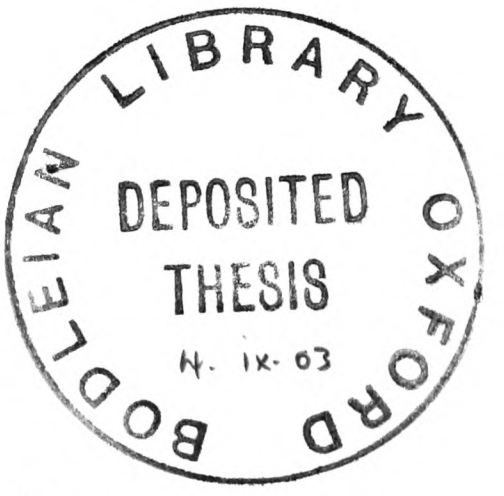
Socio-Economic Aspects of the Byzantine Mosaic Pavements of Phoenicia and Northern Palestine

Mark Wooldridge Merrony

Volume I: Text



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ABSTRACT

SOCIO-ECONOMIC ASPECTS OF THE BYZANTINE MOSAIC PAVEMENTS OF PHOENICIA AND NORTHERN PALESTINE

Mark Wooldridge Merrony

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The present thesis analyzes the Byzantine mosaic pavements of Phoenicia and Northern Palestine from a socio-economic perspective, primarily by examining the laying of pavements including technical aspects and bedding, the quality of decoration, the distribution of pavements in time and space, as well as inscriptions which provide names of donors and artists as well as dates. The approach adopted represents a novel alternative and complement to typical interpretations of mosaic floor decoration which overwhelmingly focus on the development and diffusion of style, or provide an exegesis of figurative iconography. Key aspects discussed include the extent to which chronological patterns of mosaic floor laying may be used to gauge economic conditions; the factors which determined the quality and distribution of technique and decoration in different building types; as well as the social mechanisms of patronage.

Close scrutiny of the regional mosaic Corpus (which includes the total number of pavements) suggests that mosaic pavements provide a reasonable indication of economic conditions, especially in association with other media (coins, pottery,

inscriptions). Together these media paint a historical picture of the economy of the period.

Having graded according to four Levels of Complexity all the geometric designs in the Corpus after their codification following the rules devised by the Association Internationale pour l'Etude de la Mosaïque Antique (AIEMA), and with the support of the written ancient sources, it is demonstrated that quality and distribution of technique and style were governed by a combination of factors, notably function, financial expenditure, social use and various socio-economic categories of patrons, liturgy and liturgical level of participation.

By building on the methodologies followed and the conclusions reached by other mosaic scholars, this innovative approach has attempted to reintroduce the human element into a discipline focused since the late 1960s on codification and descriptive precision. Revealing the hidden costs underlying the laying of mosaic pavements has presented a new insight into mosaic pavements as tri-dimensional products of team work. Likewise, stripping the literary language of dedicatory formulas down to essential information has challenged the misinterpreting of epigraphic evidence regarding donations and donors. In-depth analysis of Christian mosaic inscriptions has strengthened the pattern of changes plotted by historians of the Early Byzantine period and suggested that Christian patronage of mosaic art is to be equated with the local initiatives of the Church, ecclesiastics and wealthy laymen (or women) as private donors, and more rarely entire village communities. By contrast, scrutiny of the Jewish and Samaritan mosaic inscriptions has highlighted the

fact that benefaction emanated from rich and poor alike, and was far more family and community oriented.

PREFACE

My interest in ancient mosaic pavements was sparked off by a visit to the Romano-British *villa* at Fishbourne in Sussex with my parents at the age of seven. My curiosity in the Levantine Byzantine mosaics was strongly influenced as a first-year archaeology undergraduate by Father Michele Piccirillo's great work *The Mosaics of Jordan.* Byzantine mosaic pavements of the Levant constitute such a huge corpus of material that it has been necessary to limit the present study to a relatively small portion of the Byzantine Empire. The choice of Phoenicia and Northern Palestine as the geographical zone of enquiry was influenced by several seasons of fieldwork in the region, and by the fact that these constitute a geo-cultural entity distinct from Syria to the north and the rest of Palestine to the south (Dauphin 1998, I, 69-70).

The decision to study Byzantine mosaic pavements of Phoenicia and Northern Palestine from a socio-economic perspective was prompted by the realization that studies of Graeco-Roman and Byzantine mosaic pavements have overwhelmingly been restricted to stylistic and exegetic interpretations, this creating an imbalance in favour of pure art history as opposed to historical archaeology. Despite a shift towards viewing mosaics as socio-economic indicators in the past three decades, I felt that in order to be completely filled the 'lacuna' necessitated a thorough examination of specific aspects of chronology, technique, decoration and epigraphy. It must be emphasized that my aim has not been to dismantle previous methodologies; rather my study is designed to complement these and to serve as a contribution towards redressing the methodological balance and reintroducing the human element into the discipline.

