rivoira 1918:69; Creswell 1924:17). Evidence that Hadrian built a temple rather than a simulacrum, that it was an octagon in shape, and that any portion of that temple remained into the 7th century is open to speculation.

It is hardly surprising then that the Muslims would take over and make over this hallowed ground for their own religious purposes. It is important to observe that they were steeped in biblical tradition and that they identified the landmarks of

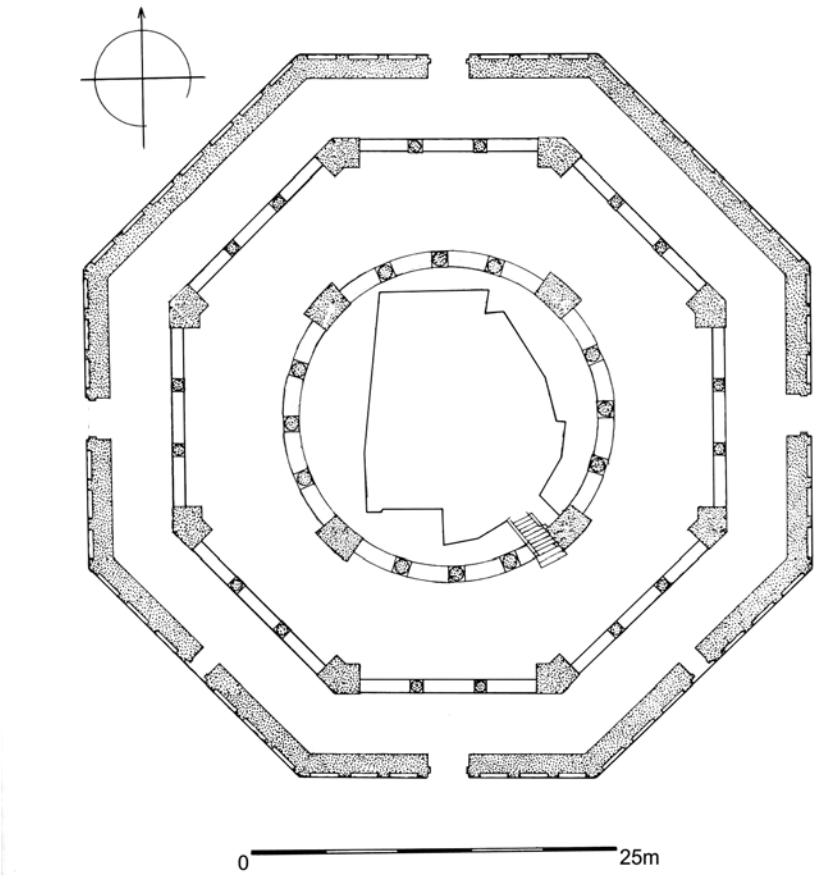


Figure 5: *A plan of the Dome of the Rock showing its octagonal design (after Creswell1969)*

Jerusalem with the heroes of the Testaments. For example, it was at the Temple Mount that Abraham bound Isaac (the mountain in the land of Moriah was explicitly identified with the site of the Solomonic Temple in 2 Chronicles 3: 1), and Jesus had preached in and cleansed the Temple area before his crucifixion and resurrection.

Within a few years a mosque was erected on the Haram, the first of the al-'Aqsa structures to stand there. By the end of the 7th century several other buildings had been erected, all part of a comprehensive program to reclaim one of the most sacred sites in the ancient world for the true religion stemming from Abraham, and including the followers of Moses on the one hand and those of Jesus on the other, both of whom were and are acknowledged as prophets of the one true God by Muslims.

The Dome of the Rock

The principal building, designed to dominate the Haram and to represent and symbolize the new factor in the return of the age-old religion, was the Dome of the Rock – Qubbat al-Sakhra – built on the site of the Temples of Solomon and Zerubbabel (and Herod the Great). It is now a unique structure, having few strict counterparts in the religious buildings of the ancient world, and few imitators in its own culture. Exactly what it is and what its principal purpose or function are, remain in some doubt and dispute, although a moderate consensus along broad lines may be secured.

First, we should consider the shape and appurtenances. The dimensions on which modern analysis has been conducted were taken by Sir Archibald Creswell (1969:658-70). The Dome of the Rock has a double octagon plan (Figure 5) with a rotunda or dome and is not generally considered the normal shape for typical houses of worship, whether temples or churches or synagogues or mosques. Nevertheless, there are examples of such structures, in Byzantine architecture most notably, and there are different views about the numerical significance of the octagon. Wilkinson discusses the use of the octagonal design in Byzantine architecture and compares the proportions of the Dome to the earlier churches at Mt Gerizim and Capernaum that also have octagonal plans. He derives a single set of working figures used by the architects on all three buildings (1981:171).

'Abd al-Malik, the sponsor of the Dome, apparently had two main motives or objectives in adopting the octagon shape. These two reasons are not mutually exclusive – one addresses practicality and the other spirituality. First, the octagon is the logical base structure for a huge dome, and 'Abd al-Malik needed a huge dome in order to affirm the central importance of his faith as opposed to the Christian

Figure 6: *Jerusalem showing how Caliph 'Abd al-Malik succeeded in eclipsing the Church of the Holy Sepulchre. Image: CJ Davey 1974*

statement architecturally articulated in the Church of the Holy Sepulchre, and to assert the primacy of Jerusalem as the holy city, hence in contrast with or as superior to, Mecca. The historian Muqaddasi, (10th century C.E.) suggests that the magnificent size and shape of the Dome of the Rock are a reaction and response to the Church of the Holy Sepulchre: "And in like manner the Caliph 'Abd al-Malik, noting the greatness of the Church of the Holy Sepulchre and its magnificence, was moved lest it should dazz1e the minds of the Muslims, and hence erected above the Rock a dome which is now to be seen there." (Duncan 1972:28) Muqaddasi is two hundred years removed from the construction of the Dome, but it is understandable and a generally accepted tradition that 'Abd al-Malik desired to surpass the Church of the Holy Sepulchre as either a symbolic victory over, or symbolic potential absorption of, Christianity (Figure 6). Architectural rivalry was prevalent at the time as demonstrated by the comment of *Bayt Al-Maqdis*: "The Syrian Muslims wanted to surpass the dome which covered the spot from which Christ had ascended to Heaven, by constructing a new one which covered the rock from which God had ascended to Heaven" (Raby 1992:101).

With respect to the spiritual significance of the octagon, in our view it symbolizes symmetry, totality, perhaps perfection. The number figures importantly in the story of creation in the Bible and figures prominently in other distinctive and significant places and contexts. The sequence of the books of the Canon of the Hebrew Bible shows the following patter: Torah – 5, Prophets – 8 (former = 4, later = 4), Writings, 11; 5+11=16 (twice 8) + 8 (prophets) = 24 total). cf Psalms. 119 – the 8 books of the Prophetic Canon – 5+8+11) (Freedman 1999). That the octagon (8) symbolizes the totality of heaven and earth, i.e. the universe, may be reinforced by two other features: the four doors to the building are connected with the four rivers of paradise and the exact location is identified with the omphalos, or umbilicus, of the world. Jerusalem as the very centre is known from biblical prophecy (cf Ezekiel 47: 1-12) and the rivers that flow out of Jerusalem from the centre of the earth.

The octagon is also the only shape that mediates between the geometric articulation of the terrestrial and celestial – it is the only shape that nearly squares a circle. Kim Williams, describing the sacred quality of the octagon, discusses the mathematical significance of this shape: "The use of irrational values, or incommensurables, is linked philosophically to the symbolism of the circle and the square. A circle was indefinite, its circumference and area based on the irrational p whereas the circumference and area of a square were rational values. Philosophically the use of irrational numbers such as q shows an attempt to rationalize that which is irrational, or in other words, to make sensible that which is divine or only achievable through the intellect? (Williams 1982:19).

The Decoration of the Dome of the Rock

If the shape is symbolic, the same may be said of the decorations and motifs of the friezes that cover the whole extent of the outer walls. The combination of geometric designs and floral motifs is intended to evoke and depict images of Paradise, colourfully described in the Koran and early Islamic literature. The happy destiny of the faithful is amply depicted on the walls of the Dome and fits in with the traditional view that Jerusalem would be the scene of the general resurrection of the dead, the appearance of God at the Last judgment, and the settlement of all outstanding accounts. Islam shares this view with

traditional Judaism and Christianity, so the symbolism of the Dome representing the gates to Paradise is fitting for its particular location. It is notable that exclusive emphasis is placed on the joys and bliss of Paradise, promised to the faithful of Islam, and open to the rest of humanity, but especially to those Peoples of the Book, who belong to the great monotheistic tradition.[3]

More important even than the shape and the decoration is the lengthy inscription that runs twice around the structure, once in each direction so that the pilgrim or inquiring visitor may read it all as she/he walks twice around the drum (in opposite directions). The legend is written in Arabic, thereby defining the primary audience and target of the inscription: by Arabs for Arabs, by Muslims for Muslims, but also for others. It is a public statement meant for everyone who can read the "sacred" language, large and clear even for those in a hurry (cf Habakkuk 2:3). It is an Islamic statement affirming the basic tenets of the faith and pronouncements of the Prophet Mohammed. It quotes freely from the Koran; in fact this inscription constitutes the earliest written documentation of the Koran and may precede any written manuscript of the prophet's utterances. No doubt the written text is derived from oral tradition, and the tenacious memory of those who heard and remembered. It affirms the unity and uniqueness of Allah, the God of Islam (and of the Bible) using language that if not identical with or derived from the Bible, echoes the monotheistic affirmations found in Second Isaiah especially, and also Deuteronomy 32: 39: "See, now, that I, I am He and there is no god with me; I cause death and I cause life, I have wounded and I will heal, and there is no deliverer from my hand."

At the same time, it makes explicit reference to Jesus, acknowledged as a true prophet and standing in the line from Adam through Abraham and Moses, and continuing to the latest and last of them, Mohammed himself. This reference to Christianity is at once irenic and polemical. It affirms the unity of the Godhead against any Trinitarian notions, and while acknowledging (or at least implying) the resurrection of Jesus, nevertheless affirms his humanity against claims of his divinity. At one and the same time, it attacks normative Orthodox Christianity, especially as believed and practised in Jerusalem at the time, but invites Christians as People of the Book to consider the (superior) merits of Islam with its positive view of Jesus and his tradition.

No doubt a similar treatment of Judaism and approach to this other and earlier People of the Book would have been made had there been any significant Jewish population in the vicinity. But as noted, the city and environs of Jerusalem were populated mainly by Arabic-speaking Christians.

If we take all the features of the Dome together, including its placement on the Temple Mount, its shape and design, as well as its decorative style, along with the contemporary inscription which with its names and dates ties it directly to the building, the time and the Caliph who sponsored it as well as the team that planned and executed that plan, all in the last decade of the 7th century C.E., we come up with a unique sacral structure, variously called a *ciborium* or a *martyrium* – a structure dedicated to the memory of an individual saint and a particular experience. The Dome of the Rock, in terms of commemoration, holds significance for all three monotheistic religions Judaism, Christianity, and Islam.

Discussion

In this case, there are competing theories or resolutions, none of which may be entirely or factually accurate, but all of which contribute to the understanding and appreciation of the site's role in the religious history of Jerusalem and its (or the) world. The traditional view connects the site (and the structure) with the legendary night ride by the prophet (the *isra*) and/or his journey to heaven (*mi'radj*). That connection was not made in the earliest sources and there is no mention of it or allusion to it in the inscription, so we may regard it as a later accretion. The second view, which derives from the earliest written sources, holds that the Caliph who ordered and arranged the buildings on the Temple Mount, 'Abd al-Malik, did so in order to create a rival for the famous shrine at Mecca with its sacred stone, the Kaaba, and divert pilgrims from going there and instead have them come to Jerusalem for the same purpose. At the time, Mecca was under the control of a rival, 'Abd Allah ibn al-Zubayr, and the outcome of the struggle between the two for pre-eminence of location was in doubt. Van Ess discusses this rivalry in detail (1992). But shortly thereafter the rival was killed and Mecca reverted to the authority of the Caliph.

So while the conflict may have been a factor in the story of the Jerusalem buildings, the outcome was quite different. In the end, Mecca remained the primary goal of all Muslim pilgrimages, while Jerusalem was built up and presented not as a substitute or alternative to Mecca, but as an added attraction, closer to the actual center of power and authority in the Muslim empire growing by leaps and bounds at that time, and more closely tied to the biblical traditions and the temples of the Bible than any others.

A third view evokes the contemporary socio-political and religious situation in which the Arab Caliphs found themselves, and both the necessity and desire to establish themselves in the complex world of Syria-Palestine and to make a firm statement about the place of Islam, especially in relation to the Byzantine empire. Here we would emphasize the special character of the Dome among other sacred buildings on the Temple Mount, and the particular details of the inscription on its walls. Together they affirm the central tenet not only of Islam but also of the religions of the Book – intrinsic, inherent, and explicit monotheism, in an Islamic formulation that nevertheless echoes the Hebrew Bible. Next to laudatory statements about the latest and last of the true prophets (Mohammed) is a positive affirmation about Jesus, the preceding true prophet in the story of

authentic religion, one whose presence in Jerusalem is not only recorded there but affirmed and elaborated on by the imposing sacred building standing on its own hill (or mount) across from the Dome – the Church of the Holy Sepulchre/the Church of the Resurrection.

In this way, the Dome of the Rock and its weighty and lengthy inscription affirms the centrality of Islam against its rivals, but at the same time affirms and approves its predecessors as leading and guiding along the proper way. Above all, it invites comparison and also extends a welcoming hand to all those pilgrims and visitors to come and see for themselves – to stand where Abraham stood with his knife raised before God and to walk around that sacred stone, to consider the roots of this religion as seen through the eyes of the first ancestor in the faith for all of them, and then to examine its architecture and art and to read its literature and join the faithful in a common act of reverence and obeisance to the one God of all.

While for Jews and Christians, neither the legend on the wall, nor the Koran, nor Islamic theology can ever come close to rendering a true and faithful account of their religious convictions and commitments, there is an honest and honourable attempt to make Jerusalem a dwelling place for all of them, a common ground for believers in the one true God. Has anyone since been able to do better than that? Given the long period of the Dome's survival (1300 years), it is hard not to believe that Providence has played an important role in maintaining this building above all in its place on the Temple Mount. If it is not the Third Temple of messianic tradition and hope, then it is a surrogate and substitute that deserves to hold its place until the day of the Messiah. It comes as close as anything could even if it does not yet entirely fulfil the words of the prophet (Isaiah 56: 7):

> *"And I shall bring them to my holy mountain, And I will make them rejoice in my house of prayer… For my house will be called 'House of Prayer' for all the peoples."*

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Endnotes

[1] Jerome, *Ad Paulinum Presbuterum* 58.3.13.

[2] The Anonymous Pilgrim of Bordeaux, 7a, Jerusalem. (333 A.D.), *A.D. 2000 Franciscan Cyberspot,* at http://198.62.75.1/www.l/ofm/pilg/bord/10Bord07aJerus.html#SolomonTemple.

[3] See *Qedem*, 46-62.

The Excavation Technology used in the Cow Catacombs of the Sacred Animal Necropolis, North Saqqara, Egypt

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DOI: https://doi.org/10.62614/tdd4bt07

Abstract: The technology used in tomb excavation in ancient Egypt has not been the subject of thorough investigation to date. A 'false end' in the catacombs of the mother of Apis bulls at the North Saqqara necropolis provides evidence of one excavation system used by tomb excavators. Chisel marks and 'cone' excavations elsewhere in the catacombs provide some evidence of an alternative practice. The paper interprets this evidence and shows that practices used in ancient Egypt in principle at least are still applied today, albeit in conjunction with explosives. It is noteworthy that the main chisel types used in the construction of the Cow Catacombs have not been discovered in archaeological excavation in Egypt.

The excavations of the Sacred Animal Necropolis at North Saqqara Egypt have previously been reported in *Buried History* (Anon 1979). That article was largely based on Professor John Ray's earlier paper entitled 'The World of North Saqqara' (1978). Ray described how the Egypt Exploration Society (EES) conducted excavations in the necropolis from 1964 under the direction of Professor W.B. Emery, and how after his death in 1971 Professors Geoffrey T. Martin and Harry S. Smith continued the work until 1976. Two volumes of excavation reports have been published by the EES to date and others are in preparation (Martin 1981; Green 1987).

This paper is published with the kind approval of the Egypt Exploration Society, Dr Paul Nicholson and Professor Emeritus Harry Smith. The fieldwork described herein was carried out with Professor Smith's facilitation and his helpful comments on the publication of it are gratefully acknowledged, as are those of Professor John Tait.

The necropolis at North Saqqara is located near the village of Abu Sir on the south side of a shallow valley that runs westward from Abu Sir to the Serapeum. In summary the EES excavations at the necropolis discovered a complex of terraced temples, and a number of subterranean galleries or catacombs containing four million mummified ibises, half a million falcons, and the burial places for five hundred mumified baboons and a score of sacred cows. Other objects included about four thousand dedicatory statues, about one thousand documents in Demotic, Greek, Aramaic, Coptic, Carian and Arabic.

The complex was associated with the cult of the Apis bull whose burial place was in the Serapeum. A road led from the Serapeum along the valley to a lake in front of the terraced temple complex at North Saqqara. The complex was a place of pilgrimage from the fourth century BCE onward for people in the eastern Mediterranean. Economic development occurred in the immediate area to satisfy the requirements of pilgrims, but nothing has been found of the hostels, shops and manufacturing facilities.

Included in the North Saqqara complex were catacombs where the mother of the Apis bull was buried. The catacombs were cleared during Professor Emery's last season at Saqqara in 1969/1970 and were described in a preliminary report (Emery 1971). These catacombs will be referred to as the Cow Catacombs and are generally known for a series of small limestone stelae written in Demotic on behalf of the workmen who supervised each burial, some of whose work is the subject of this paper.