The argument of the present thesis (Vol. I) is underpinned by a range of data (dates, technique, inscriptions, decoration) provided by the Catalogue of Volume II. Certain aspects of my study, such as viewing mosaics as an economic indicator, and examining the quality and distribution of technique and decoration, have been attempted before on a rather smaller scale by Claudine Dauphin (1980) and Katherine Dunbabin (1978, 1999). Approaching mosaic pavements in a holistic manner such as I have adopted, on the basis of the compilation and examination of a regional corpus is, however, unprecedented in mosaic studies.

The geometric decoration is described in Volumes I and II according to three systems of codification and is graded according to four levels of complexity. These are listed in Appendix I. Tables of concordance between the three systems of geometric codification are provided by Appendix II. Appendix III presents each pattern in a graphic manner. (The appendices are to be found in Volume III.)

For reference to academic publications, a composite of the Harvard and Oxford systems which makes use of footnotes was adopted. Extensive references are given in the Bibliography at the end of Volume I.

ACKNOWLEDGEMENTS

My decision to study Byzantine mosaic pavements was inspired by Father Michele Piccirillo's wonderful book *The Mosaics of Jordan* (1993). The conception of the present thesis was primarily influenced by my supervisors Claudine Dauphin and Julian Raby who at times of despondency never failed to encourage me and bring my research to fruition. I humbly acknowledge the advice, kindness and constant support of both great scholars. Special thanks are due to C. Dauphin who kindly allowed me to read her unpublished Ph.D. thesis (Dauphin, 1974) and numerous other articles in the making, and who has devoted a vast amount of time and energy acting as my mentor, answering all questions patiently and commenting in detail on all chapters of the thesis. Thanks are also due to J. Raby who has expended a great deal of time on my behalf during the course of my research and has been both a wonderful teacher and a person of great warmth. I will remember with great affection our unconventional tutorials walking through the grounds of Worcester College. My gratitude to both supervisors is deep for their constant support, advice, patience, and especially belief in my research. Working with Professor Dauphin and Dr Raby has been a privilege.

I am particularly grateful to Jacques Negeur of the Israel Antiquities Authority for permitting me to study the unpublished detailed drawings of mosaic bedding sections at Caesarea and allowing me access to many uncovered mosaic pavements for technical analysis. Thanks are also due to Hava Katz (Chief Curator of the IAA) and Ze'ev Weiss (Co-director of the Zippori excavations) of the Hebrew University in Jerusalem for kindly granting me permission to examine the mosaic pavements of the Nile Festival House at Zippori. I am also very grateful to Tsvika Zuk (Head Archaeologist of the Israel National Parks Authority) for granting me permission to conduct my technical analysis of the synagogue pavements at Beth Alfa and Hammath Tiberias.

Great thanks are due to Sean Kingsley for his kindness in giving me a copy of his D. Phil. thesis (Kingsley, 1999) and many of his fine published articles; Marlia Mango for granting me unrestricted access to her D. Phil. thesis (Mundell Mango, 1984); Derek Goldrei for sharing his mathematical expertise and sacrificing so much of his precious time on my behalf; David Miles of the Oxford University Computing Service for sharing his wizardry; Jane Bruder (in particular) and her colleagues in the Ashmolean Library for their cooperation at all times; William Hodges (in particular) and his colleagues in Duke Humfrey's Library of the Bodleian for their willing co-operation at all times; Stephanie Dalley for her precious editorial advice; and Alison Reeve for her logistical support of various aspects of my research.

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I would like to express my extreme gratitude to Somerville College for accepting me on a D. Phil. programme, and my particular thanks to the Principal, Dame Fiona Caldicott, for her personal support. My College Advisor, Miriam Griffin, the former College Treasurer, Peter Younie and the Domestic Bursar, Susan Cashman, took great care of my well-being. Finally, special thanks are due to my Mother and Father, Betty and John for their constant financial and moral support; and to my wife Sophie, and daughters, Marigold, Hannah and Lily, for their enduring tolerance during the three years of this doctorate.

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CHAPTER I

SOME METHODOLOGICAL CONSIDERATIONS ON THE STUDY OF GRAECO-ROMAN AND EARLY BYZANTINE MOSAIC PAVEMENTS

Mosaic pavements are among the best-preserved remnants of antiquity and represent a vast body of material. Most conspicuously, they are decorated with a wide range of subject matter: geometric motifs, hunting, rural and mythological scenes, personified abstracts, and inanimate objects, as well as inscriptions, the nature of this decoration arousing the interest of the art historian.

For this reason, scholarly research applied to floor mosaics in the course of the twentieth century has tended to be predominantly art-historical as opposed to archaeological. Thus the analysis of floor mosaics has centred on interpretations concerned with the diffusion and development of style or the significance of iconography *per se* as opposed to addressing socio-economic questions. The tendency has been to interpret the art that was created by a certain type of society, rather than the economy that produced it. However, this imbalance has begun to be redressed by scholarship over the past three decades. The present thesis aims to contribute to this trend by further elucidating the socio-economic background of mosaic pavements.

Methodology is important in the study of mosaic pavements. Thus methodological considerations form the central theme of the present chapter, which will comprehensively assess previous approaches to the study of Graeco-Roman and Early Byzantine mosaic pavements. This will indicate specifically where inadequacies and strengths lie in the field of traditional interpretation. The influence of specific methodologies upon subsequent approaches will also be evaluated. Such an appraisal

will place this socio-economic approach in context. The latter part of Chapter I sets out the principal elements of this approach within a temporal and regional framework.

1. Approaches to the Study of Graeco-Roman and Early Byzantine Mosaic Pavements in the Eighteenth and Nineteenth Centuries

Early approaches to the study of Graeco-Roman and Early Byzantine floor mosaics were essentially descriptive. In Britain, for instance, between the seventeenth and nineteenth centuries, antiquarians generally applied a quaint description or fanciful drawing to new discoveries.[1] The drawing and description of one of the *villa* mosaics discovered in 1753 at East Coker, Somerset, may serve as illustrations. The mosaic, now lost, is described in the *Gentleman's Magazine* of the same year and in a contemporaneous drawing[2]: 'a woman dresst, 'tis thought, in the Roman stola with its purple laticlave, or border; another much damaged; which, with the former, each gave a hand to fix the cloaths about another woman, lying on a couch naked to below her waist, and on whom the physician hard by prepared to do some operation by the fire, either cupping or burning able to suit the use of the room.'[3] This anachronistic description[4] is compounded by poor artistic recording. For example, a double row of concentric circles is supposed to reproduce a double guilloche. In addition, the figures in the medallion are represented inaccurately; a landscape is suggested by shading; and, a fourth figure mentioned in the description does not appear.[5]

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[1] Johnson, 1995, 5.
[2] *Gentleman's Magazine*, 1753, 293 quoted by Stupperich, 1980, 290.
[3] Smith, 1977, 146.
[4] Richmond (1963), suggested that the drawing depicts Semele, on the couch, at the moment of giving birth to Bacchus in the presence of Jupiter and Juno. This interpretation has been widely accepted. See also the critique of the original description by Smith, 1977, 146.
[5] Stupperich, 1980, 291.

Such poor recording of Romano-British mosaics prevailed during this period with the notable exception of Samuel Lysons, the eighteenth-century excavator and publisher of many mosaic floors, including those of Woodchester and Bignor. Lysons accurately described mosaic pavements in their architectural contexts which he furthermore engraved in colour faithfully. In common with his contemporaries, however, his approach was essentially descriptive.[6]

Likewise, the approach adopted by antiquarians in the Levant during the same period was predominantly descriptive. Thus E. Renan accurately recorded Byzantine mosaic floors in the Lebanon,[7] and translated and dated associated inscriptions. For example, the nave and aisle decoration in the Church of St Christopher at Qabr Hiram (No.6/1) is described thus: 'un riche enroulement de trente et un médallions représentent des sujets de fantasie (combats d'animaux, scènes rustiques, jeux d'enfants, surtout scènes de la vie agricole). Les deux travées latérales se composent de soixante et quatorze médallions représentant les douze mois, les quatre saisons, les quatre vents et une série d'animaux et de fruits.'[8] Elements of Renan's work do, however, touch upon social relations in his interpretation of the nave inscription (discussed below in Section 4).[9] This early attempt at penetrating the social dimension of floor mosaics was not, however, subsequently followed up by scholars.

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[6] Lysons, 1797; Lysons, 1813-1817. On antiquarian approaches to the study of mosaic pavements, Fowler, 1907; and Morgan, 1886.
[7] Renan, 1864.
[8] Renan, 1864, 609.
[9] This description is also discussed by Dauphin 1978, 22 and 48.

2. Approaches to the Study of Graeco-Roman and Early Byzantine Mosaic Pavements 1900-1940

In the early part of the last century, scholars became more concerned with the evolution of mosaic art. This was perhaps due to two factors, primarily as a conscious reaction to the inadequacy of previous methodologies. Secondly, the body of material was expanding rapidly at this time, and needed to be placed into rational order.

P. Gauckler's "Musivum Opus", written at the start of the twentieth century, is an early attempt at placing Graeco-Roman mosaic pavements into a coherent historical framework through purely stylistic analysis.[10] The interpretative framework applied by Gauckler smacked, however, more of antiquarianism than of scientific enquiry.[11] A more satisfactory approach was applied to the Roman mosaics of Italy by M. Blake, who made sufficient use of the archaeological data, notably masonry fabrics, to provide a reasonable development of chronology, composition and style.[12] Likewise, E. Krüger contextualised the mosaics of Germany with the archaeological material and thus provided a reasonable picture of artistic development.