The author was a member of the 1976 temple-town survey team at North Saqqara led by Professor Harry Smith and in addition to the function of surveying and drafting spent some afternoons studying the Catacombs for the mothers of Apis (Smith & Jeffreys 1978). In the catacombs there is evidence for the excavation technology and systems used by the workmen. A preliminary publication of the investigation results was published in *Der Anschnitt.* (Davey 1980)

Excavation technology in Ancient Egypt

Egyptian monuments display prodigious amounts of stone masonry and Egypt's countless tombs were formed from many kilometres of excavation and so it is understandable that there has been an interest in Egypt's workmen. The

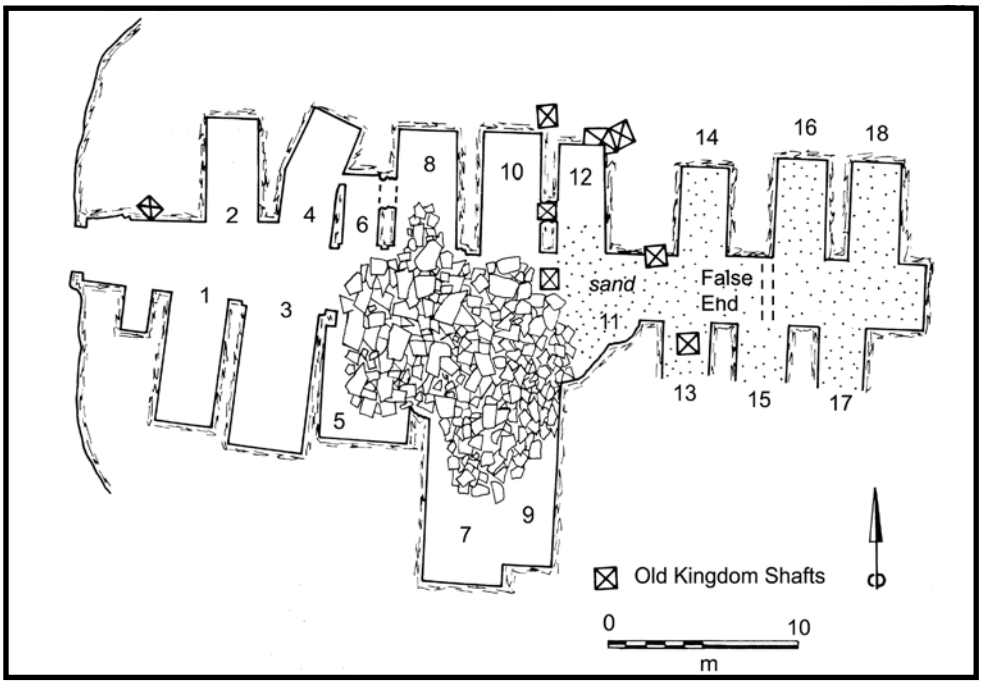

Figure 1: *A plan of the Cow Catacombs showing the areas of fall and sand, and the location of the false end.*

discovery of workmen's villages at Kahun, Deir el Medina and El Amarna has provided much of the evidence for that study. Many tools have been found in these excavations, some of which were published by Petrie in his *Tools and Weapons* chapter IX, 'Builders Tools' (1917:41-43). The operating systems of the workmen who excavated the tombs of Egypt have been partially revealed by the texts of the community at Deir el Medina, but the technical details of their work procedures 'at the face' have remained largely obscure (Romer 1984:14-18, 82-87).

An early discussion of quarrying and stone working is found in Lucas' *Ancient Egyptian Materials and Industries* (1964:63-74). John Weeks provided some basic illustrations that give an indication of the strategies adopted for quarrying, but there is no detailed description of possible excavation techniques (Weeks 1971: 24). Dieter Arnold offers the most comprehensive examination of stone quarrying during Pharaonic times (1991:27-40) and Denys Stocks has addressed the use of copper and bronze chisels for stone cutting (2003:25-33). But again the precise excavation systems employed at the face were beyond the scope of these studies.

One means of investigating the working procedures is to study the tombs and excavations themselves. The chisel marks that remain on the walls often give an indication of the sequence of working and the tools that were involved, but the most helpful features are those where the excavation process was halted before the completion of a full working cycle. In mining terms these are called 'false ends'.

The Cow Catacombs have a couple of false ends where the original working plan was abandoned and the excavation work was halted in mid cycle so that the face was not cleaned off to remove the evidence of the initial intention. The excavation of the later stages of the Cow Catacombs seems to have been fairly rough and portions have therefore been left in an unfinished state. These features bring us very close to the original workmen because it is possible to detect the last chisel cut they made and to model their last working position when work ceased over two thousand years ago.

Excavation Strategy

Before considering the evidence from these features it is necessary to consider the overall strategy of the excavation. A number of factors are likely to have determined the location and plan for the excavation of the Cow Catacombs. While there were considerations such as the proximity of the temples and the normal design for underground chambers apparent in the Serapeum, there was also the competence and hardness of the rock strata and the existence of earlier tombs.

The area in which the catacombs are located is honeycombed with previous tomb excavations, and indeed it was the clearing of an Old Kingdom tomb that led to the modern discovery of the Sacred Animal Necropolis. Old Kingdom tomb chambers occur near the surface and are also found at greater depth. The tomb diggers may have known about the location of these prior workings before commencing the catacombs because the Cow Catacombs were driven from the rock face of the Abu Sir-Serapeum Valley conveniently positioned just under the upper tombs and above the lower ones.

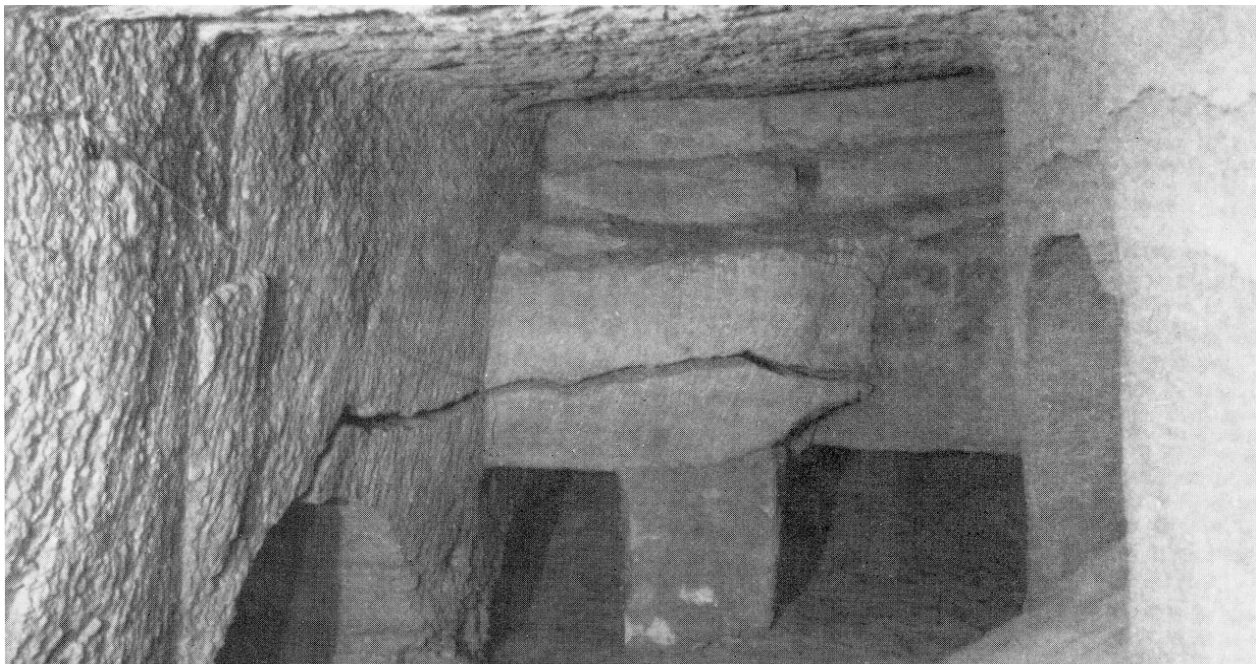

Figure 2: *A general view of the false end. The bench is supported by a modern buttress built under it in the middle of the Main Passage.*

The knowledge of these tombs would certainly have been obtained during the excavation of the catacombs. The upper tombs are about 30 cm above the roof of the Cow Catacombs and as they were only partially filled with sand, would not have posed an immediate major threat to the workmen.

The large area of collapsed roof at present in the catacombs is the result of the collapse of an upper tomb chamber floor (Figure 1). This was precipitated by the failure of the pillar between two long catacombs that was made too narrow possibly as the result of a surveying error by the workmen. The fall probably occurred at the end of the catacombs life after it ceased to be used as the burial place for the mothers of Apis.

The Old Kingdom tomb shafts sunk to the lower chambers were more of a nuisance and presented a greater threat to the workers. These shafts were filled with sand that could burst forth burying the workman if they were encountered during excavation work. Dry sand under pressure can flow like water and is treacherous because it silently engulfs all in its path preventing escape. The shafts were dealt with by either removing the sand from them and walling them off, or by redirecting the excavation of the catacombs to avoid them. In any event, the effect of the various existing excavations around the Cow Catacombs was predominantly short term rather than of major strategic importance. The extent of the problem is evident from the fact that the rear of the catacombs is almost full of sand that came from these shafts.

The competence and hardness of the various strata however appear to have been of primary importance. The rock in

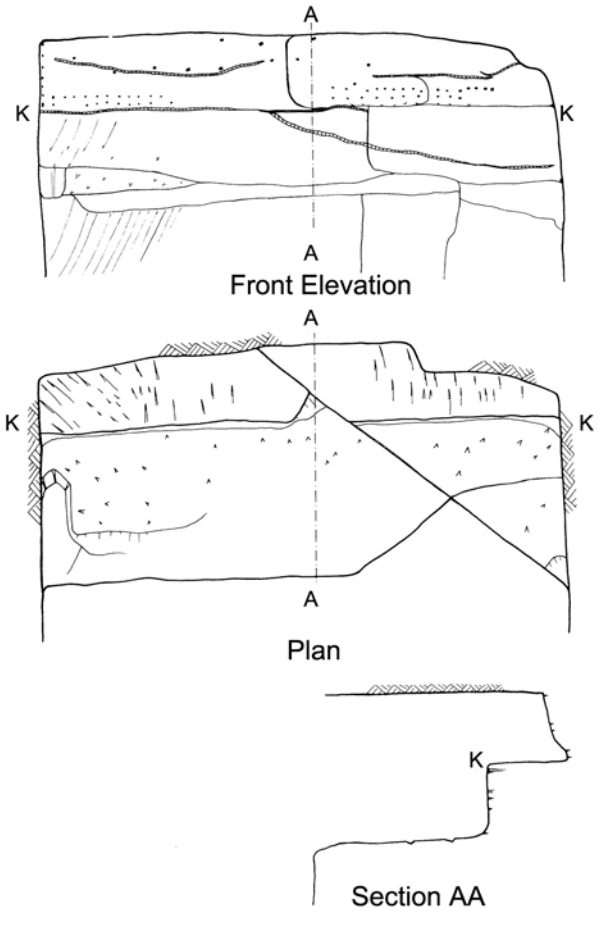

Figure 3: *Front elevation, plan and section of the bench showing the chisel marks.*

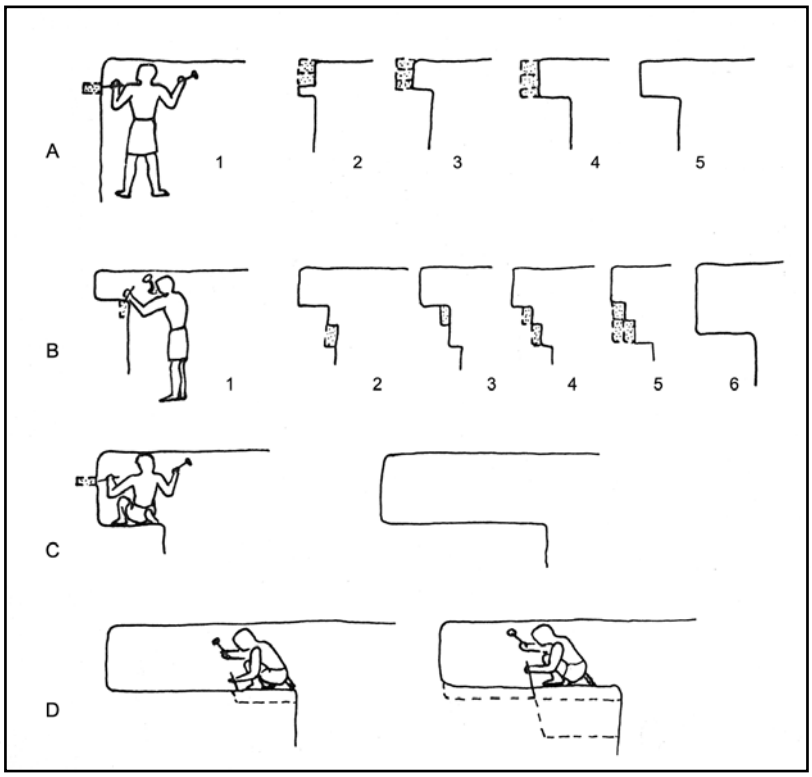

Figure 4: *A diagram of the proposed excavation sequence for the Main Passage.*

which the catacombs were excavated comprises horizontal beds of limestone varying in thickness from 10cm to 1m. Each layer differs in hardness and strength from the one above and below so that by careful management it was possible to excavate in soft material and leave a harder stratum to form the roof.

The rock also has discontinuities: veins of calcite up to 1cm thick occur in the limestone providing a surface that could assist the excavators. Horizontal veins were utilized by the workmen in the excavation sequence but the numerous vertical discontinuities, which occur with random direction, were of limited assistance. These fractures in the rock greatly reduce its overall strength and its capacity to remain stable around large openings.

The roof of the Cow Catacombs consists of a fairly hard limestone stratum that provides a strong and safe roof. However, the upper two metres of the catacomb walls at the entrance also consist of hard or medium-hard limestone and softer strata only occur near the floor. It might have been expected that the excavators would have chosen a lower roof level in these circumstances, which indeed they did at the rear of the Cow Catacombs.

Thirty-five meters from the entrance, the roof level was lowered by 2.3 m and it is this change which left the false end. The new roof is still formed by a stratum of hard limestone, but the strata to be removed was soft and easily excavated. The strata excavated in the rear part of the Cow Catacombs coincide precisely with those of the Lower Baboon Catacombs and is a little higher than those of the Falcon Catacombs. The workmen would have no doubt been familiar with the stratagraphic sequence of Limestone but still chose to start the excavation of the Cow Galleries in comparatively hard material. A reason for this is not immediately obvious, but may possibly be deduced from the study of the excavation technique discussed below. Only four more burial chambers were cut after this decision and these have not been cleared of sand.

While excavating the catacombs to a predetermined plan, it is noteworthy that the workmen were still able to use the properties of the rock to their advantage. In particular the randomly occurring veins in the calcite were used wherever possible to assist with the breaking of the stone.

Excavation of the Main Passage

The main passageway of the Cow Catacombs was about 4m wide, 4-5m high and was rectangular in section. It is probable that the main passage was only extended each time there was the need for additional burial chambers. The burial chambers are 3-4m wide and have arched roofs in contrast to the flat roof of the main passageway.

The decision to lower the catacombs was made soon after work had begun to extend the main passage beyond burial chambers 13 and 14. In fact the false end probably represents no more that a few manshifts of work. When the decision to lower the roof was made, work immediately began at the lower level leaving the false end above (Figure 2).

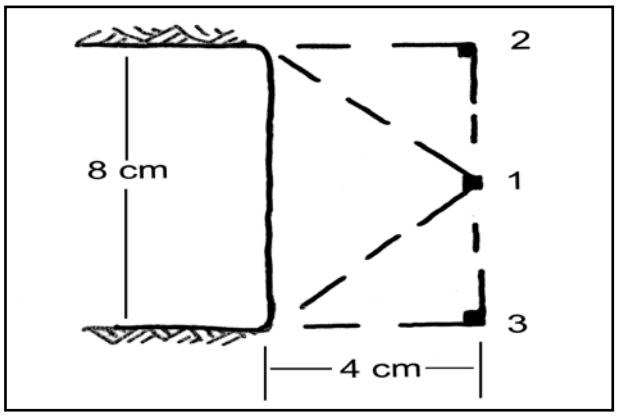

Figure 5: *A diagram of the system of cut and easers. Chiselling follows the sequence 1,2 and 3 to advance the groove.*

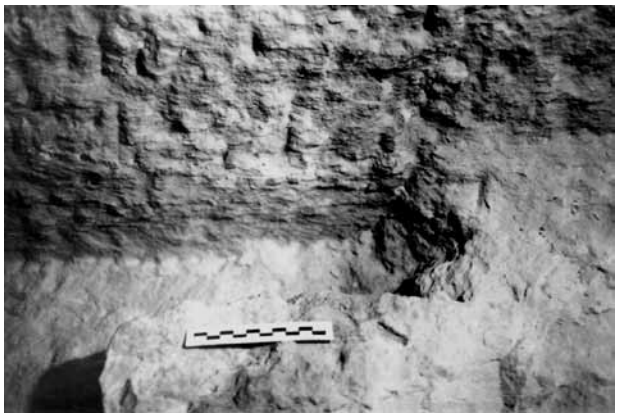

Figure 6: *Photograph of the shallow groove on the left hand side of the main bench showing the system of cut and easers being used when work finished - position D1 Figure 4.*

An attempt has been made to reconstruct the sequence of excavation as it appears from the two benches left in the false end and also from chisel marks on the walls of the main passage. The plan, elevation and section of the benches show the chisel marks that remain visible and from which it was possible to estimate chisel sizes (Figure 3). The stages of the mining procedure are illustrated in Figure 4 and are described as follows:

The first cut, A1 (Figure 4)

A horizontal cut about 13 cm deep and 8 cm high was made across the width of the face with a chisel 25 cm long with a 5-7mm square section. A vein of calcite immediately below the cut made it easier to break the rock away. The miners were right handed and so began the cut on the left side of the face with a fan like chisel pattern similar to the 'chop cut' or 'draw cut' used occasionally in modern tunnel blasting.

A system of 'cut and easers' was used to obtain the width of the cut, each chisel cut having a burden of about 4cm (Figures 5 and 6). This system was clearly used later in the sequence for creating the groove around the bench on which the workers knelt. It is an efficient way to excavate a vertical or horizontal channel in the rock because it removed the maximum amount of stone each cut and produced a groove about 8 cm wide.

Expanding the first cut, A2

The 13 cm deep cut was extended to the roof in two stages, each approximately 15 cm high. A number of chisels were driven in 15 cm above the cut with a space of 10 – 20 cm between them in order to wedge a large block of limestone downward. Again a vein of calcite was exploited by the miners.

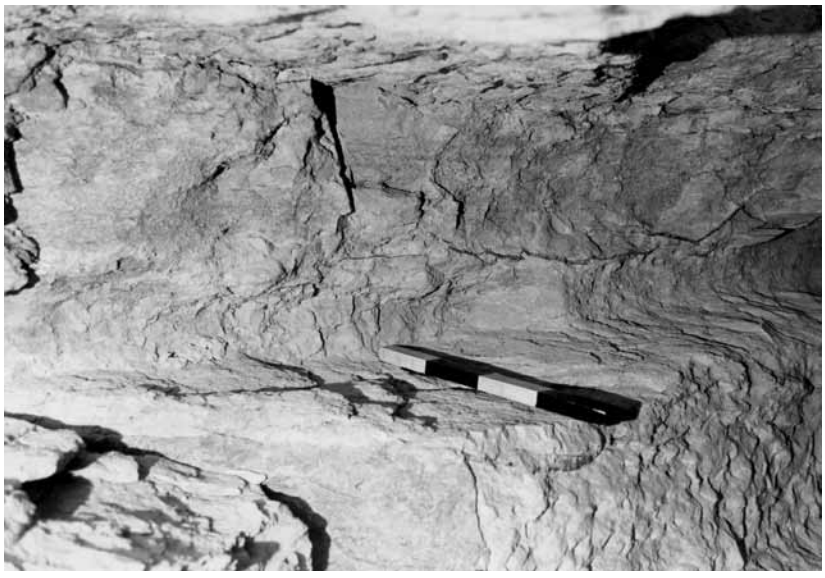

Figure 7: *Photograph of the upper bench where work ceased. The groove being made at the rear of the bench was already being extended to the roof.*

Deepening the cut, A3 & A4

The process of A1 and A2 was repeated at least a couple of times forming a bench. The bench already created would appear to make this operation difficult, but the fact that the excavation ceased when this cut was being created confirms that it was done in this way (Figure 7). The existing face also shows that process described in A2 was completed almost as far as the partially finished cut A1, indicating that steps A1 and A2 were done almost simultaneously.