Indeed, "artistic development" was a recurring theme during the period. It lay at the heart of C.R. Morey's treatment of mosaic pavements in Antioch. Morey was not, however, solely concerned with the development of composition and style, but also with its diffusion to other regions. He argued, for example, that Late Antique mosaics in the East, notably those of Antioch, underwent a process of Orientalization and, in turn, exerted an influence upon the mosaics of the Latin West: 'Hellenic

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[10] Gauckler, 1877-1919, 2088-2122.
[11] For a concise critique of Gauckler's approach, Levi, 1947, 6.
[12] Blake, 1930, 7-160; Blake, 1936, 67-214; Blake 1940, 81-130. A concise evaluation and critique of Blake is presented in Levi, 1947, 6.

education and literature, judging from the shift in artistic taste evinced by our mosaics, was in the fourth and fifth centuries succumbing rapidly to Oriental manners ... The shift to two-dimensional style, to rhythmic composition, to animal subjects and carpet motifs in decoration, are symptoms of atavism, of the gradual relapse of the Hellenic East into ancestral habits.' Moreover, Morey argued: 'The importance of our mosaics in recording the stages of this transformation of outlook and style is the proof they offer that the same phenomenon visible somewhat later in Asia Minor, Greece, Italy, and the Latin West, was due to the influence of Syria and its metropolis.'[13] Morey's work was a precursor to the monumental treatment of Antioch mosaic pavements by D. Levi.

Interest in the development of composition and style and their diffusion to other regions of the Empire subsequently gathered pace in mosaic studies and remains a prominent feature of many, more recent, approaches. During the 1930s, however, a fundamentally different treatment of mosaics emerged: the data catalogue. Its earliest manifestation was the comprehensive work of M. Avi-Yonah,[14] whose methodology might be viewed as a solution adapted to the management of a vast body of material. Whether it may be regarded as progress from earlier descriptive approaches, however, is debatable.

Avi-Yonah catalogued the mosaic pavements known to have existed in Palestine at the time of his work. The catalogue consists of a detailed description of 362 sites with mosaic pavements and is structured as follows. Each site is briefly described in architectural terms followed by a detailed description of the decoration of

[13] Morey, 1938, 47.
[14] Avi-Yonah, 1932, 136-181; 1933, 26-72; 1934, 187-193.

each mosaic floor. The spatial dimensions of each pavement are given. Aniconic decoration is described with the aid of a devised type code (A, rectilinear borders; B, curvilinear borders; C, circles, and so on). Each pavement is also examined in terms of cube density per square decimetre. The dominant colours are given. Inscriptions are published in their original text (Greek, Hebrew, Aramaic or Armenian), accompanied by an English translation. Finally, the pavements are ascribed a date, either by stylistic comparison, epigraphy, or by a *terminus post quem* (based on chronological and numismatic evidence).

The general notes which appear in the final part of the catalogue may be summarised as follows. The decoration code is briefly reviewed, and bibliographical sources provided. *Tesserae* density is discussed, which, Avi-Yonah suggested, varied with the function of the building (for example, houses versus utilitarian buildings). Several general observations are made on patterned mosaics, for example that mosaic pavements of a determinable kind are predominantly ecclesiastic in character. Functional context is diagnosed by subject matter: for example, ecclesiastical buildings are distinguished by their lack of pagan elements on the one hand, and presence of Christian symbolism on the other. Synagogues are discussed with regard to subject matter (the Torah shrine, the Zodiac, and Old Testament scenes). Iconic decoration (animate and vegetal) is reviewed. Composition is discussed, particularly in connection with the organisation of the field (whether in the form of inhabited vine scrolls, or divided by a geometric framework). Finally, Avi-Yonah discusses technique and bedding; inscriptions (for example, by type: Salvation or Thanksgiving, Commemoration and Dedication); the identity of the artists; and, briefly, iconoclasm.

Levi felt that Avi-Yonah's catalogue had significantly contributed to the field of mosaic studies. This point of view is justified in that the work of Avi-Yonah was a successful attempt at recording a vast body of material from a specific region. Moreover, although this approach appears to represent little more than a descriptive inventory, the discursive element of Avi-Yonah's work does touch upon a number of important interpretative issues. The brief discussion of technique and bedding summarizes the material constituents of the floors, but it does mention *tesserae* density, and its variation in different parts of a building - a factor that has important economic ramifications, particularly in relation to the economic resources of the patron. However, the data is merely collected and economic issues are not addressed. In a similar manner to the contemporary treatment of artistic development and diffusion by Morey, the data catalogue of Avi-Yonah set a trend for subsequent approaches of this nature that still dominate the study of Graeco-Roman mosaic pavements. The 1930s, therefore, might be regarded as pivotal from the point of view of methodology in mosaic studies.

3. Approaches to the Study of Graeco-Roman and Early Byzantine Mosaic Pavements 1940-1970

In the period immediately following World War II, artistic development and diffusion remained a prime concern, with, however, a new aim, that of elucidating symbolism in art. The work of D. Levi on the mosaics of Antioch is representative of this blend of old and new approaches.

In the introduction to *Antioch Mosaic Pavements*, Levi describes his method: 'The second part of our work is essentially an attempt to sketch the history of mosaic art at Antioch, and to bring mosaic art as a whole into the wider picture of the history of art in antiquity. The first part is the description of each of the mosaics ... the collection of all the evidence of the excavation which may prove useful to the understanding, classification and dating of the mosaics, and provide us with the solid basis of "facts" for a history of their style; and the iconographic study of their representations.'[15]

The traditional art historical method applied by Levi is more thorough than pre-war studies of this nature. The development of style and composition feature prominently. However, Levi's arguments are somewhat strengthened by the synthesis of iconography from other artistic media, notably architectural sculpture, frescoes, silverware and ceramic painting, in keeping with his aim: 'This iconographic study of the mosaics in relation to monuments of other categories of art is a prelude to framing mosaic art within the general picture of ancient art.[16] It is, however, in his detailed

[15] Levi, 1947, 10.
[16] Levi, 1947, 10.

treatment of symbolism that Levi also added a further dimension to the study of floor mosaics, as evidenced by his analysis of hunting scenes.

Levi convincingly argued that a number of motifs from generic hunting scenes derived from ancient mythological representations. He contended that through time they tended to loose their mythological aspect and gain more of a symbolical value. Such symbolism may be traced back to the Hellenistic world in which the victorious hunter was often associated with the image of the triumphant prince rising in a majestic attitude on his rearing horse, having overthrown the wild animal at his feet. He suggested further that an esoteric interpretation of this combat developed, with subsequent variations of the artistic motifs. The Battle between the prince and his enemies - wild animals - could be viewed symbolically as the struggle and victory over passions (notably intemperance), thus as the Victory of Good over Evil, or more generally, as an allegory of human life itself. The treatment of symbolism in this way represented an important methodological advance in mosaic studies, since it effectively marked a break from the raw data catalogue and from art historical analysis and inaugurated a move towards methodology which addressed cultural mentality. This factor is in itself a significant methodological advance since it addresses the social dimension of art and not solely art *per se*. Levi's work also prefigured subsequent approaches in which emphasis was laid on exegesis of symbolism, allegory and mentality.

A similar approach was adopted by S.J. Saller and B Bagatti in their analysis of the Early Byzantine mosaics of Mount Nebo in Jordan.[17] The mosaics are first viewed in their broader archaeological context, the various buildings and other

material remains in the vicinity of Mount Nebo (the city wall, churches, cisterns and springs, wine and olive presses, tombs, and so on). The mosaics are then placed in their more immediate archaeological context. The churches whose floors they covered are described in some detail (architecture, architectural sculpture, internal and external dimensions). The decoration of the floors is then analysed, as is composition and style. Finally, the subjects and their significance are discussed (scenes from daily life or work; portraits; personifications; the heraldic disposition of animals; isolated animals; works of man, and so on). The subject matter is essentially viewed in symbolical and allegorical terms as appropriate to the Christian sphere. Technical aspects such as bedding and methods of laying *tesserae* are also discussed and the floors are dated. The floor inscriptions are also treated in detail: a translation is provided, and information from the inscriptions on the identity of the benefactors is also mentioned (for instance, clergy, or laity; nature of office; social status). Finally, the work extensively covers the floor mosaics of Jordan, notably at Madaba, Al-Quwaysmah/Amman and Jerash.

This work essentially represents a detailed synthesis of the floors discussed. The various strands of data collected perhaps echo the earlier catalogue of Avi-Yonah. However, there is a far greater emphasis on using the data to interpret subject matter. No attempt is made to tap the economic potential of the material, but the social dimension is touched upon in the analysis of the inscriptions. The treatment applied

[17] Saller and Bagatti, 1949.

to Early Byzantine mosaics by the work of Saller and Bagatti does, nonetheless, represent not merely a description of artistic development, but the placement of the mosaics of Jordan within the broader history of mosaic art. This contribution, however, is the allegorical and symbolical exegesis of the varied subject matter. Thus their work represents a parallel methodological advance to the contemporary approach of Levi.