Removing the first bench, B

The bench formed in A was then lowered by a series of small steps until it was 80 cm below the roof. There were few clear tool marks

Figure 8: *A general view of the vault of burial chamber 13 showing the two cones representing two false starts. The sand is streaming from an Old Kingdom shaft.*

remaining to indicate how this part of the operation was performed but it would appear that a number of chisels at a time were driven downwards about 10 cm from the face of the bench in order to prise away the stone about 10 cm wide and 20 cm deep.

Advancing the heading, C

The heading so formed had sufficient room for two men to squat and work. In this position they could continue to repeat steps A and B until an opening of sufficient length was obtained.

Benching down, D

The final operation was similar to quarrying for building stone and could have been carried on simultaneously with the driving of the top heading using as many men as space permitted. A 15 cm deep groove was cut down the left hand side of the floor of the top heading, across the bench and back along the right hand side.

The miners used a right-handed action to cut the groove and as can be seen on the left hand side to the second bench, following the system of 'cut and easers' as illustrated in Figure 5 but with larger chisels enabling the burden to be increased to about 6 cm and the width to 15 cm and the depth of the initial groove was probably about 10-15 cm. Tool marks on the wall indicate that the 15 cm deep groove was deepened to about 60 – 70 cm with long chisels of rectangular cross-section of 10mm x 4mm. The block of stone isolated in this fashion could then be removed using wooden wedges or levers as in a quarry operation (Lucas 1962:64). This procedure would have been repeated until the floor level was reached.

Excavation of the vaulted burial chambers

The arch roof of the vaults could not be excavated in the same fashion as the flat roofed main passage. Evidence for the procedure adopted for the vaults was found immediately to the right of the place where the roof of the main passage was lowered (Figure 8). The decision to lower the roof height was made soon after the vault was begun, but not before two false starts had been made on the second end. These false starts reveal the system used in excavating the vault (Figure 9).

The first cut A

The first false start was in the form of a cone driven flush with the intended crown (centre-top) of the vault and the second was 30 cm lower. The cone was created by simultaneously driving about seven large chisels into the rock in a circular pattern of about 13 cm diameter until the chisels met about 25 cm from the face (Figures 10 and 11). Chisel marks on the roofs of other vaults indicate that the initial hole was then enlarged by successively chiselling around it until the opening was about 40 cm square (Figure 12).

Bench removal B

This opening was then extended downwards to the level where the arched roof joined the walls. There is no evidence how this was accomplished, but the removal of the first bench in the Main Passage reveals one possible approach.

Making the vault on the right side C

The opening was extended on the right hand side following the curve of the roof until the full width of the arch on

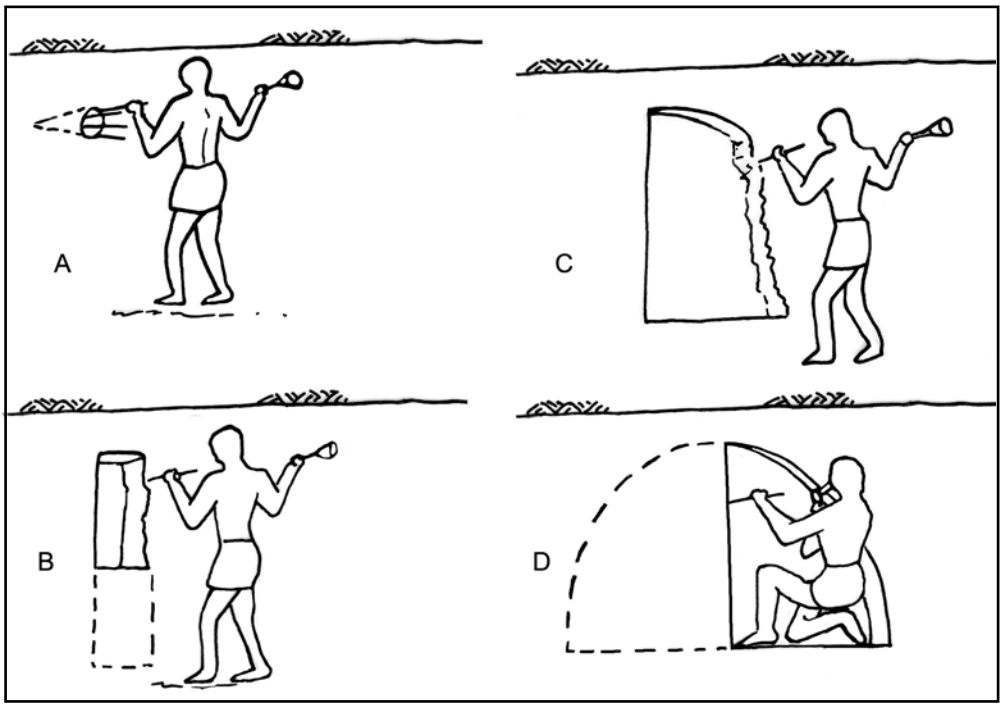

Figure 9: *A diagram of the proposed sequence of excavation for the burial chamber vaults.*

that side was attained. The right hand side of the face was removed by chiselling the face (initially the wall of the main passage) and breaking the rock into the opening already made.

Making the vault on the left side D

The left side was then removed by the chiselling the left-hand side of the opening and breaking the rock outwards toward the main passage until the complete arch on the left hand side was established. The different process used to form each side of the vault is derived from the direction of the chisel marks on the vault itself. Those on the right are parallel with the direction of the vault while those on the left are at right angles to that direction (Figure 12).

Bench Removal

After this procedure was repeated eight or so times there was enough room for other workmen to begin benching downward to floor level as was done in the main passage. About three men could have been employed cutting the top-heading, that is making the arched roof and when space permitted, a similar number could have worked on lowering the bench. The excavation of the bench down to floor level would have been accomplished by means of grooves and wedges as it was in the main passage.

Figure 10: *Photograph of the lower cone shown in Figure 8.*

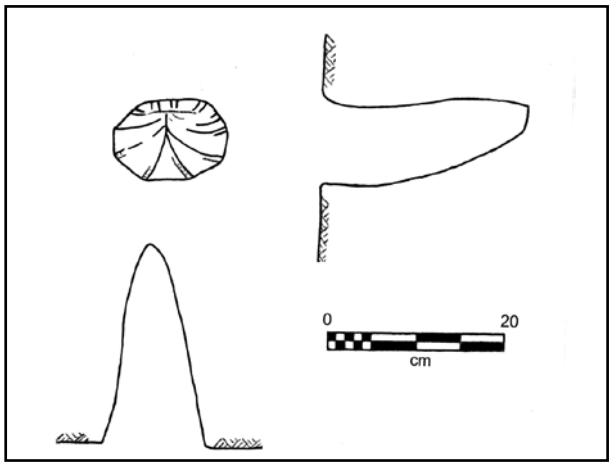

Figure 11: *Front elevation, plan and section of the cone.*

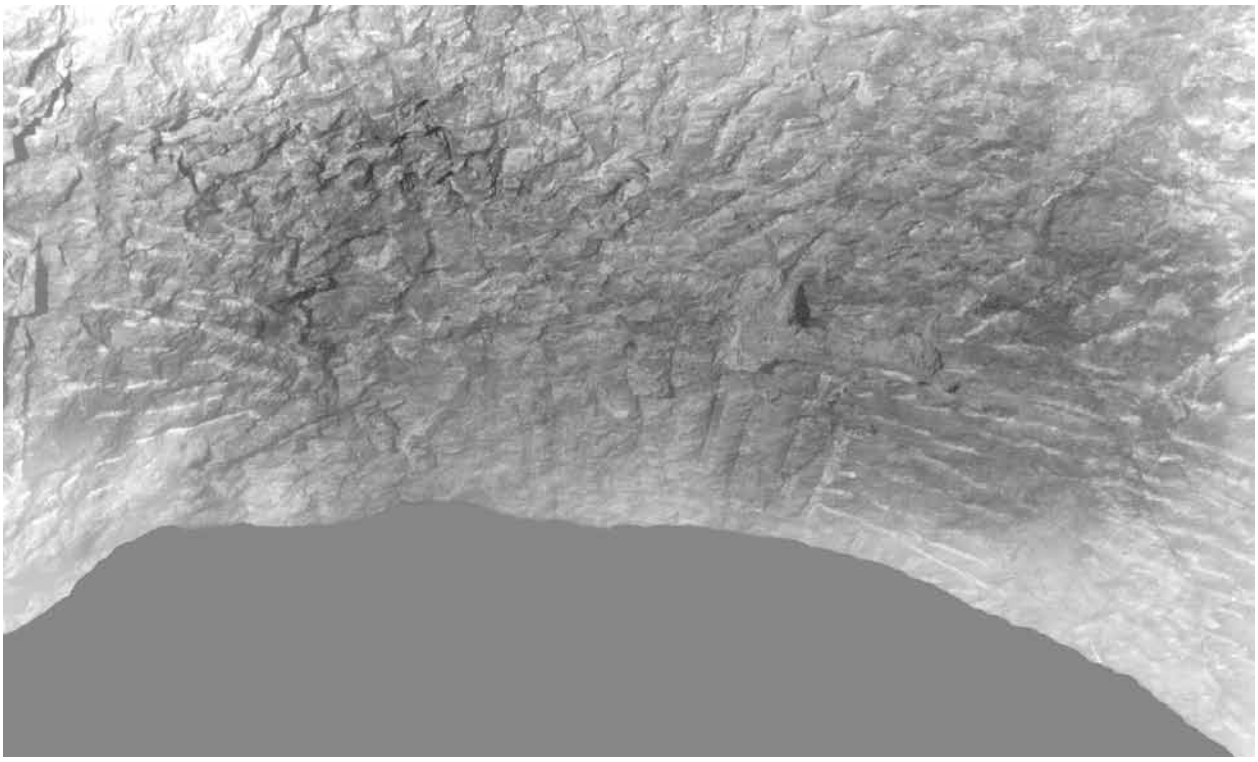

Figure 12: *The pattern of chisel marks on the vaulted roof of a burial chamber. The cone was driven in the centre, and the right side in the photograph (left side of the vault) shows the chisel marks are directed away from the centre of the vault.*

Excavating systems

The system of driving a top-heading and removing the remaining bench with downward holes for explosives is often used in modern tunnelling and is common in many large underground excavations such as hydro-electric stations. The advantages of this system are:

- the roof is made clean, safe and secure at the beginning so that subsequent operations do not have to contend with dangerous rock conditions overhead,
- the work of cleaning and securing the roof can be done without the use of scaffolding or other forms of support. For workers using candlelight the immediate proximity of the working surface was important.
- the excavation is immediately made according to plan and has the outline of the opening defined for the benefit of subsequent work,
- the excavation of the top-heading may be carried out independently of the removal of the main bench. Thus short delays in one operation will not immediately affect the other, and
- the working area is large providing adequate space for numerous miners and progress is therefore faster.

The adoption of this system by the excavators of the Cow Catacombs made it possible to remove the bench by means of groove and wedging which itself has added advantages in that it:

- prevented overbreak and produced clean walls in a fashion similar to modern 'pre-split' blasting,
- resulted in large blocks of stone suitable for building purposes,
- is efficient mining as there is a minimum of rock hewing required thereby reducing the amount of chisel sharpening necessary and
- is also efficient as mucking, that is removal of the excavated material, in a pre-machine age is made quicker by dragging a block of stone away rather than collecting many fragments of abrasive stone in baskets.

The method of driving a top heading and then benching down was well established in Egyptian tomb excavation by the end of the New Kingdom. The author has observed that the last room in the Tomb of Horemheb, in the Valley of the Kings, is unfinished and that it has its upper section only excavated. The reason for the use of this system in the Valley of the Kings is probably related to the poorer quality of the limestone and the need to get the lengthy decorating activity under way. By completing the roof first it could be made clean and secure and probably decorated before the lower sections of the room were removed.

The reason for the adoption of the system at Saqqara in the Cow Catacombs is probably rather different. The Cow Catacombs are next to the temple complex that required building stone from time to time. The production of building stone was probably a major reason for the Cow Catacombs being excavated in harder limestone and for the application of the system described above. When such stone was no longer required, the excavation could be lowered into softer limestone that would disintegrate during excavation rather than form blocks. It is also possible that it was necessary to have the vaults formed in the more competent limestone.

Two different methods were used for making the crucial initial opening in the face. In the main passage a fan-like system of chisel cuts was used starting from the left hand side and working to the right, progressively straightening up so that by the time the middle of the passage was reached the chiselling was in line with the passage. This is similar to the modern equivalent that is called a 'drag' or 'draw' cut and is generally used in softer strata (Lewis 1964: 165). Good miners are able to adjust the drilling of the face to make use of any discontinuities in the rock. In the same way the workmen in the Cow Catacombs were able to use the bands of calcite.

The vaults were excavated by a second method involving the application of a cone. This is similar to the most common method used today in tunnelling where a hole known as a 'burn cut' is made initially in the face (Lewis 1964:167). The use of cones has been noted in mining at Timna dating from the New Kingdom although it seems these were not made by a number of chisels driven simultaneously (Conrad 1980:83). The use of cones to make the first opening in a face does not appear to be common in tomb excavation in Egypt.

The unfinished tomb of Ramose in the Valley of the Nobles, for example, has an unfinished face which was being excavated by means of a groove around the entire perimeter of the passage. The rock isolated by the groove then appeared to be removed by picking in a fashion akin to that used in the Roman Catacombs, where picks were generally used.

Chisels

The workmen in the Cow Catacombs used mallet and chisel and there is no evidence for the use of picks, although there is a possibility that some of the walls in the softer limestone were partially dressed with the use of an adze. Chisels are the only practical way to excavate harder limestone. Picks rely on strong hafting, something that was hard to achieve in ancient times, and they also would be inclined to rebound when striking harder stone. Accuracy of the cut was important and this could only be achieved with the application of chisels.

The chisels used for making the cones had a blade width of about 10mm. These chisels were up to 30 cm long and appear to have had a flat rectangular cross-section. The cone openings were slightly concave revealing that the chisels flexed while they were being driven.

Chisels used in all the other operations varied in length from 20 cm to 50 cm with cross-sections from 6 to 15 mm square. They were neither flat nor crosscut chisels as defined by Stocks but had points (2003:27).

This is an important aspect of the above analysis. The application of the chisel did not produce material in proportion to the size of the blade of the chisel, but according to the geometry of the excavation for which the chisel was being used. All the systems described in this paper involve the creation of an opening or groove in the face and then the breaking of rock toward the free surface so created. This technique was efficient in that it minimised the amount of chiselling and thereby, the amount of tool sharpening required.

Pointed chisels of the dimensions referred to above do not appear in the literature. Arnold states that pointed chisels made from bronze were used from New Kingdom times and he also notes that such tools are still to be found (1991:33) It is possible that the chisels used in the Cow Catacombs were made from iron. Chisels suitable for excavation in hard limestone would have been uncommon when compared to those used for the trimming of masonry and the excavating and dressing of tombs in soft limestone.

Conclusion

The advantage for tomb excavation of the two systems used in the Cow Catacombs was that clean walls were produced immediately and much of the excavated material was suitable for building stone. Many features akin to modern tunnelling and blasting practices such as top-heading and benching sequences, pre-slitting and stripping with cut and easers were employed by the ancient miners.

All workers were right-handed, and only three basic specialities can be distinguished; benching, the work in the top-heading of the burial vault where cones were used and the work in the main passage top heading where a form of draw cut was used to make the initial opening in the face.

The benching activity was common in all quarrying work and was therefore not a specialist occupation. The work of advancing the top-headings was more specialised and more demanding as work space was limited and the chisel cuts were made horizontally. This work occupied only two or three men in each heading, while the benching operation could have employed a larger number. Only a limited number of workers in Egypt at any one time would have had the skills for excavating top headings.

The Cow Catacombs provide a window into some tunnelling techniques used in the late first millennium B.C.E. Egypt. Until more work is undertaken in Egypt's subterranean world it will not be possible to comment on the history of the techniques represented here. However it is clear that the tunnelling procedures used in the Cow

Catacombs were well developed and gave a rapid advance with a minimum of effort. They had no doubt been developed from the time that copper and bronze chisels first became available in Egypt.

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Aspects of Cultic Ritual within early Philistia: Who are you calling a Philistine?

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DOI: https://doi.org/10.62614/rdp9nb17

Abstract: The origins of the people of Philistia, often equated with the biblical 'Philistines', has been a dominant interest in Palestinian archaeology, with much archaeological investigation being structured around the various issues associated with material culture and ethnicity. While the archaeological record has been used to support various hypotheses of cultural contact and development, there has been little attempt to understand the archaeological record of cult. Here the archaeological, and briefly the textual, data is examined in an effort to illuminate the cultic ritual practiced within Philistia during the early Iron Age.