In spite of these advances in the study of mosaic pavements, the field stagnated. On the one hand, the standard art historical approach prevailed, whilst on the other, the raw data was simply catalogued, as in M. Chéhab's work.[18]

Chéhab published 12 sites containing mosaic pavements in the Lebanon of both the Roman and Early Byzantine periods, in a format that typifies the approach to the cataloguing of mosaic pavements. The site is first ascribed a catalogue number. The circumstances of discovery are then explained and the architectural context of the floors is provided together with excellent plans. The decoration of the pavements is then described in detail, the original Greek text of the inscriptions and their translation into French being fully quoted. Finally, the pavements are ascribed a date, either on ceramological or epigraphic grounds, or by stylistic comparison. Such an approach was in no way innovative since no real attempt was made to address the allegorical or symbolical meaning of the decoration.

In 1963, I. Lavin published an important paper which brought artistic development and diffusion once more to the fore.[19] Lavin studied the radical changes

[18] Chéhab, 1957, 1-196.
[19] Lavin, 1963, 179-286.

that took place notably in North African hunting mosaics during the third and fourth centuries AD. He traced the progression from the *emblema*-type panels of the second century, with their single theme and pictorial treatment of space and depth, through the various systems used in the third century in order to obtain a compromise between the logical treatment of depth and the free distribution of the figures over the surface, to the 'two-dimensional unity' which is found from the fourth century onwards, with figures arranged on primarily formal, unrealistic principles. The main systems he distinguishes were the panoramic technique with its unified 'bird's-eye view' and the use of registers or friezes, which produced a narrative approach. The subsequent developments of these in the fourth and fifth centuries gave rise to the 'inventory composition' (in which the figures were disposed paratactically), and to the organically integrated, frequently centralized, composition.

The second part of Lavin's paper dealt with the stylistic influence of North African mosaic pavements on those in other regions of the Empire. He challenged the widely accepted view that a style which originated in one of the provinces of the Roman Empire could not have played a major creative role during late antiquity. He argued that from around 300 AD, the North African style spread to most of the Empire through Rome, which remained a great cultural centre in the fourth century, even after Constantinople became the capital of the Eastern Roman Empire. Pavements in the Greek East appear to have absorbed two influences: the Eastern, more conservative Hellenistic (*emblema*) tradition, and the expansive Western figurative programmes. The vigorous, often awkward, figures of the mosaic pavements of the West were given

elegant, dignified proportions. Loose, rambling compositions were simplified and organised, and focus was laid on the figures. Lavin has argued that the Eastern artists went much further in eliminating depth and atmosphere, so that the unity of the entire composition depended upon the subtle spacing of the figures on an abstract ground. Lavin thus regards the style of these pavements as an amalgamation of Eastern and Western artistic traditions.

Lavin's analysis of artistic development traceable in North African mosaic pavements represents a detailed treatment of composition and style. Moreover, his argument for the diffusion of North African mosaic art via Rome to the East has profound implications for traditional notions of diffusion.[20] Despite chronological foundations by no means always secure, his arguments have been widely accepted, and are certainly plausible. There is also little doubt that Lavin's paper represents an outstanding contribution to the field of mosaic studies. His work does not, however, extract mosaic studies from the realm of art history. Both his main hypotheses are couched purely in artistic terms, without any attempt to interpret art symbolically or allegorically, let alone from a socio-economic point of view.

Lavin's paper clearly influenced scholarship in this period, since the interest in artistic diffusion remained prevalent in mosaic studies. The interest of scholars in terms of exegesis and artistic diffusion, did not, however, immediately take hold in Romano-British mosaic studies. In fact, J.M.C. Toynbee's work of 1964[21] might be

[20] An excellent discussion of this issue is provided by Dunbabin, 1978, 222-233.
[21] Toynbee, 1964, 228-289.

regarded as somewhat regressive, since it combines an area-by-area description of subject matter, with the occasional slight attempt at exegesis.

D.J. Smith's 1969 paper on Romano-British mosaics offered far greater promise. His approach blended four types of interpretations.[22] Firstly, Smith concentrated on the chronology of Romano-British pavements, which he ascribed, in the main, to the fourth century AD (*ca* 300-370) clustered in Gloucestershire, Somerset and Dorset. Smith thus inferred that mosaics reflected both the prosperity of the *villa* patron and the prosperity of the region. Secondly, he suggested a correlation between the quality of a floor and its function. For instance, the most elaborate and largest pavement decorated the *triclinium*, while a lesser-quality mosaic was laid in the private living room (or rooms), and the least elaborate floors in the servants' quarters. Linking together his hypotheses, he suggested that mosaics could be viewed as socio-economic manifestations: 'just as the number and quality of the mosaics in any villa must have a bearing on its proprietor's economic status, so must their disposition and degrees of elaboration within the house be related to the sociological aspect of villa life.'[23] In examining the significance of subject matter, Smith concluded: 'Abounding in allegory, allusion and symbols which have never been intensively studied and are still far from being properly understood, figured mosaics … constitute a body of evidence for the intellectual culture of Britain which is second only to the linguistic evidence …'[24]. It is particular interesting that Smith attempted to address significance, while at the same suggesting that scholarship had hitherto not focused on that most rewarding avenue of mosaic research.

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[22] Smith, 1969, 71-125.
[23] Smith, 1969, 72.

Finally, Smith concentrated on tracing schools of mosaics or *officinae*, on the basis of stylistic comparisons between groups of mosaics in various regions. Four schools of mosaicists of the late third and fourth centuries were thus identified. They were based at or they practised in the region of Dorchester (Durnovarian school), Cirencester (Corinian school), Water Newton (Durobrivan school) and Brough on Humber (Petuarian school). The Corinian school, for instance, was detected thanks to a group of mosaics depicting Orpheus. Accompanied by animals and birds, Orpheus was generally portrayed in a rectangular panel designed to be viewed from only one direction. The Corinian school, however, produced mosaics whose design consisted of several concentric circles, with Orpheus occupying the central medallion and animals and birds scattered in the surrounding zones. Smith's approach represents a landmark in mosaic studies, since it not only discussed significance and stylistic diffusion, but also the socio-economic context of pavements. Subsequently, his approach was adopted in part or in whole by other mosaic scholars.

Neal,[25] has rejected this hypothesis and questions whether the various Romano-British floors may be attributed to different schools on stylistic grounds, preferring instead to view stylistic similarities as more the work of itinerant craftsman as opposed to a static workshop.

L. Budde's work of 1969 paralleled Smith's approach as regards stylistic analysis. Budde linked the mosaics of Misis in Asia Minor to a hypothetical workshop

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[24] Smith, 1969, 94.
[25] Neal, 1981, 19-20.

in Antioch on the grounds of stylistic parallels in the treatment of acanthus decoration.[26]

4. Approaches to the Study of Graeco-Roman and Early Byzantine Mosaic Pavements 1970-1980

The study of Graeco-Roman and Early Byzantine mosaic pavements from 1970 onwards both continued and developed earlier approaches. The early part of the 1970s was characterized by a paradigm shift from a cultural historical approach to an essentially positivist scientific attitude, with an emphasis on collecting, codifying and testing data. This was particularly manifest in French approaches to the study of mosaics, as exemplified by the *Répertoire Graphique du Décor Géometrique dans la Mosaïque Antique*, published in 1973.[27] The *Répertoire* codified geometric border and field decoration with the graphic support of a series of black-and-white drawings. It represented a more complete version of the coding system devised by Avi-Yonah for the geometric decoration of Graeco-Roman and Early Byzantine pavements.

Part One of the *Répertoire* covers the various ways in which mosaic floor panels may be arranged (rectangles, hexagons, octagons, and so on). In Part Two, black-and-white drawings depict various ways in which *tesserae* may fill a mosaic floor (notably, fish scale, chevron and lozenge). Part Three lists 136 geometric elements of decoration (a chevron is numbered 1, 2, and so on). Part Four is dedicated to geometric border patterns, numbered from 137 to 308 (for instance, no. 194 is a simple two-stranded guilloche). Part Five deals with geometric field compositions,

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[26] Budde, *Antike Mosaiken*, 1969, I.
[27] *AIEMA*, 1973, vol. IV. This work forms part of an ongoing repertoire compiled by the AIEMA since 1968.

numbered from 308-620 (for example, a composition consisting of parallel lines is numbered 308). In each case the decoration in question is briefly described (for example, no. 547 as "cercle tangent à quatre triangles latéraux").

This format was standardized in 1985, in the more comprehensive *Le Décor Géométrique de la Mosaïque Romaine*,[28] which followed a similar format to that of its predecessor. Part One lists 101 border patterns, which are in turn subdivided alphabetically (for example, "Planche 1, a-f"). Each element is then described (for instance, "Planche 1a = simple filet"). Part Two lists surface patterns, which are numbered from 102 to 254. These are also subdivided alphabetically (for instance, "Planche 102, a-d"). Each element of decoration is then described (for example, "Planche 102a = Monochrome opus segmentatum").

Scientific methodology also characterized other approaches to the study of floor mosaics during this period. In 1976 C. Dauphin examined the diffusion of artistic style on the Late Antique mosaic pavements of the Levant. The particular method adopted was essentially analytical - an approach typical of the then "New Archaeology". The pavements were codified according to multiple traits of composition and style (vine and acanthus decoration), assessed according to a range of technical data (notably cube density and surface area dimension) and then computed.[29] Inferences were then drawn from the results, and "regional groupings" and "schools" established. Dauphin concluded that it was from the main centres that the mosaicist moved or that the craft was propagated. She stressed, however, the importance of

[28] Balmelle *et alii*, 1985.
[29] Dauphin, 1976, 113-149.

provincial artistic centres as opposed to the metropolis, Constantinople, widely held until then to have been the origin of most artistic trends.