Philistine Cultural Identity

Identifying a religious artifact within a component of the local culture must, in the first instance, recognise the parameters that define that same culture. Within archaeological literature numerous definitions of what is 'Philistine' abound,1 the most influential being those of T. Dothan and A. Mazar. The initial archaeological identification of the biblical 'Philistines' was based primarily on the appearance of a new culture in southern Palestine during the early-twelfth century BCE; discerned by the 'appearance' of a locally-made, but Aegean inspired, pottery style known as Mycenaean IIIC:1b. This new ceramic tradition (Figure 1) and its subsequent derivative, so-called 'Philistine Bichrome' or red and black painted ware, came to be attributed to the biblical 'Philistines'.2

Significantly, the geographical concentration of this distinct ceramic horizon generally corresponds with the biblical 'land of the Philistines,' (Joshua 13:2-3) namely the southern coastal plains of the southern Levant (Figure 2). This has led some archaeologists to conclude 'Philistine' presence from the identification of just a few 'Philistine Bichrome' sherds.3 Bunimovitz criticizes this approach as overly simplistic and as 'taking for granted' the connection between 'Philistine' pottery and their ethnic presence. He cites the somewhat incomplete repertoire of 'Philistine' ceramic types as evidence.4 All eighteen ceramic types are small serving and pouring vessels, i.e. 'tableware'(Dothan 1982:95). There is a conspicuous absence of kitchenware. The 'Philistine' ceramic assemblage, therefore, in order to be completed, must have included the use of local Canaan-

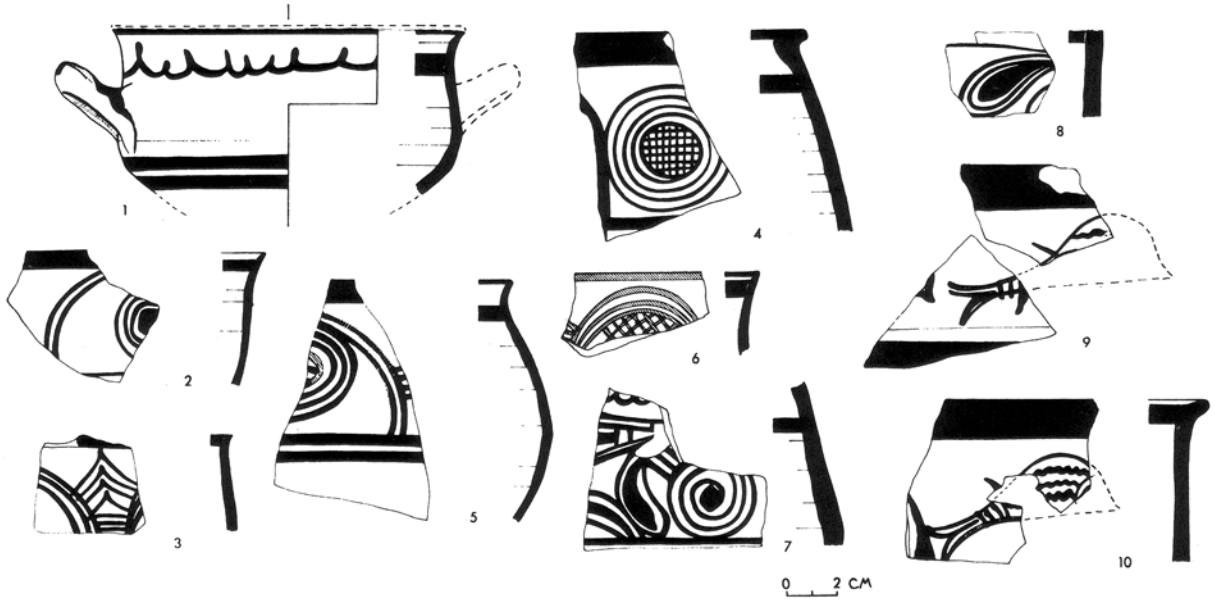

Figure 1: *Local Mycenaean IIIC:1b pottery, Ashdod. (T. Dothan 1982:fig. 3, 40)*

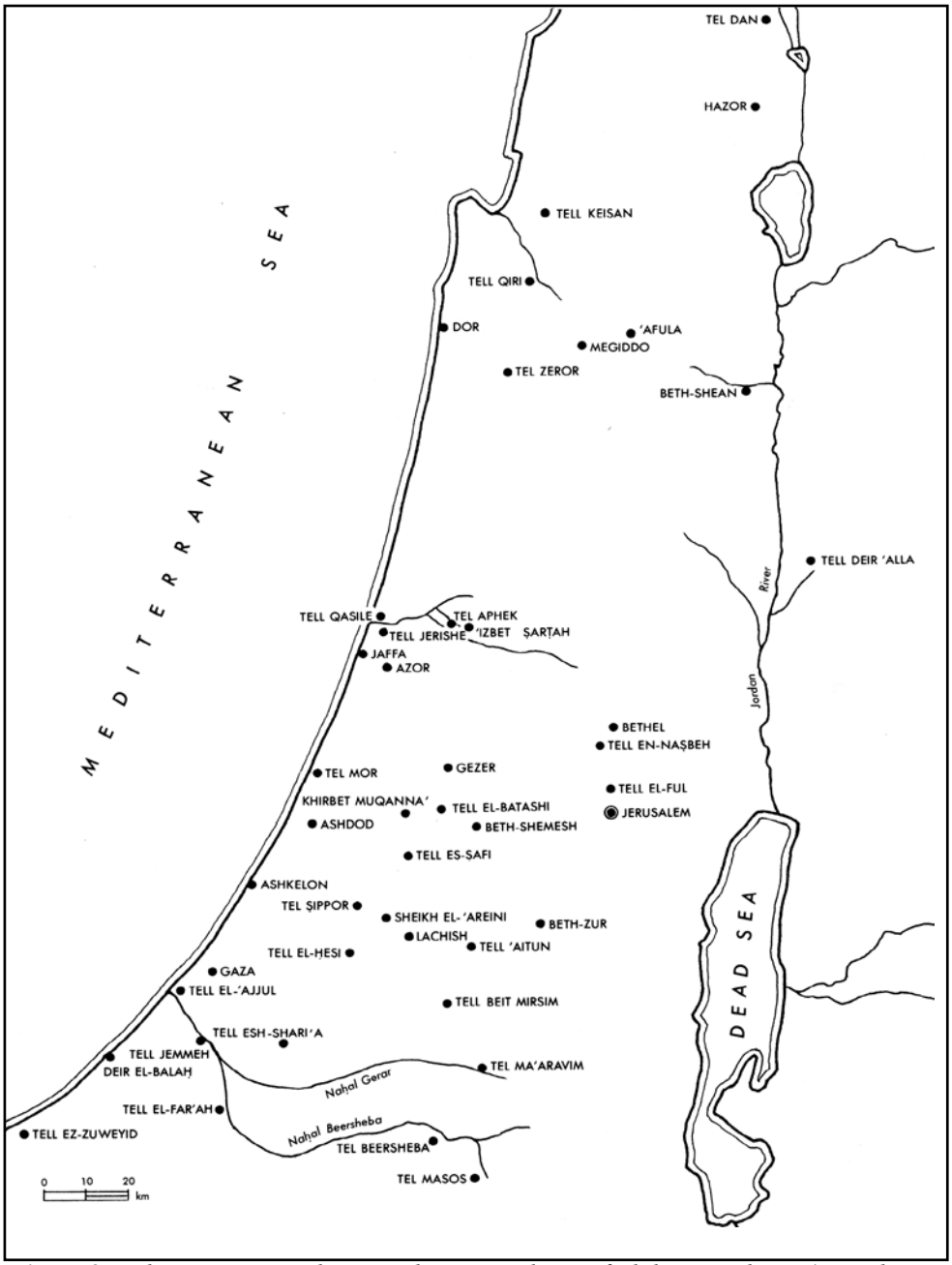

Figure 2: *Palestine. Principal sites with some evidence of Philistine culture. (T. Dothan 1982:map 2, 26)*

ite ceramic traditions. This led Bunimovitz to conclude that 'Philistine' pottery should be known as 'Philistia' pottery, as it is geographically rather than ethnically or culturally defined.5 But whilst it is obvious that 'Philistine Bichrome' has been grossly misused, there is no valid reason to discount the use of pottery in identifying cultural practices. The persistent association of a certain group of traits within a bounded geographical area is the one means archaeologists have for defining such practices.6 Furthermore, defining a cultural distinctiveness need not make any statement concerning that culture's ethnicity, despite Stone's suggestion to the contrary.7 Ultimately 'Philistine Bichrome' is indicative of a geographically-bounded distinctiveness of cultural practice.8 In this paper 'Philistine' does not refer to an ethnic group, but to the distinct ceramic culture concentrated within biblical 'Philistia.'. 'Philistine Bichrome' is an important feature of the local Iron Age culture and may be loosely identified as 'Philistine'. As a result, the culture complex of 'Philistia' has been limited to sites with high concentrations of 'Philistine Bichrome', namely Ashdod, Ashkelon, Ekron (Tel Miqne) and Tel Qasile.

Identifying cultic ritual in the archaeological record can be difficult. Many archaeologists suggest it is near impossible. Indeed, Hawkes (1954:161) has placed religious institutions and the spiritual life on the highest, most speculative rung of his ladder of inference. But I would suggest, in the words of Lord Renfrew, "that there is nothing inherently

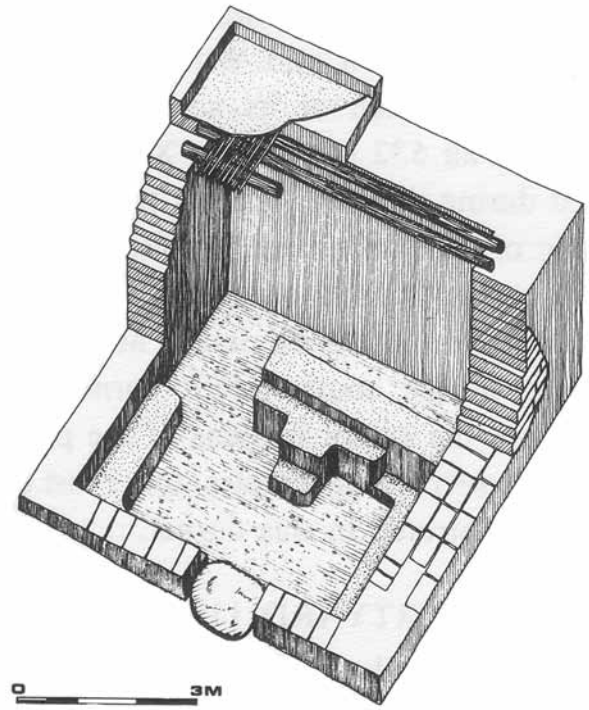

Figure 3: *A possible reconstruction of Temple 319, Tel Qasile, Stratum XII. (A. Mazar 1980:fig. 5)*

obscure or problematic about [Hawkes'] fourth category."9 Briefly stated, religious ideology (belief) manifests itself through the practical matrix of ritual, which in turn affects the physical record and can be archaeologically assessed.

Cultic Architecture

Considering the few 'Philistine' sites excavated, the repertoire of cultic architecture is accordingly quite small. Examples excavated so far include three successive temples at Tel Qasile, a small shrine and two cult rooms at Ekron, and the open-air shrine and apsidal building at Ashdod. Nonetheless, the blending of several religious architectural traditions (Canaanite, Cypriot) does reveal the syncretistic nature of local religion.

Tel Qasile

Situated on the Yarkon River in the northern frontier-zone of Philistia proper, Tel Qasile was, unlike the cities of the pentapolis, founded by the people of the 'Philistine' culture. Three buildings (131, 200 and 319) have been identified by the excavator (Mazar, 1973a) as 'Philistine' temples, or, more accurately, the continued remodelling of one temple over a period of time. Superimposed upon each other, these three buildings follow successive occupational phases of the site; Strata XII-X, with each differing significantly from its predecessor. Periodically the building was re-built, enlarged eastward and the entrance altered, though, significantly, the western wall and holy-of-holies remained fixed.

The earliest temple (319) was a small (6.4 x 6.6 m) symmetrical one-room mud-brick structure with a central raised platform, or bamah, bench-lined walls, non-right-angled corners and a direct entrance (Figure 3). Building 319 belongs to Stratum XII, Tel Qasile's initial settlement phase (late 12th cent. BCE). Its significance is supported by an abundance of complete vessels found on its floor, a phenomenon rare in this phase (Mazar, A 1985a: fig.7). The building's attention-focusing architecture (symmetry, central bamah, direct access, raised benches) and later use of this space for cultic practice indicate that this is a temple.

The subsequent Temple 200 of Stratum XI (early 11th cent. BCE) is a larger building (Figure 4).10 The exterior walls were upgraded to undressed kurkar stone and extended eastward (8 x 8.5 m) to allow for the inclusion of an interior partition. The resulting partitioned room was apparently the treasury, as indicated by the rich assemblage recovered therein. Plastered mud-brick benches still lined the interior walls and the bamah remained a central feature. The entrance, however, was shifted to the northeast corner. As in Stratum XII, a large open courtyard (281) extended east of the temple. Situated within Courtyard 281, northeast of Temple 200, a cultic depository, or favissa 125 was excavated. Important cultic vessels deposited here, among others, include the anthropomorphic breast-spout vessel (Figure 5), a lion-headed cup (Figure 6) and zoomorphic mask fragments.11 Shrine 300, which essentially consisted of a small bench-lined cella, was also added to the western exterior of Temple 200 (Figure 4). Much of the building's architecture was again designed to focus one's

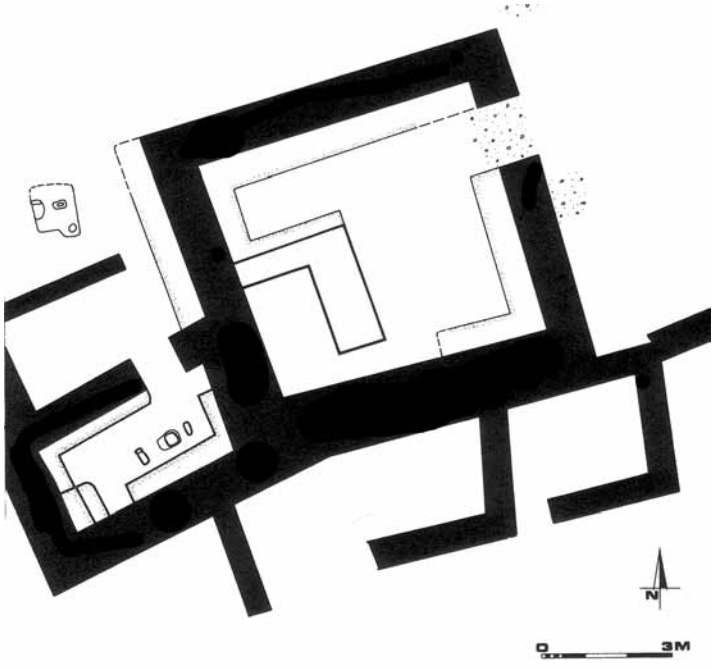

Figure 4: *Schematic plan of Temple 200 and Area C, Tel Qasile Stratum XI. (A. Mazar 1980:fig. 6)*

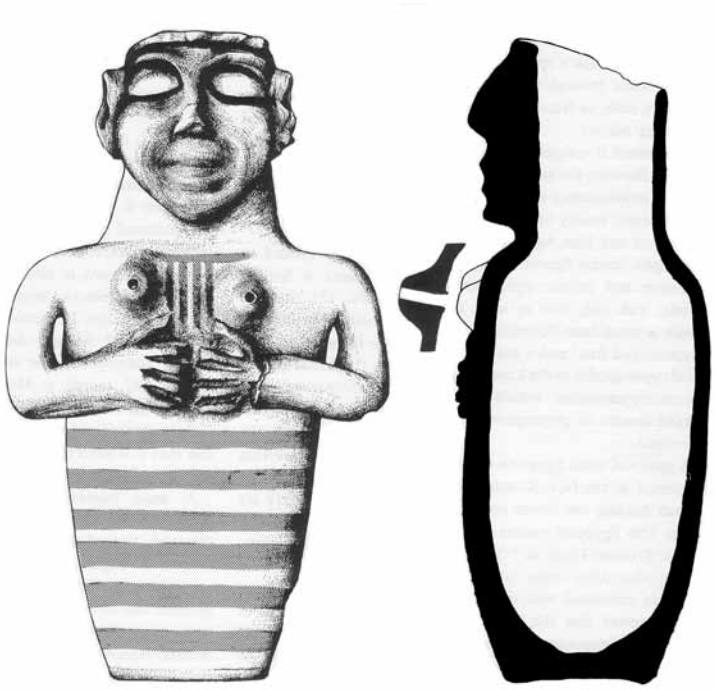

Figure 5: *Female anthropomorphic vessel, Tel Qasile* Favissa *125. (A Mazar 1980:fig. 18)*

attention inward, while the indirect bent-axis helped protect the sacred interior from the casual glance of the profane, external world. The significant yield of cult stands and cult bowls therein clearly confirm the cultic function of this enlarged complex.

Temple 131, the largest of the three, once again significantly departed from the layout of its predecessor.12 The Stratum X (mid to end 11th cent. BCE) temple was no longer a single cella with partitioned treasury, but had added a bent-axis antechamber (separate entrance), distinct treasury and two functional pillars set along the cella's centre axis (Figure 7). Of the few biblical references to temples in 'Philistia', Judges 16:29 recalls a two-pillared cella reminiscent of Temple 131, though the biblical Temple of Gaza appears much larger than Temple 131. Significantly, the bamah and entrance lay on a separate axis to that of the pillars, so that an unobstructed view of the bamah from the entrance hall was maintained, though once again it could not be disrespectfully viewed from outside. The concentration of pottery and rare cult vessels (cult stands, lion-headed cup) found in the vicinity of the bamah leaves little doubt as to this feature's significance. The rich pottery assemblage recovered from the back room suggests this was where the temple treasury lay. During this phase the exterior court was enlarged to an area of 100 sq. m. and, for the first time, included a sacrificial altar.13 The accumulation of ash, bones and burnt potsherds in this courtyard imply intensive sacrificial activity. The small shrine to the west remained relatively unchanged, despite the addition of its own courtyard.

Although building remains above Stratum X were scanty, A. Mazar believes that enough evidence exists to indicate that the temple was rebuilt again in Stratum IX (10th cent. BCE) and used into Stratum VIII (9th cent. BCE). However there is a distinct absence of cultic vessels within these strata, and may be indicative of lessened cultic activity.14 Does this suggest that domestic religion was a more popular alternative during the later periods.

Tel Qasile's three Iron Age I temples generally lack uniformity despite their successive reconstruction upon the same site. Such variation within a site is unusual. Mazar interprets this as reflecting an ill-defined Philistine architectural tradition, though Bunimovitz prefers to associate the variation with the flourishing expansion of the site.15 Nevertheless, despite the apparent inconsistency, some principles of planning are retained throughout the three successive phases. Firstly, none of these temples were monumental; each was a small building of only average size. Secondly, these temples were not freestanding; they were instead attached and integrated into the town-plan. Thirdly, each temple maintained the same west-southwest orientation and location of the bamah. Each bamah was, despite variation in layout, visible from the entrance, though not necessarily visible from outside. And finally, each successive cella, though different in size, maintained similar proportions and was lined with plastered benches.

A survey of Late Bronze and Iron Age Canaanite temples reveals a distinct tradition of monumental, freestanding symmetrical buildings; aspects absent at Tel Qasile. Instead

Figure 6: *Lion-headed cup, Tel Qasile* Favissa *125. (A. Mazar 1980:fig. 34)*

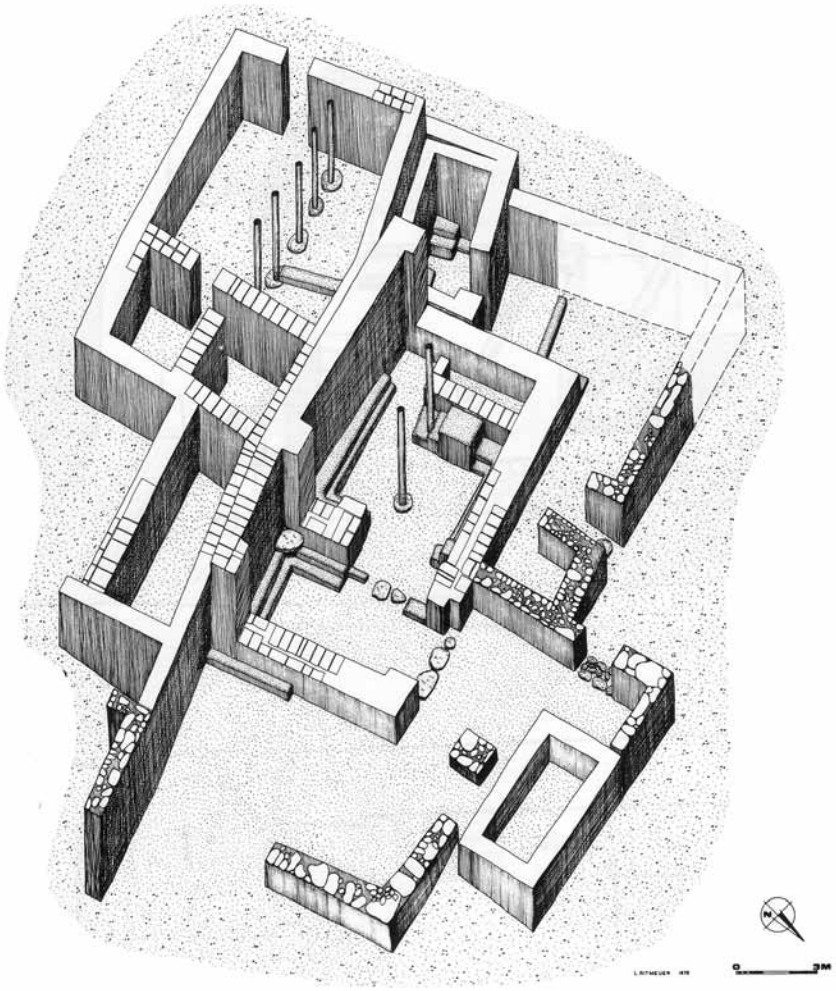

Figure 7: *Exonometric view of Temple 131 and Area C, Tel Qasile Stratum X. (A. Mazar 1992b:fig. 8.10)*

scholars have cited the Aegean as inspiration.16 However, on closer analysis, some parallels do exist within 'Canaanite' and Cypriote traditions. The characteristically symmetrical plan and direct approach of Temple 319 resemble Hazor's Area C Temple, despite differing floor plans.17 The off-centre/corner entrance of Temple 200 is also evidenced in Canaan, - at Lachish, Tel Mevorach and Beth Shean; as well as Cyprus - at Kition and Enkomi.18 The deliberate burial of important artefacts in a temple favissa is well known from Canaanite, Syrian and Hittite contexts, but not Aegean.19 Temple 131's two functional pillars also has several parallels, though their arrangement along the cella's long centre axis is restricted in Canaan to the Lachish Fosse II and enigmatic Jaffa Lion temples. Non-Canaanite examples include the Mycenae, Phylakopi, Enkomi and Kition temples.20 The bent-axis entrance of Temple 131 and Shrine 300 is a common feature in Mesopotamian temples of the third millennium BCE, but is rare during the second millennium.21 The Lachish and Mycenae temples are the closest parallels, but are similar in principle only and not actual layout. A distinctive and unusual aspect of Tel Qasile's temples is the attaching of a subsidiary shrine (300) to a major temple (200, 131 successively), a feature unparalleled in the Near East. Mycenaean and Cypriot parallels exist, the most obvious examples being Phylakopi's West and East Shrines and Kition's sacred area.22 The benches lining the inner walls of the Tel Qasile temples are characteristic of Levantine, Cypriot and Aegean temples, as is the treasury evidenced in Temples 200 and 131.23 The bamah, however, is essentially a Levantine tradition and is rarely found in the Aegean.24

From the evidence it appears that Tel Qasile's earliest temple/s primarily reflect local Canaanite traditions and, interestingly, very little Aegean influence. Indeed, it is the latter temples that bear closest resemblance to Aegean/Cypriot examples, though this is likely the result of Levantine influence upon the west, not vice versa.25 Obviously not related to the monumental symmetrical temples of Canaan, the two later Tel Qasile 'irregular' temples do reflect a 'rogue' Canaanite temple tradition.26 These sanctuaries, though continually rebuilt on the same site, usually display considerable variation in layout. In short, they consistently lack consistency. Canaanite temples with non-monumental, irregular plans include the Lachish Fosse II and III, Tel Mevorach, Tel Qasile 131 and 200, Tel Abu-Hawam Stratum IV and Beth Shean Northern Stratum V Temples.

Regarding the nature of ritual performed in the Tel Qasile temples, little can be ascertained with any degree of certainty. The abundant benches were used for the placement of offerings, as confirmed by the many pottery vessels found in situ. The courtyard altar and its accompanying ash and bones further imply an emphasis on ritual offerings. The significant height and central positioning of the bamah, along with its visual alignment with the entrance, indicate the bamah was a central feature of ritual activities. The fixed location of this feature within the three successive temples meant the ritual point of focus was maintained.

The modest dimensions of Tel Qasile's temples imply that, rather than an elaborate public ritual being preformed, the interior was the abode of an associated deity. This interpretation is accepted by A. Mazar, who adds that if Temples 200 and 131 are considered the main abode of the deity, Shrine 300 housed either a secondary deity or the main god's spouse.27 The identity of the deity worshipped

Figure 8: Ashdoda *figurine, Ashdod Stratum XII. (M. Dothan 1971a: fig. 91.1)*

at Tel Qasile, however, is not known, though there is a possible clue from an ostracon found by B. Mazar on the Tell's surface. The reference on the sherd to 'Beth Horon' may be an allusion to the temple/abode of the Canaanite god Horon.28 Attempting to identify the Beth Horon of this fragmentary, unstratified ostracon with a Tel Qasile temple is, however, problematic. An alternative is to associate these temples with the fertility goddess symbolized by the anthropomorphic breast-spout vessel (Figure 5) that is before she fell out of favour and was ritually disposed of. Nevertheless, no distinct cult images have been recovered from Tel Qasile and any attempt to identify the god/ess worshipped there is inconclusive.

Ekron

Situated on the western edge of the Inner Coastal Plain the site of Tel Miqne has been identified with the biblical site of Philistine Ekron. Excavation of the site uncovered three successive shrine-like structures with very little alteration across their two centuries of use (Strata VII-V; 12th and 11th cents BCE).29 While the plastered floor, benches and platform only suggest a cultic context, the animal and human figurines, lion-headed cup, incised bovine scapula and miniature votive vessel are clear confirmation of the area's purpose.

In addition, Stratum V of Field IV revealed a well-planned monumental building (351), possibly multiple-storied, that served as a public administration or palatial centre.30 The central feature of Building 351 was the large elongated hall with its three superimposed hearths, which continued in use throughout three successive phases. Clearly the hearth is significant. This room's impressive entrance, massive construction and focus 'around' this feature imply the hearth played a prominent attention-focusing role. A concentration of ash and bones on and around the hearth suggests sacrificial activities. Sunken hearths like the Ekron examples are uncommon in Canaan - they are instead an Aegean, Cypriot and Anatolian feature.31 Pillars situated on the long axis of the 'hearth room' reflect Tel Qasile's Temple 131, but more closely some Cypriot and Mycenaean examples. The incorporation of pillars and hearth has particularly close parallels in Cyprus, where this hearth-type featured prominently in combined religious and civic centres.32

The second phase of this building (350) witnessed the addition of three subsidiary rooms to the east of the hearth, hereafter called the northern, middle and southern rooms. Numerous loom-weights recovered from the northern room suggest the presence of weaving activities, possibly associated with the clothing of priests or even the cult statue. The middle room contained a stepped bamah, similar to other Canaanite and Cypriot examples,33 as well as the remains of an ivory-handled knife and cast-bronze mobile cult-stand, all of which imply cultic/sacrificial activity. The southern room also revealed a knife, a complete bimetallic example, and a small plastered altar in its northwest corner. The cultic connotation of the latter two rooms is undoubtedly strong, continuing into the next phase despite the hearth becoming less prominent. The eventual abandonment of the hearth and continued cultic use of the southern two subsidiary rooms, and their bamot, indicates the hearth's fall from prominence within cultic activities, possibly as a result of its true Aegean and Anatolian significance being lost with time. If Building 350 is indeed a temple it is tempting to associate it with the biblical temple of 'Baal Zebub' at Ekron (2 Kings 1:2-16), though such an interpretation is unwarranted.

Ashdod

In the earliest of Ashdod's 'Philistine' phases (Stratum XIII; early 12th cent. BCE) an open-air shrine was discovered on the tell's northern edge. The structure consists primarily of a plastered-brick altar and round pillar base, which appear to have been used sacrificial activity as indicated by the pillar's blackened surface and numerous bones.34 The

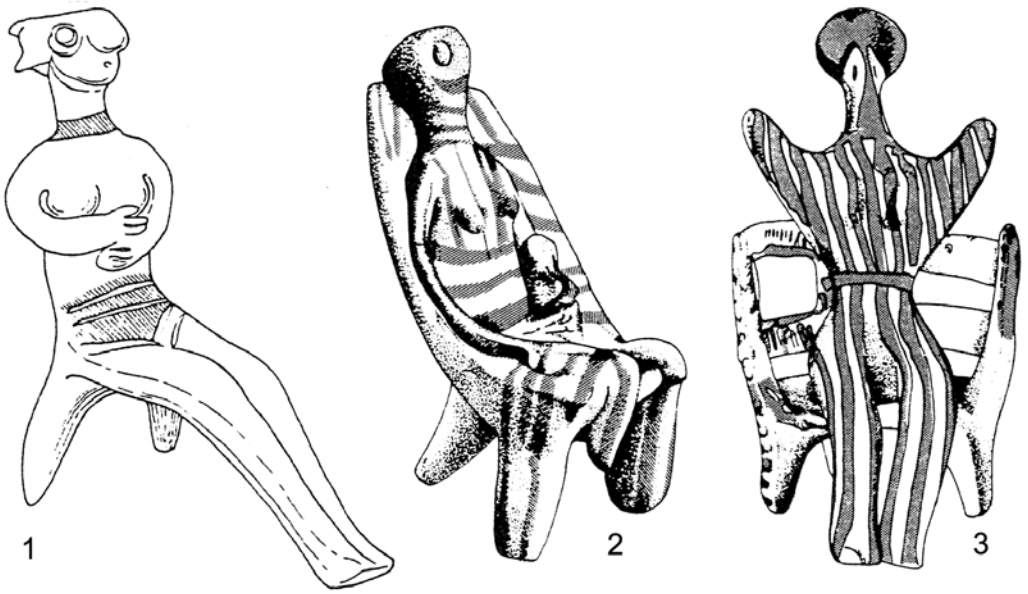

***Figure 9: 1** Seated Cypriot figurine. (Sandars 1978:fig. 116.) **2** Seated Mycenaean figurine with child. (Mylonas 1956:pl. XV:7) **3** Seated Mycenaean figurine. (Mylonas 1956:pl. XIII)*

elevation of both features also implies a desire for directing activity around/toward them. That this shrine is open to the elements implies the worship of a nature or weather god/dess here, the local Canaanite storm-god, Baal a possible candidate.

Another cultic structure uncovered at Ashdod is the unique Stratum XII (mid 12th cent. BCE) Apsidal Building from Area H.35 This building, of which no other parallel exists prior to the eighth century BCE, consists of a semi-circular brick-wall laid around a rectangular platform. The structure is identified as cultic primarily because of its unique, attention-directing architecture, indeed a circular wall is ideal for focusing one's attention to a point. The extraordinary artefacts found therein, particularly the complete Ashdoda figurine (Figure 8), strengthen the cultic association.36 The large quantity of burned grain found near and on the platform, originally interpreted as a silo by the excavator, implies sacrificial activity.37 The fragmentary architectural plan of this building prevents any comparative study. Nevertheless, the identification of a cult structure at Ashdod recalls biblical reference to Ashdod's Temple of Dagon, a chief male deity of the Canaanite pantheon also known from Mari, Ugarit and Ebla (1 Samuel 5:1-8). The Dagon association, however, is problematic considering only a female goddess, Ashdoda, was found here. Instead, scholars have preferred to place the Dagon Temple much later, after the Aegean influenced Ashdoda goddess was abandoned for the local Canaanite male deities.38 But, this is also problematic since Ashdoda figurines persist well into the eighth century, over three hundred years after Ashdod's adoption of Dagon as chief deity. It appears, therefore, that both of these deities were worshipped simultaneously.

Ashkelon

Excavations at Ashkelon have recovered an Early Iron Age (12th cent. BCE) monumental building with possible cultic associations.39 Its large stone column-drums and floor plan are similar to the temples of Ekron, Tel Qasile and Ashdod, though further discussion of its nature awaits the results of current excavations. Could this building eventually be recognised as being dedicated to Athtorati, the fish-bodied patron goddess of Ashkelon?40

Overall apparent cultic architecture survives at Ashdod, Tel Qasile and Ekron, and possibly Ashkelon. Despite the clear cultic nature of these buildings, none can be definitively associated with specific deities. The one exception is Ashdod's apsidal structure, probably associated with the Ashdoda goddess, though her ancient name eludes us. Other 'Philistine' temples are known from biblical sources: Temples to Dagon at Gaza and Ashdod, and possibly Ekron and Gath where statues of Dagon prominently displayed. The one biblical reference to a Philistine priesthood (1 Samuel 5) refers to priests associated with Ashdod's Temple of Dagon and their rather peculiar practice of leaping on or over the temple threshold (1 Samuel 5:4-5; Zephaniah 1:9). Classical sources also mention Philistine gods and associated temples, such as Astarte at Ashkelon and Marna at Gaza, though, as yet, neither have been archaeologically identified.41 Nevertheless there is a distinct cultic architectural tradition within Philistia, one profoundly influenced by local, Aegean and Cypriot temples.

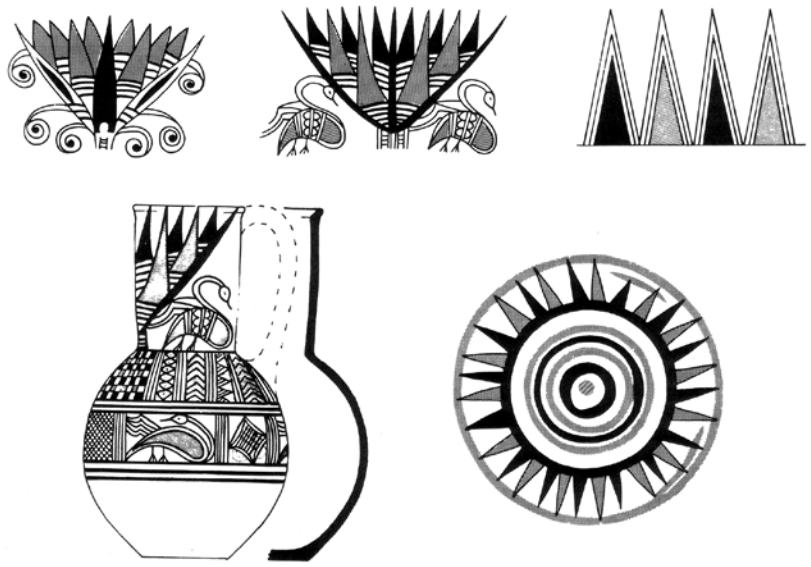

Figure 10: *Stylized lotus motif. (T. Dothan 1982: figs 48, 50, pp. 176-7)*

Cultic equipment

Taken on its own, architecture can reveal only limited detail of cult. In turn, this must be supplemented with contextual analysis of artefacts, ritual paraphernalia. Indeed, the identification of cultic architecture is often reliant on the types of artefacts found within the same context, and vice versa. Context is the key. Only by fully appreciating the relationships within a context can an archaeologist avoid the error of circular logic. Too often are artefacts termed cultic because of context, which, in turn, is termed cultic because of those same artefacts. And so, rather than be created, context must be confirmed through spatial analyses.42 Inevitably, cult cannot be explicitly proven or disproved, but only the degree, or probability, of its presence established. As a result cult is archaeologically identified by analysis of both architecture (see above) and equipment (following discussion).

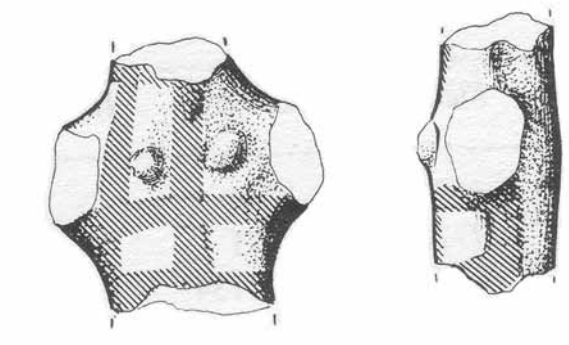

Figure 11: *Fragment of goddess with upraised arms, Ashdod unstratified. (Dothan and Porath 1982: fig. 34.2)*

Humanoid Figurines

Probably the most distinctive Philistine cultic artifact is the so-called Ashdoda figurine (Figure 8). Found at Ashdod, Ashkelon, Ekron and Tel Qasile,43 this figurine-type is often considered indicative of cult in Philistia. The form of this obviously female figurine is unique; the body blending into the four-legged throne on which she rests, with head and neck rising above the chair back. The schematic seated female is considered an abstract depiction of an enthroned goddess, often suggested to be the Aegean 'mother goddess.'44 Noteworthy are the markedly different contexts of Ashdoda and the Mycenaean seated goddesses, the latter being found primarily in grave contexts. The non-funerary context of Ashdoda figurines implies a very different understanding of a seminally Aegean goddess. Nonetheless, Ashdoda's decorative exterior, the distinctive bichrome paint on white-slip, is definitively local in execution. Nevertheless, reclining female figurines are common to the Aegean (Figure 9), despite Ashdoda's Egyptian and Canaanite stylistic influences.45 Ashdoda's stylized spreading headdress and bird-like facial features have Mycenaean parallels, as does her horizontal bands on torso and neck. However, Mycenaean reclining goddesses are manufactured separately from their thrones, or at least have a distinctively formed body, and only ever have three-legged thrones. One unpainted Cypriot example has a more stylistic merging of throne and goddess, but ultimately remains primarily a goddess-body with chair legs. Ashdoda, on the other hand, is essentially a four-legged chair with head, breasts and no arms, apart from the Tel Qasile example which is related to the Mycenaean mother goddess nursing a baby.46 Fertility goddesses are well attested in Palestine and are possibly the original inspiration behind Greek mother goddess figurines. The form of Ashdoda's throne is similar to four-legged offering tables common throughout Palestine and is probably a direct descendant of

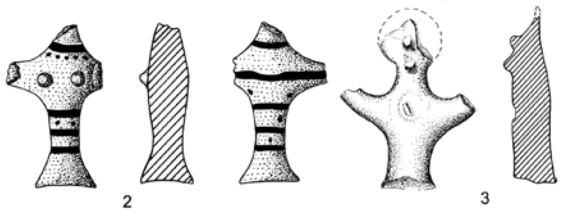

Figure 12: *Minoan goddess with upraised arms, Enkomi. (Dikaios 1969a:pls 170.2-3)*

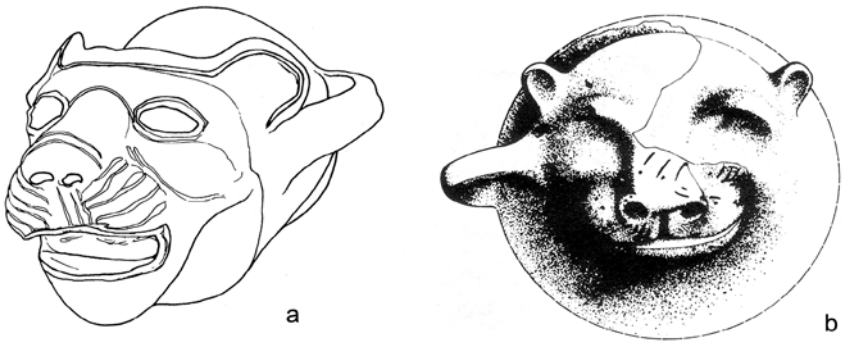

Figure 14: *Lion-headed cups with realistic features: a) Ugarit, b) Tel Zeror, (Zevulun 1987:figs. 7 & 14)*

the Palestinian miniature offering tables found in plentiful supply throughout Philistia.47 Furthermore, Egyptian influences can be clearly seen in Ashdoda's elongated triangular patterning, considered to be a schematic depiction of the Egyptian lotus flower motif (Figure 10).48 Ashdoda, therefore, borrows only minimally from Aegean figurines and is instead a blend of Egyptian, Aegean and local Canaanite traditions. It is possible that Ashdoda represents a goddess worshipped at Ashdod, but her eclectic heritage makes it unlikely that she specifically represents the Aegean mother goddess. More plausibly, Ashdoda represents a local fertility goddess, though her lack of genitalia is a problem. If indeed Ashdoda is a representation of a local goddess, interestingly the biblical record makes reference to only male Philistine gods (Judges 16: 23; 1 Samuel 5:2-7; 2 Kings 1:2-16).

The second cultic figurine-type from Philistia is the 'mourning woman,' or 'goddess with upraised arms' (Figure 11). While the figurines' pose, hands placed on head, is paralleled in Aegean mourning figurines, these are stylistically very different to Mycenaean examples. The relatively few examples from Philistia's Iron Age are from distinctly non-funerary contexts and therefore cannot be considered equivalent to their Aegean counterparts.49 Instead, the figurines are paralleled by the Late Bronze Age Minoan 'goddess with uplifted arms' from Cyprus and Crete (Figure 12).50 Thus, this figurine type is unlikely to be associated with 'Philistine' mourning customs (T. Dothan 1982: 237-249), but with the Cypro-Minoan 'goddess with uplifted arms,' adopted much earlier by the local population.

Despite the archaeological prominence of female figurines at Philistine sites, Ashdod has yielded a few figurines that have been interpreted as male (Figure 13).51 Interestingly all of these male figurines belong to first millennium BCE contexts, leading some to conclude that they signify the eventual adoption of the predominantly-male local pantheon. However, such a theory assumes that the Iron Age culture of Philistia is not local. Moreover, it is not clear that these figurines are male, even less deities. One example is (male?) figurine playing an instrument, most likely representing a lyre. Parallels are known from Cyprus (Young et al 1955: pl. 4:120-121) and Crete (Nilsson 1950: 109-110) where lyre-playing was associated with ritual music and though this is probably not a deity, it is plausibly an allusion to the use of music within local ritual. A conoid seal depicting a man playing a lyre recovered from Ashdod further support this interpretation (Dothan 1971a: fig 76.1).

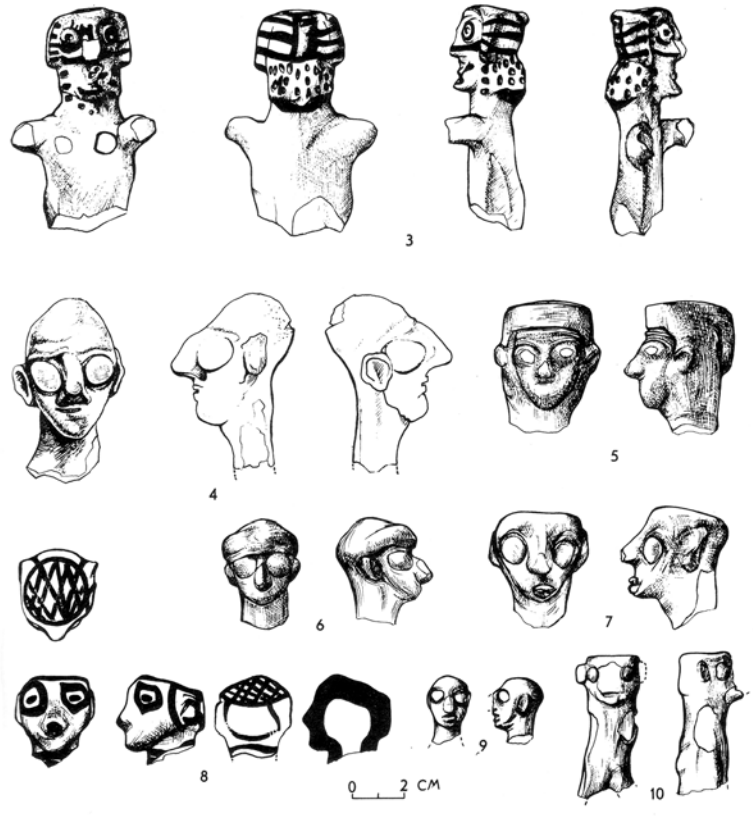

Figure 13: *Male figurines, Ashdod. (M. Dothan 1971a:figs 62.3-10)*

Figure 15: *Ceremonial scene on ivory plaque, Megiddo. (Zevulun 1987:fig. 11)*

Libation vessels

Another prominent aspect of cult in Philistia is libation and the ritual handling of liquids, as evidenced by spouted vessels, ritual cups and various fertility symbols. Recovered from Tel Qasile's Favissa 125, a unique and alluring female anthropomorphic vessel with breast spouts (Figure 5) is undoubtedly a cultic libation vessel (A. Mazar 1980: 78). Primarily consisting of a tall cylindrical wheel-made body c. 32.5 cm tall, the female features of this unique vessel were modelled through the application of clay to torso and face, most notably the breasts that doubled as libation spouts. Despite the Mazar's suggestion that this vessel has no Levantine parallels, a pierced breast vessel is known from Beth Shemesh (Grant 1931), other examples similar in concept are known from Egypt (Hornblower 1929: 44), Mycenae (Taylour 1970: pl. XLa) and Crete (Nilsson 1950: 149). By the very nature of the spouts, the type of liquid poured out was important. Milk could signify nurturing, fertility, abundance and Mother Nature, while blood would be much more sinister. Nevertheless, this vessel is clearly cultic because of the strong symbolism associated with breasts and libation, not to mention its recovery from favissa 125.

Despite the limited repertory of anthropomorphic vessels, there is an abundance of zoomorphic libation vessels. Ritual cups in the shape of lions' heads have been found at both Tel Qasile (Figure 10) and Ekron (A. Mazar 1980:fig. 34; T. Dothan 1995:fig. 3.10). These cups have been erroneously referred to as Greek rhyta (T. Dothan 1990:28), though they each have no libation spout; a true rhyton is a vessel with two openings, one for pouring in liquid and another for pouring it out (Zevulun 1987:n. 2). Another libation vessel from Tel Qasile, known as the 'zoomorphic trick vase', is the closest example of a rhyton from Philistia (A.Mazar 1980:fig 36). While the trick-vase does have two holes, it is stylistically unique and difficult to parallel. Nevertheless, Zevulun has conclusively demonstrated that the Philistine zoomorphic cups are modelled along Near Eastern sculptural traditions with no trace of Aegean influence. Aegean rhyta are usually metal or stone (Nilsson 1950), but the Philistia cups are, in accordance

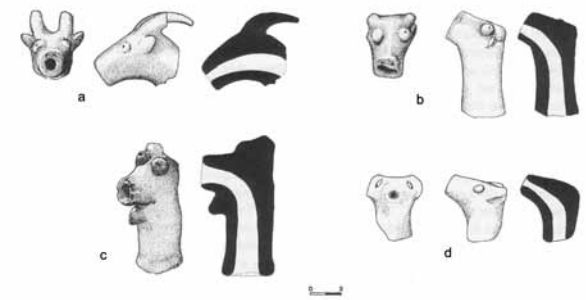

Figure 16: *Zoomorphic spouts, Tel Qasile. (A. Mazar 1980:fig. 41)*

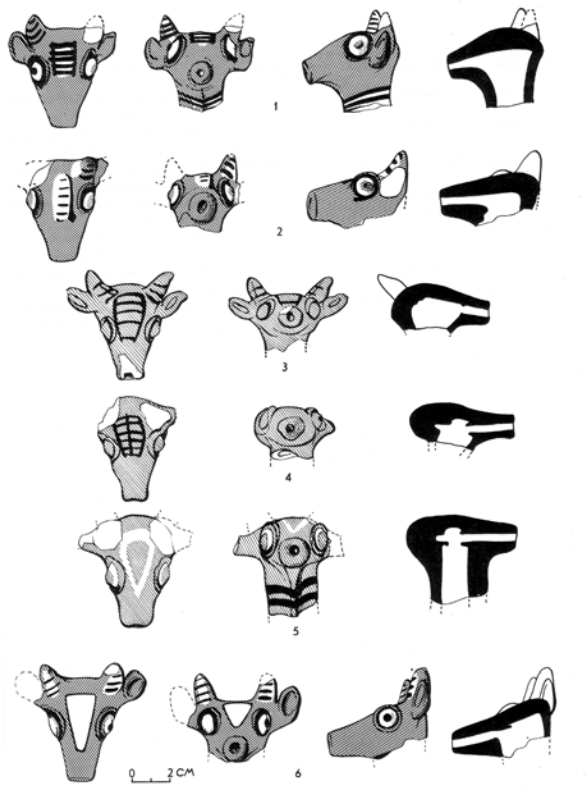

Figure 17: *Bull-headed spouts, Ashdod.(M. Dothan 1971a:fig. 69)*

with most Iron Age Levantine examples, ceramic. The two ceramic Levanto-Helladic rhyta from Ugarit are exceptions, but they are rigidly Mycenaean in decoration with their overall design very unique (Zevulun 1987:fig 6). The stylised 'roaring' features of the Philistia lion cups (mouth open, fangs bared and protruding tongue) again follow Near Eastern artistic tradition, as does the palm tree motif applied to the Tel Qasile cup's handle. T. Dothan (1982:229-234) has divided Canaanite zoomorphic cups into two different types: those modelling natural/realistic features (Figure 14), and those with abstract/naïve features (Figure 6). The Tel Qasile and Ekron cups are examples of abstract design. The function of these zoomorphic cups is primarily cultic; the Tel Qasile cup was found in favissa 125 beside the female anthropomorphic vessel and other cultic items. Indeed, most Canaanite zoomorphic cups are found within temple contexts. Perhaps most important is the depiction of a Canaanite cup on a Megiddo ivory (Figure 15) and an Ugaritic alabaster vessel (Zevulun 1987:fig 10), both displaying clear ritual ceremonies. The dedicatory inscription to a Canaanite god on a naïve style Ugaritic cup (Zevulun 1987:fig 9) is further confirmation of their ritual use. These zoomorphic cups are clearly a Levantine cultic tradition.

Most, if not all, of the many animal-headed spouts recovered from Tel Qasile (Figure 16), Ashdod (Figure 17) and Ekron belong to ring vessels known as kernoi.52 The kernos is a hollow pottery ring, usually under 10 inches in diameter, upon which zoomorphic spouts are set in communication with the hollow ring (Figure 18). Some Near Eastern kernoi have a combination of animals, jars and pomegranates set along the ring (all common fertility symbols), but the Philistia kernoi appear to be exclusively zoomorphic. The animals featured include goats and gazelles, birds, and the abundant bulls. How exactly the kernos was used remains uncertain, though conceivably liquid was poured into the

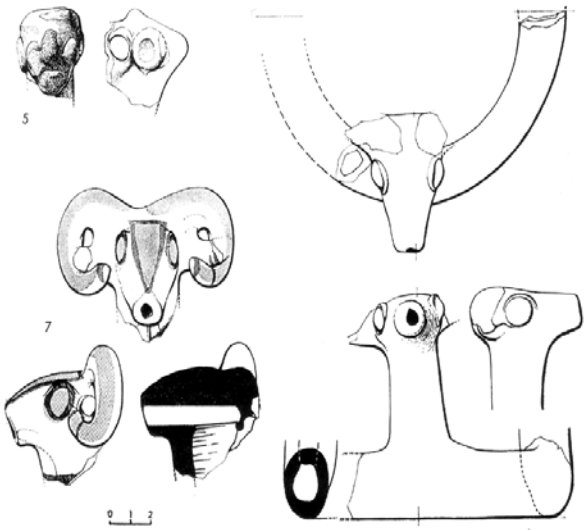

Figure 18: *Zoomorphic spouts, Ashdod. (Dothan and Freedman 1967:figs 47.6-7)*

hollow ring, shaken up and poured out in the course of religious ritual. The origin is still debated, with the Aegean (T. Dothan 1982:224) and the Ancient Near East (Furumark 1941:67-70). However, kernoi are rare amongst Mycenaean tradition while relatively common in second millennium BCE Cypro-Palestine (Nilsson 1950:113-120; Demetriou 1989:41-42). Therefore, they appear to be borrowed from non-Aegean ritual traditions.

Closely related to the kernos is the so-called 'hollow-rim bowl', or kernos-bowl, from Tel Qasile's Temple 131 (Figure 19). Hosting both an internal and external zoomorphic (bull) spout, it is similar in design to one found at Beth-Shemesh (Figure 20), though the Tel Qasile example

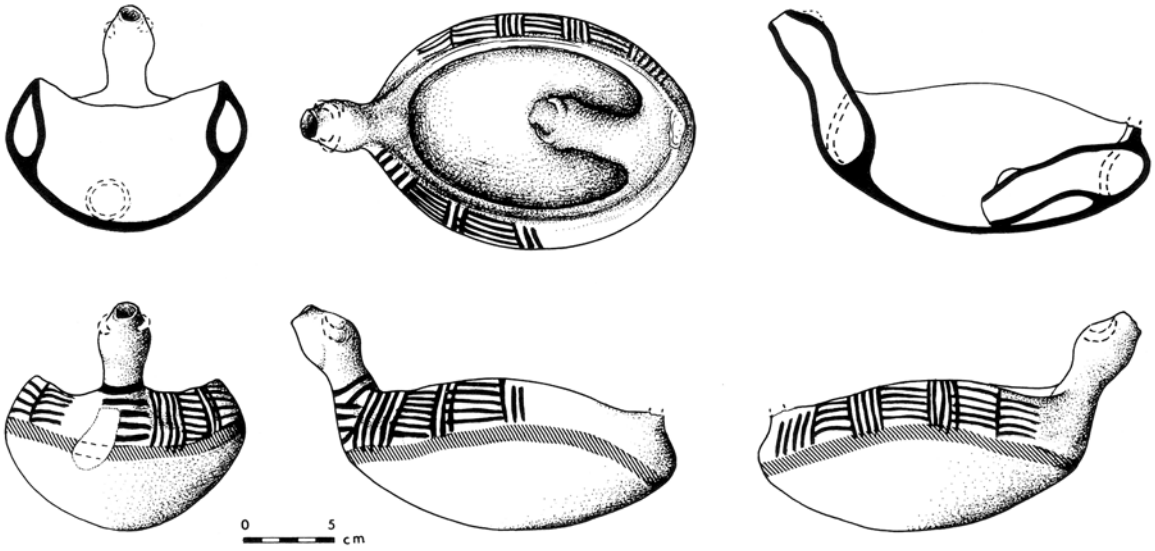

Figure 19: *Kernos-bowl, Tel Qasile Stratum X. (A. Mazar 1980:fig. 39.a)*

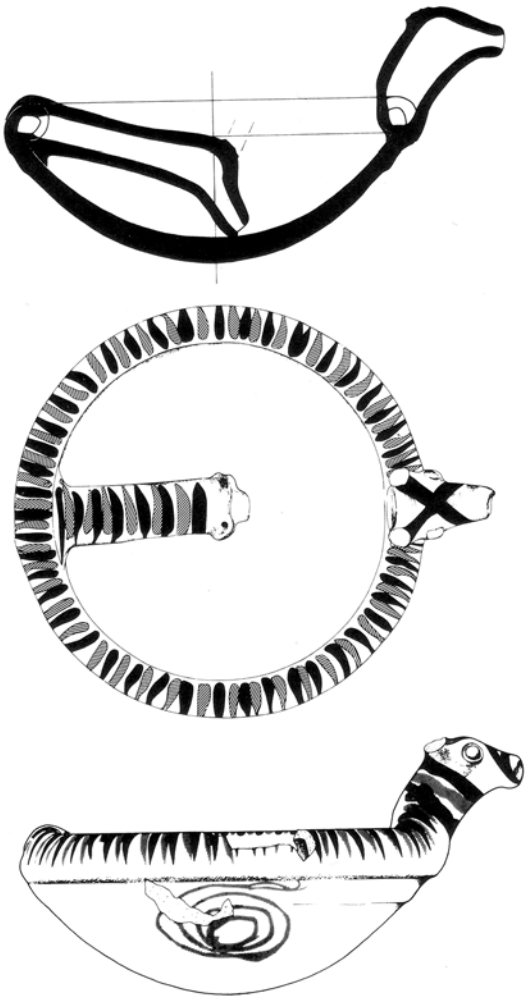

Figure 20: *Kernos-bowl, Beth Shemesh. (T. Dothan 1982:fig. 4, 226)*

is more oblong than round (A. Mazar 1980:106-108). Hollow-rim bowl fragments from Ashdod and Tel Qasile could also be further examples of kernos-bowls (Dothan 1971a:figs 58:29-30; Mazar 1980:fig 39b). The external bull's head served as a spout, whereas the internal head

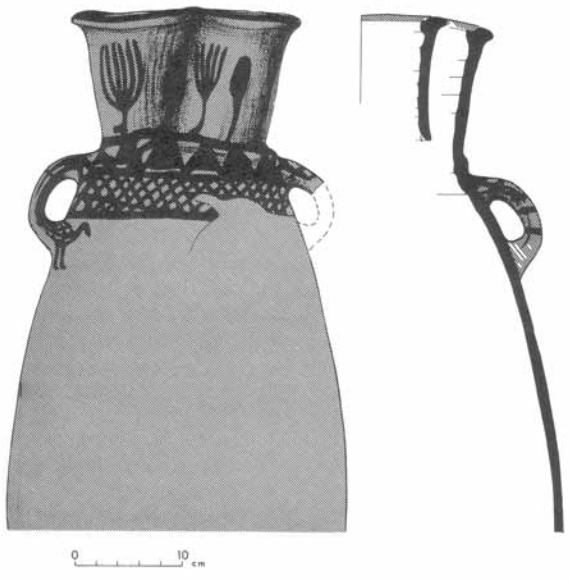

Figure 22: *Cultic 'pot-plant,' Tel Qasile Stratum X. (A. Mazar 1980:fig. 38)*

slanted downward as if drinking from the bowl. If the outer spout were sucked, any liquid inside the bowl would be drawn into the hollow rim through the 'drinking' bull and out through the spout. The exact ritual function, however, is difficult to assess, though clearly designed for a form of libation.

Although libation vessels predominantly incorporate anthropomorphic and zoomorphic components, plants also play a role in the cultic repertory of Philistia. A composite libation vessel found in Tel Qasile's Temple 131 appears to incorporate figs, or possibly citrus fruit or pomegranates, into its form (Figure 21). The vessel is composed of a long tube with six elliptical, hollow fruit attached to the tube's base. The lack of parallels for this vessel may leave its exact function in doubt, though the communication between fruit and tube suggests a libation design (A. Mazar 1980: 104-105). The fertile symbolism of fruit and the vessel's recovery from within a temple confirm ritual association. Another plant-inspired vessel associated with

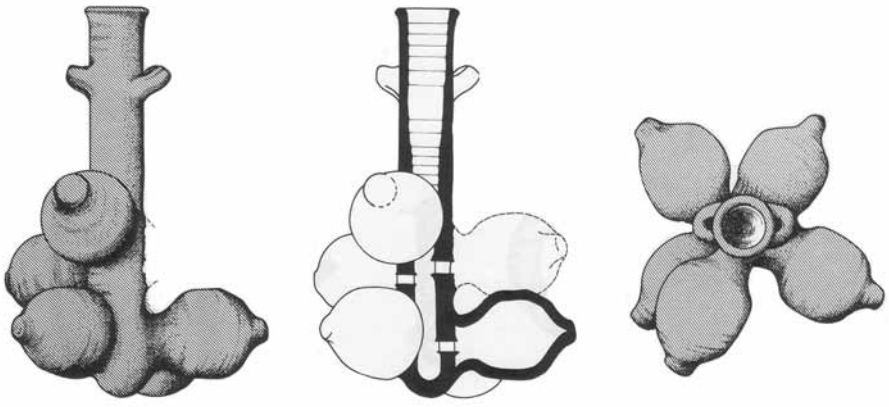

Figure 21: *Composite libation vessel, Tel Qasile Stratum X. (A. Mazar 1980:fig. 37)*

libation was found close to the composite libation vessel. It is a large, two-handled jar with a neck composed of an inner cylinder (diameter 11cm) and surrounded by four kidney-shaped openings (Figure 22). It has no known parallels. The neck's exterior is decorated with a schematic plant design of alternating open and closed papyrus, or lotus, plants, clearly of Egyptian inspiration. The exterior plant motif is rare on large vessels. A small stylized bird decorates the lower neck near one of the handles. The function is again difficult to assess, but is possibly a container for liquids or sacred plants, which could have been the focus of specific libation rituals.

Given that so many cultic vessels are associated with libation; breast-spouted woman, lion-headed cups, kernoi and kernos-bowls, this form of offering must have played a significant role within the liturgy of Philistia. Nevertheless, the exact nature of these libations and associated liquids still eludes us.

Cult Stands and Bowls

The cult stands found at Tel Qasile and Ashdod are similar to those found throughout the Near East and are known to be closely associated with ritual offerings and libations (A. Mazar 1980:87-96). The three high cylindrical cult stands found grouped together in Tel Qasile's Temple 131 (Figure 23) closely resemble two Palestinian stands from Late-Bronze and Early-Iron strata at Tel Shera (A. Mazar 1980: 93). This stand type (open-ended cylinders) is unknown in the Late Bronze Age Mycenaean-Cypriot worlds. The three Tel Qasile stands, therefore, clearly represent local cultic traditions. The decorative patterning, on the other hand, has no discernable parallel and may be a local innovation. Each stand was topped with a cult bowl, occasionally modelled after a bird (ornithomorphic) (Figure 24), which could be used to serve sacred meals. The horizontal-banded stand (Figure 23) most likely held the bird-shaped cult bowl (Figure 24) found lying near

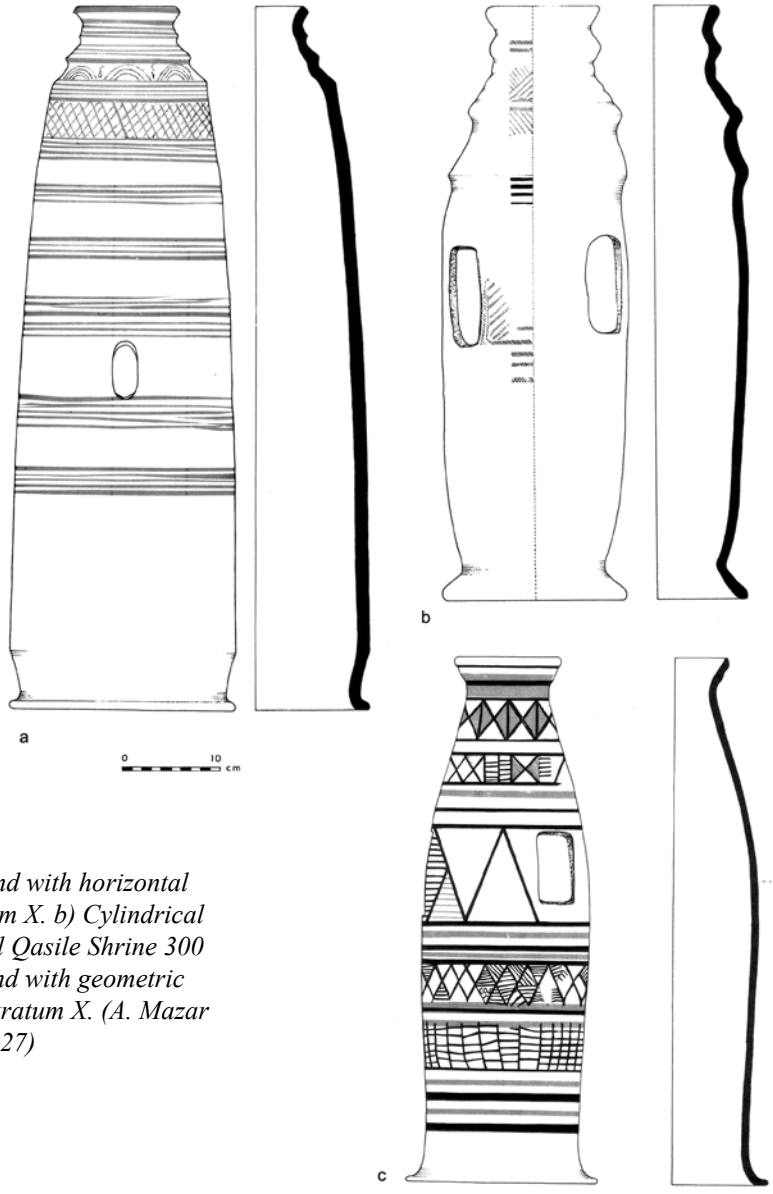

Figure 23: *a) Cylindrical cult stand with horizontal bands, Tel Qasile Shrine 300 Stratum X. b) Cylindrical cult stand with worn decoration, Tel Qasile Shrine 300 Stratum X. c) Cylindrical cult stand with geometric decoration, Tel Qasile Shrine 300 Stratum X. (A. Mazar 1980:figs. 25, 26 & 27)*

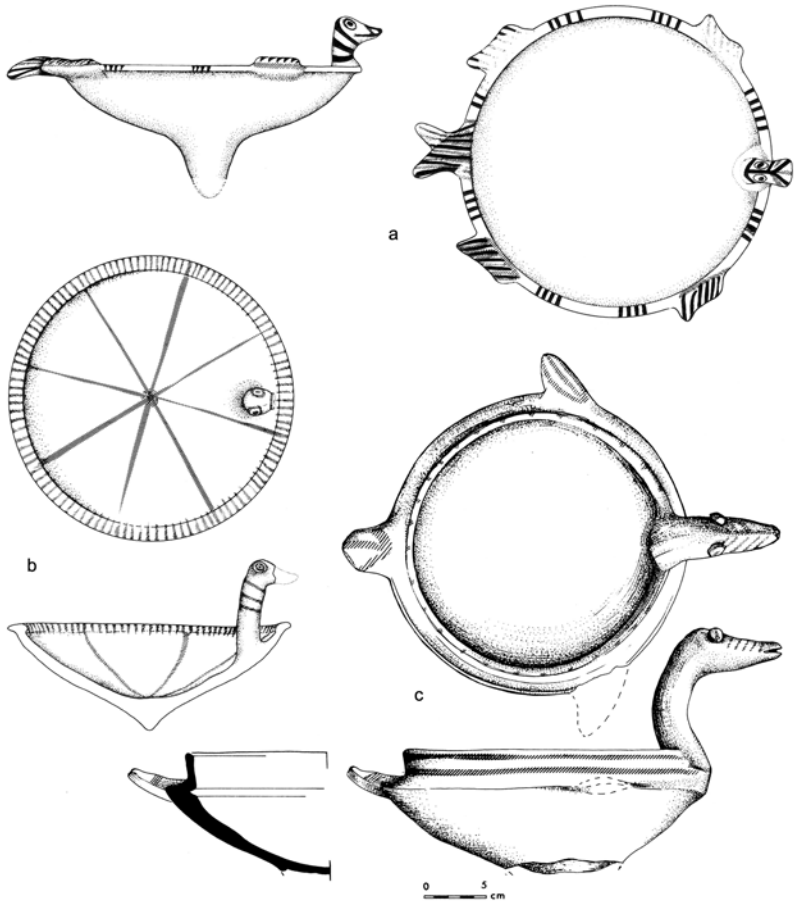

Figure 24: *Bird-shaped cult bowls, Tel Qasile. a) Stratum X, b & c) Stratum XI-X, (A. Mazar 1980:figs 28, 29, 30 & 32)*

its rim. Similarly, the stand found between the other two (Figure 23) probably held one of the two cult bowls found nearby, one again being ornithomorphic (Figure 24). Bird-shaped bowls have also been found at Ashdod, though the evidence there is more fragmentary (M. Dothan 1971a:figs 92.1-5). Representations of birds have a long history in the Aegean (Dothan and Dothan 1992: 51) and Near East (Macalister 1911:121), and are well attested at many sites. Nevertheless, the continuous recurrence of the bird motif in different facets of Philistia's cultural practices is striking. Ornithomorphic bowls recall the bird motif common to 'Philistine Bichrome' pottery (Figure 25). Apparently birds, or bird-like traits, held significance for this culture, possibly iconographic, and was conceivably worshipped.

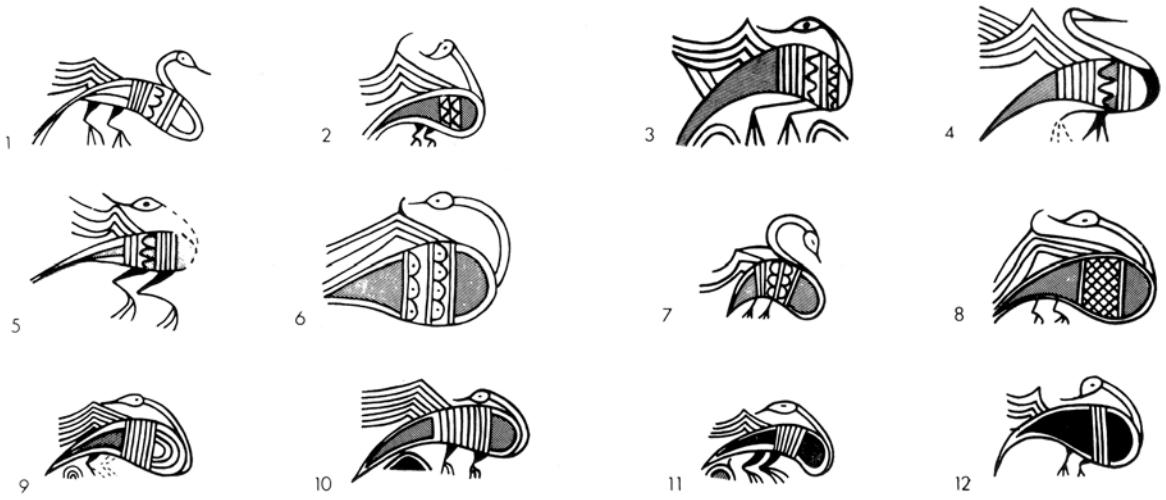

Figure 25: *Philistine bird motif. (T. Dothan 1982:fig. 61, 201)*

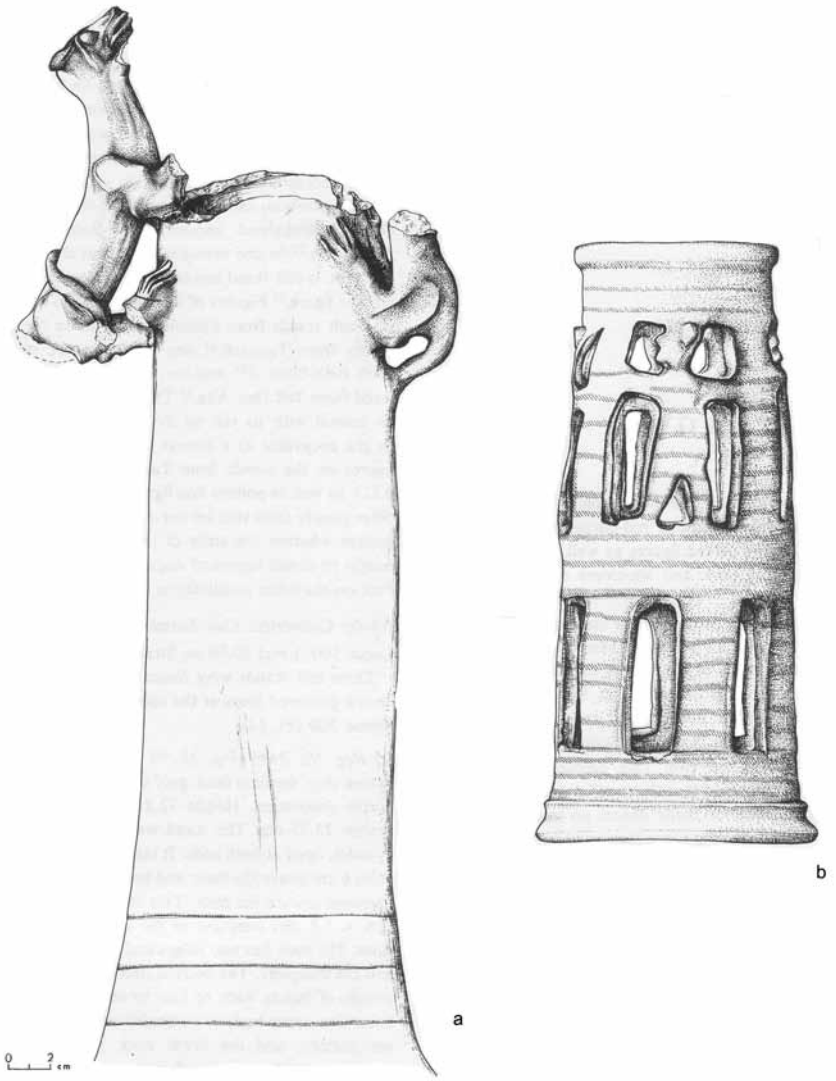

Figure 26: *a) Lionesses cult stand, b) Dancers cult stand, Tel Qasile Stratum X. (A. Mazar 1980:fig. 24 & 23)*

A fourth cylindrical cult stand was recovered from Tel Qasile's Temple 131 bearing two animal figurines attached to the exterior rim (Figure 26). These animals, possibly lionesses, would have supported the stand's cult bowl (A. Mazar 1980:90). Though Near Eastern parallels exist for zoomorphic cult stands, this is the only known example from Philistia. A fifth cult stand from Temple 131 is ornamented with four human figures standing in procession with outstretched arms (Figure 26).

Rather than being modelled in the round and applied to the stand's cylinder, like the lionesses, the figures were created by cutting windows out of the cylinder's walls. The motif of a procession of human figures with outstretched hands ('marching men') is well known in the Levant and has been interpreted as a procession of cult dancers. Human representation on cult stands, however, is rare; with only two other examples existing, one of which is from Ashdod. This so-called 'Musicians Stand' features five musicians and three animals parading around the stand's tall cylindrical body (Figure 26). Four of the musicians are modelled in the round and stand in window-like openings, whereas the largest was made in the same cut-out technique as the above 'Marching Men Stand'. Each of the figures plays a musical instrument which have been interpreted as cymbals, pipes, a drum (or tambourine?) and a lyre. Once again music and musicians are part of the liturgy and worship amongst the residents of Philistia. The presence of cult musicians recalls biblical reference to Philistine prophets whom Saul is instructed to seek (1 Samuel 10:5). Cult musicians, however, are not unique to 'Philistia'; Jerusalem had its share of Levite musicians in Solomon's temple (2 Chronicles 6:12; Psalm 68:24-25). Apparently music was an important component of cult and ritual meals within Philistia.

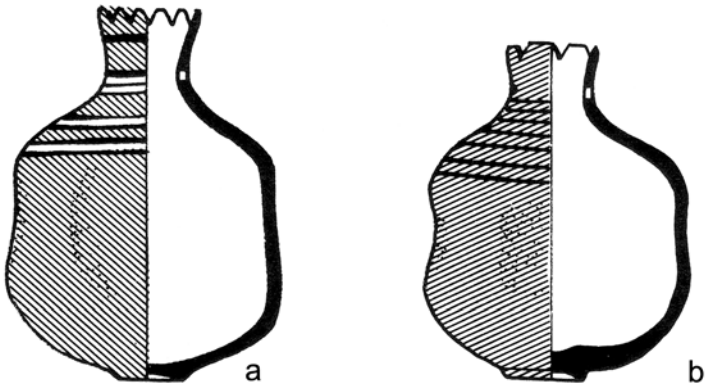

Figure 27: *Pomegranate-shaped vessels, Tel Qasile. (A. Mazar 1980:fig. 46)*

Other ceramic equipment

Two very distinct pomegranate vessels recovered from Tel Qasile (Figure 27), and a third from Ashdod, have cultic associations; pomegranates were a popular fertility motif within Late Bronze and Iron Age Egypt and Canaan (A. Mazar 1980:116). The two small holes pierced in each vessel's neck were for display, or possibly aided their ritual functional. Various zoomorphic figurines and vessels are also evident and confirm the prominence of animals within the cult. These figurines were possibly symbolic of particular deities or divine attributes. Animal figurines from Tel Qasile and Ashdod include horses,53 horned ram-like animals,54 dogs55 and bears.56 While the horse was a popular Aegean and Cypriot image, the dogs and bears are both unusual and difficult to parallel, especially considering their ambiguous features (Catling 1974). An incomplete ornithomorphic vessel found at Ashdod resembles the 'bird-rattle' recovered from the Gezer cache with its pierced back, designed for hanging, and askoid shape reminiscent of Cypriot and Mycenaean vessels (M. Dothan 1971a:fig 72.2; 1982: fig1.1,220; Furumark 1941: 67). The unusual form of this artefact makes its function difficult to determine.

In addition to libation and food offerings, votive offerings also played an important role in ancient cult. Numerous miniature vessels recovered from Tel Qasile, Ashdod and Ekron have been interpreted as votive vessels.57 The use of miniature vessels for votive offerings in Near Eastern and Cypriot contexts is well documented (A. Mazar 1980: 117-118). A ritual interpretation is supported by the significant amount of luxury items deposited in the Tel Qasile temples, including beads and vessels of alabaster, ivory and metal. There are also huge concentrations of ceramic bowls within the Tel Qasile temples reflecting the deliberate deposition of certain goods; i.e. votive offerings (A. Mazar 1985a:24-30).

Other ceramic finds of cultic importance include the numerous loom-weights of unbaked clay found within the cultic buildings at Ekron, Ashdod and Ashkelon (T. Dothan 1990: 31; Dothan and Porath 1993; Stager 1995). Reminiscent of loom weights found in Cypriot and Aegean temple precincts, these small cylinders are indicative of cultic weaving activities. Indeed weaving industries were often associated with temple precincts, either making vestments for the cult image or the priests (2 Kings 23:7). The discovery of anthropomorphic and zoomorphic mask fragments at Tel Qasile exemplifies the ritual costume and dress, and possibly drama. Similar human-face masks from Cypriot and Canaanite temples represent the worshipper's desire to enter into direct relationship with the deity; wearing a god's emblem would secure a divine experience (Karageorghis 1976:102-107). While anthropomorphic masks can be considered relatively common in the ancient near east, zoomorphic masks are rare. Some examples do exist; the Mesopotamian Humbaba masks (Barnett 1960:147-148), Cypriot bull-skull masks (Karageorghis 1971) and the Egyptian Bes masks (Wilson 1975), but any similarities are in nature, not style. The zoomorphic examples from Tel Qasile have been tentatively identified as representing lions.

Metal equipment

Despite the huge repertory of ceramic equipment, some metal artefacts have also been found to be associated with cult in Philistia. Miniature cast-bronze wheels recovered from Ekron and Tel Qasile have been identified as part of mobile cult stands (A. Mazar 1986:13-14; T. Dothan 1990:30). The tiny eight- and six-spoked wheels, from Ekron and Tel Qasile respectively, are unknown in Palestine. Instead, parallels are found in mobile cult stands and model chariots from Cypriot temple contexts (Figure 28) (Catling 1964:208-210). A fragment of cast-bronze frame, with a loop for the insertion of an axle, was also found near the small Ekron wheels. These small wheels constitute the first cases of mobile cult stands being found in Palestine documenting Cypriot influence on local cult.

Another metal artefact with possible cultic significance is the bronze axe-adze from Tel Qasile (Mazar 1985a:fig 1.1). While such implements are rarely considered cultic in nature, the recovery of this specimen from within a clear temple context implies a ritual function. This axe-adze is

Figure 28: *Cypriot mobile cult stand. (Dothan and Dothan 1992:249)*

also often cited as an unmistakable indicator of an Aegean heritage for the people of Philistia; similar artefacts have been found in abundance throughout the Aegean. However, the origin and diffusion of this axe-adze type is not firmly established and may represent an eastern influence on the Aegean.

Knives were also among the metal artefacts recovered from the Tel Qasile and Ekron cultic contexts (T. Dothan 1990:28-31; A. Mazar 1985a:6-8). One Ekron example, an ivory ring-shaped pommel handle with traces of an iron blade, was found near the ritual burial of a decapitated puppy. The two others from Ekron were recovered from the subsidiary cult rooms of Building 350. The Ekron examples all have ivory handles attached to iron blades fastened by bronze rivulets (T Dothan 1995:fig 3.18). Though this knife type is rare in the Levant, another example was found in Tel Qasile's Temple 319 (Mazar 1985a:fig 2.1). The elegant craftsmanship, exotic nature and notable context of these knives confirm their cultic associations. Bimetallic knives with ivory pommel handles have their closest parallels in Cypriot temples. Another similar knife was excavated at Perati on the Greek mainland, but there is associated with a funerary, rather than temple, context (Iakovidis 1984:90). All together the knives, mobile cult stands and axe-adze are important for understanding Cyprus influences upon Philistia.

Organic materials

In addition to manufactured metal and ceramic implements, organic materials were sometimes modified for ritual use. Several incised bovine scapulae (shoulder blades) were recovered from one of the Ekron shrines (Figure 29). Well-known from shrines in Cyprus, bovine scapulae are regularly associated with public divination rituals, oxen sacrifice and ritual musical instruments (Schaeffer-De Chalon 1971:258). Indeed, soothsaying and divination are known cult practices among the biblical Philistines (1 Samuel 6:2) and Ancient Near East (Brug 1985:183). The clear cultic function of incised bovine scapulae also indicates the relative importance cattle held amongst Ekron's Iron Age community (Hesse 1986:23-25). Two triton shells found in Tel Qasile's Temple 200 are also possibly associated with cult; the practice of using triton shells as horns is well known in Minoan cultic contexts (A. Mazar 1980:118). Nevertheless, the context of these two horns is ambiguous and, therefore, uninformative.

When re-considering the above cultic equipment as a whole, some tentative observations can be made regarding the nature of ritual across Philistia. While biblical references to Philistine gods portray a male pantheon, interestingly only female cult images have been recovered from sites within biblical Philistia. Nevertheless, the apparent discrepancy between the biblical and archaeological record is more informative than problematic. Music clearly played an important role, as evidenced by the Musician

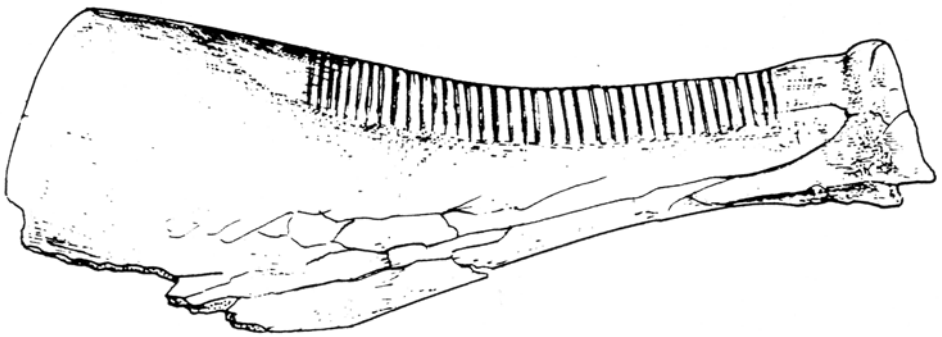

Figure 29: *Incised bovine scapula, Ekron. (Dothan and Dothan 1992:242)*

Stand, lyre-player seals, lyre-player figurine, incised bovine scapulae and conch-shell horn, with dramatic dance probably accompanying the music, as suggested by pottery masks and the Dancers Stand. Offering, in whatever form, was also prominent; note the abundance of votive vessels, cult stands, animal bones, libation vessels, luxurious deposits, broken figurines and metal knives. Fertility (pomegranates, breast-spouts, zoomorphic-spouts), birds (ornithomorphic bowls, pottery motifs) and cattle (scapulae, bull-head spouts) were also important motifs.

Concluding remarks

What was immediately discernible within the religion of Philistia, like 'Philistine Bichrome' pottery, was the syncretistic fusion of many different cultural elements. Religion here primarily incorporated public ritual and held a strong emphasis on participation. The use of sacrifice, offerings, musicians, dancing, meals and priests all confirm that collective participation was expected. Yet, despite these insights into outwardly visible aspects of local ritual, very little is known conclusively about the underlying belief systems. Ultimately theology is elusive, primarily because the material culture currently lacks written texts, but also because of the limited excavation of sites within the Philistia hinterland.

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Acknowledgements

This research was originally presented as a fourth-year undergraduate paper to the University of Melbourne. Thanks are due Assoc. Prof. A.G. Sagona, Mrs M. Whincop and Dr. G. Jenkins for their discussion of the topic. Nevertheless, I alone am responsible for any inadequacies herein.

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5 Cf. Bunimovitz (1990), 213; Wright (1959), 61; Sandars (1978), 167; Brug (1985), 212.
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11 A. Mazar (1980), 24-28.
12 A. Mazar (1980), 33-43; (1973a).
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14 A. Mazar (1973a), 47.
15 Cf. A. Mazar (1992), 322; (1980), 65; Stern (1984), 32-3; Bunimovitz (1990), 214.
16 Brug (1985), 189.
17 A. Mazar (1980), 62; (1992), 319-320; (1992b), 182.
18 A. Mazar (1980), 68; (1992), 177; T. Dothan (1982), 251.
19 A. Mazar (1980), 73; (1992b), 179.
20 A. Mazar (1980), 70; Schaeffer-De Chalon (1971), 152.
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25 A. Mazar (1980), 67. Also, Cf. A. Mazar (1992b), 182; Bunimovitz (1990), 214; Negbi (1982), 179; (1988); Cadogan (1998), 8; Karageorghis (1976), 170; Brug (1985), 185-9.
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Brief Communication

Places Hidden in the Old Testament

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DOI: https://doi.org/10.62614/g10wkc85

The Old Testament contains some 8,500 proper names, of which several thousand are place names. The overwhelming majority of these place names have been identified as place names and have been translated as such.

In this article I hope to look at two examples where the traditional Hebrew text of the Old Testament may conceal a hidden place name, and briefly comment on an example of the process in reverse.

The text of the Hebrew Bible was originally written with the consonants only. It is this form of the text that we meet in the Dead Sea Scrolls for example. In the fifth and sixth centuries AD a group of Jewish scholars became alarmed at the diminishing use and understanding of Hebrew so they added a series of vowel points under the consonants, so as not to break up the consonantal text, which they regarded as sacred. These scholars were called Masoretes and the text they produced "Masoretic" from the Hebrew word "*masorah*" meaning "tradition". It is this "Masoretic text" that is used to translate the Old Testament.

As the Masoretes added the vowel points to preserve the pronunciation they were inevitably forced to make judgements as to how the text should be interpreted. When they came across consonants corresponding to well-known words it was inevitable that they should try to make sense of these consonants as a representation of that well-known word, but the word in fact may have been a proper name, the significance of which had already been lost.

A couple of examples illustrate the point:

1) Numbers 22:4b-5a The Moabite King Balak summons the false-prophet Balaam.

> *"So Balak son of Zippor, who was king of Moab at that time, sent messengers to summon Balaam son of Beor, who was at Pethor, near the River, in his native land." (NIV)*

The phrase translated "in his native land" is *'eres b^{e}ne 'ammo* in Hebrew, "land of the sons of his people". That Balaam should be summoned from his native land is far from remarkable, furthermore, the phrase occurs without any preposition, the "in" of the *NIV* is an addition. This should provoke us to seek an alternative.

The River in question was the Euphrates. We know from the statue (now in the British Museum) of King Idrimi (1480-1450 BC) of the Syrian city state of Alalakh, of the existence of an area named Amaw. Idrimi states that he ruled over "Mukishhi, Ni' and Amaw" (Smith 1946:14-16 lines 23 & 37). The latter being the region of the Sajûr valley between Aleppo and Carchemish on the Euphrates and should not be confused with Amaw in Egyptian texts which is a gold bearing region in north eastern Sudan (Albright 1950:16 n.13). Since the daghesh, the dot that doubles the *m*, and the vowel *o* are the Masoretic attempt at pronunciation, the Hebrew *'ammo* could easily be revocalised *'Amaw*. This interpretation is adopted by *RSV*, *NRSV*, ERV, *NEB*, REB, *JB*, NJB, *GNB*, and *Français Courant*.

So it seems better to read "*He sent messengers to Balaam son of Beor at Pethor, which is on the Euphrates, in the land of Amaw, to summon him*." as *NRSV*.

2) 2 Kings 19:13 parallel Isaiah 37:13. Messengers of Sennacherib King of Assyria (705-681 BC) try to persuade Hezekiah King of Judah to surrender.

> *"Where is the king of Hamath, the king of Arpad, the king of the city of Sepharvaim, or of Hena or Ivvah?" (NIV)*

It is odd that Sepharvaim is singled out for city status. In fact the Masoretes seemed to doubt this as they vocalised the word as *la'îr*. The so-called construct "city of" form would be *l^{e}îr*. Their pointing indicates that they understood it as a city name. *Lair* actually corresponds to a city known as *Lahiru* in Assyrian texts and *l'r* in the correspondence of Arsames the Persian satrap of Egypt in the late fifth century BC. This town is in the foothills of the Zagros mountains (Driver 1954:21a) and would fit well with the other towns mentioned in the verse which were conquered by the Assyrians.

This rendering is followed by the *Jewish Publication Society's Tanak* which reads:

> *"Where is the king of Hamath? And the king of Arpad? And the kings of Lair, Sepharvaim, Hena, and Ivvah?". So also REB, NJB, Français Courant.*

Having looked at a couple of examples of words pointed as nouns hiding place names, we should also note that the

converse is also observable in the Old Testament, namely a word now understood as a place name could represent an ordinary noun.

Ezekiel 27 describes Tyre's trading partners in 586 BC (See Ezekiel 26:1).

The Masoretic text of Ezekiel 27:19a reads *w^{e}dan w^{e}yawan m^{e}'ûzzal*, which the *NIV* translates as "Danites and Greeks from Uzal". A slight change of the vocalisation to "*w^{e}dane yayin me'ûzal*" reads "and vats of wine from Uzal" (Millard, 1962, 201-3). Uzal corresponds to an area known in Assyrian texts as Izalla, the wine producing Tur Abdin area south of the Turkish town of Mardin. The wine of that area was renowned in the Ancient World. For example the Babylonian king Nebuchadnezzar (605-562 BC) received wine from that area (Millard 1980:1615a).

In conclusion, it is important that we see the question in perspective. The above examples are the *only* ones I have gleaned from a careful reading of the Hebrew Old Testament, these are the interesting exceptions that prove the rule, namely that the Masoretic text is a reliable text to use in translating even the smallest details of the Hebrew Old Testament.

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Review

Jennifer M. Webb, *Exploring the Bronze Age in Cyprus. Australian Perspectives*, Museum of Antiquities, Maurice Kelly Lecture, University of New England, 2002 (36pp).

Reviewed by Kathryn O Eriksson

This lecture was the fifth in a series of public lectures established to honour Dr Maurice Kelly and to recognise his vision in establishing in the 1950's the Museum of Antiquities at the University of New England - the only archaeological museum at a non metropolitan university in Australia. The Museum has acquired quite a significant collection of Cypriot artifacts since it was established.

Dr Webb's presentation, like the previous four lectures, was published as a separate volume by the University. In her lecture Dr Webb presented to the public what is "…a remarkable story to be told of the relationship between Cyprus and Australia with regard to the archaeology of the Bronze Age…".

The lecture, in fact, focused mainly on the Early Bronze Age (c. 2400-2000 BC), drawing particular attention to the development of scholarly debate regarding the marked transition from the Chalcolithic period to the Early Bronze Age. Dr Webb is not only well qualified to participate in this debate, but has also been the co-director of the Australian Cyprus Expedition with Dr David Frankel, that between 1991-2000 excavated the Early to Middle Bronze Age settlement site of Marki – *Alonia* in central Cyprus.

Webb and Frankel are among the more recent Australians to elucidate this period through fieldwork, an endeavour begun by the late Professor J.R.B. Stewart who we recognize as establishing the Australian archaeological presence on the island. His intensive fieldwork was conducted through the 1930's till the early 1960's and was interrupted only while he was a POW in Germany after being captured in Crete, where he served with British forces.

In her lecture Webb gives a brief history of Stewart's career, with particular focus on his first excavations in Cyprus at the Early Bronze Age cemetery of Vounous carried out before WWII. Whilst a POW he managed to work on the publication of this site by acquiring books as Webb details and also by trading cigarettes to obtain German archaeological reports. After the war he came back to Australia and in 1960 became the first Edwin Cuthbert Hall Professor of Middle Eastern archaeology at the University of Sydney where he had been teaching since 1948. He carried out two more field excavations of cemetery sites in Cyprus, in 1955 at Vasilia and Ayia Paraskevi and in 1961 at Palealona and Lapatsa near the village of Karmi. His untimely death in 1962 at the age of 48 was a great loss.

Stewart was able to bring back to Australia many of the artifacts from his fieldwork as well as items he acquired from antiquities dealers. As Webb indicates in more detail the gradual dispersal of these materials, largely in Australian museums has meant that there has been a continuing focus on the archaeology and history of the island of Cyprus. The New England Antiquities Museum has an inventory of 185 Cypriot objects which includes the bulk of Stewart's private collection, acquired by the museum from his widow, Mrs. D. E. Stewart. Dr Webb has published this material (1997 & 2001a); as well as Cypriot material from other Australian collections (2001b).

As presented in this article and in more detail elsewhere the finds from Webb and Frankel's excavations at Marki illustrate village life on the island from the beginning of the Early Bronze Age well into the Middle Bronze Age. Artifacts of the so-called Philia culture were discovered in the stratigraphic excavation and thus the fieldwork at this settlement site, as opposed to cemetery excavations, has helped to further understand this culture. As Webb elucidates, the term Philia culture was invented when a distinct body of artifacts considered to represent a separate cultural entity were turned up in cemetery excavations at Philia carried out by the Cypriot archaeologist Porphyrios Dikaios. Dikaios also found the distinctive artifacts at the cemetery of Kyra, and Stewart found similar material in his excavations at the cemetery site of Vasilia and in some of the tombs at Ayia Paraskevi.

Both men had differing opinions about the Philia culture and its place in the known sequence of Cypriot cultural development. Their differing views were presented in Volume IV, Part IA of the *Swedish Cyprus Expedition*. Webb explains how Dikaios, whose thinking was embedded in a sequential approach to cultural development, perceived the Philia culture as a cultural entity that should predate the earliest tombs at Vounous that was then considered to be normative Early Bronze Age culture. In contrast, Stewart considered the Philia culture material to be contemporary with the Early Bronze Age material from Vounous, thus presenting it as an indigenous contemporary regional development . As Webb explains, the contributions made by Dikaios and Stewart to the *Swedish Cyprus Expedition* were published "…in 1962, some months after Stewart's death, with the Philia culture identified in Dikaios' section as a transitional phenomenon between the Chalcolithic and the Early Bronze Age, and in Stewart's section as a regional variant of the fully fledged Early Bronze Age."

The excavations at Marki have now provided important cultural material that allows further examination of Dikaios' and Stewart's differing opinions about the origin of the Philia culture, Dikaios seeing it as having laid the foundation for Early Bronze Age Cyprus and noting obvious connections with Anatolia which were to him highly suggestive of cultural intrusion or population movement into Cyprus. Stewart, on the other hand, seeing in it a restricted regional variant contemporary with Early Bronze Age developments, a development that grew out of the preceding Chalcolithic culture, thus regarded the Philia culture as having a distinctive, but similar, character which was ultimately absorbed. Thus, as Webb says, "For Stewart, the Philia culture was an isolated phenomenon with an indigenous past and no future. For Dikaios, on the other hand, the Philia culture was a major new development of external origin which stood at the head of the entire Bronze Age sequence."

What Marki, and settlement excavations at two other Early – Middle Bronze Age settlement sites on the island, Alambra and Sotira, reveal is the importance of stratigraphic excavation for understanding not only the sequence, but the lifestyle and influence of these ancient villagers. According to Webb, "The stratigraphic sequence at Marki shows beyond doubt that the Philia culture is chronologically earlier than, and culturally ancestral to, the normative Early Bronze Age sequence. It therefore confirms Dikaios' view that the Philia culture stands at the head of the Early Bronze Age…".

The site has also revealed that Dikaios was correct in his belief that the Philia and Early Bronze Age culture show an external, western Anatolian origin. Frankel and Webb's work has shown that the architecture and burial practices have closer links to Anatolia than to the Chalcolithic culture of the island. Other innovations like the type of plough, metal-working, technology of the textile industry as well as the types of hearth and cooking utensils also show connections with western Anatolia. Thus, the excavations at Marki would also indicate "… that Porphyrios Dikaios was also correct in his belief that the Philia culture is an intrusive entity," although there are still scholars who oppose this migration hypothesis in favour of a indigenous development as Stewart had favoured.

The collaborative project headed by Webb and Frankel under the auspices of the Australian Research Council highlights the importance of examining cemetery and settlement together. As Webb reveals here, and especially in the publication reports of the excavations, the material from Marki has provided "…a firm basis for resolving the debate over the origin, chronology and significance of the Philia culture." This publication is highly recommended as a brief introduction to the important role that Australians have played in understanding the cultural developments in Cyprus around the crucial transition from the Stone Age to the Early Bronze Age, and to the importance of cultural infusions and transfer of ideas in stimulating growth.

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