The identification of schools and workshops through common decorative traits resembles the earlier work of Smith and Budde. Dauphin's approach, however, superseded both, since they tended to rely on a limited number of artistic variables from which hypotheses were postulated. Dauphin, on the other hand, brought into play multiple stylistic traits across a broad range of vegetal decoration, together with technical data. These factors enabled her to draw more precise inferences of artistic diffusion.

The comprehensive work of K.M.D. Dunbabin on North African mosaic pavements, published in 1978, was not influenced by contemporary methodologies, but more by earlier approaches.[30] Once again, artistic diffusion was discussed,[31] in this particular case the influence of North African mosaic style on other parts of the empire.[32] An attempt was also made to identify different mosaic workshops on the basis of particular traits of composition and style. Of particular interest are the interpretations applied to figurative iconography, notably the significance of iconography *per se*, for which Dionysiac scenes provide a good example. Dunbabin posed the question of whether these scenes were merely decorative, or religiously symbolical, and finally opted for the former.[33] Such an interpretation is characteristic of the traditional art historical approach in that it addresses the art at face value, rather than attempts to elucidate a deeper, social meaning. Dunbabin's interpretation of the

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[30] Dunbabin, 1978.
[31] Dunbabin, 1978, 12-37.
[32] Dunbabin, 1978, 196-233.
[33] Dunbabin, 1978, 173-187.

mid-third century mosaic of Magerius from Smirat however, provides an insight into cultural mentality. Four combats are depicted in the amphitheatre between *venatores* and leopards. Both the men and the beasts are named by inscriptions, as is Magerius, a richly dressed man standing beneath a depiction of Dionysus, and identified as the patron of the games (*munerarius*). Dunbabin has plausibly suggested that this mosaic would have decorated the main room of Magerius's own house and acted as: 'the representation of an exciting scene; the commemorative and honorific record; and the assertion [34]of supernatural protection.' Of these, she contended that the second strand of meaning predominates, and 'undoubtedly constitutes the mosaic's chief *raison d'être*.' This interpretation goes one step further than suggesting a superficial symbolical meaning and touches upon the social dimension.

Cultural mentality was explored in greater depth by C. Dauphin[35] in an important article published in 1978. She argued that the religious meaning of inhabited scroll pavements could vary according to three levels of social and intellectual status.[36] Firstly, she contended the rural population who constituted the laity, would have lacked the specialist knowledge required to interpret the symbolic meaning of the pavement under their feet. However, the populace would have been able to identify with the agricultural subject matter which many of the pavements contained. The second level of meaning would have been applicable to those members of the congregation who, from catechism, were taught that God was the Creator of all things and that man should offer Him the fruits of his toil. This message would have been emphasized by representations depicting the offering of fruits to Mother Earth. The third level of meaning applied to the best educated, notably the

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[34] Dunbabin, 1978, 67-69.
[35] Dauphin, 1978, 10-34.

clergy, who would have been nourished on the Bible and exegetical texts. Thus the vine, for instance, would have been interpreted as the vine of Yahweh, symbolical of the Israelites according to Isaiah, 5, 1-7 and Matthew 21, 33-41. Dauphin concluded: 'Neither symbolism nor decoration are inherent in the inhabited scroll. It is simply a neutral theme, read, understood and interpreted according to the mentality of the onlooker...'[37]

Dauphin's Structuralist attempt to elucidate cultural mentality clearly superseded Dunbabin's approach. Whereas Dunbabin viewed iconography as reflecting cultural mentality at the highest social level, Dauphin suggested that significance in iconographic terms was essentially class-and-intellect-specific. Inscriptions were examined in order to assess the social background of benefactors,[38] this leading to the demonstration that patronage was not confined solely to the upper stratum of society. For example, the bishop played a direct role as patron, as attested in the inscription of the fifth century Church of the Prophets, Apostles and Martyrs at Jerash, whilst the community as a whole could act as patron, as in the case of the seventh-century Church of the Virgin at Madaba.

Dauphin successfully attempted to gauge social relations through the medium of inscriptions. The pavements of the Church of St Christopher at Qabr Hiram (No.6/1), for instance, were examined with this aim and the nave inscription carefully analyzed. Following Renan's work, she agreed that there was an ecclesiastical hold over rural property. For instance, the country-bishop was assisted by an *epitropos* or bailiff, who through the stewards ruled over the peasants of the two estates.

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[36] Dauphin, 1978, 31-33.
[37] Dauphin, 1978, 34.

Dauphin also examined the economic dynamics of patronage. Most frequently, the clergy called upon private patrons whose names occupied the most prominent position in the inscriptions. It was the bishop who took the decision to build a church, which was erected either with his personal funds, or those of the Church, or else, he relied upon donors whose funds were used and whose names appeared on inscriptions together with his own.

In sum, this work represents an important contribution to the study of mosaic pavements, since it deeply penetrates the social realm of cultural mentality and elucidates other social facets, such as social relations and patronage. Moreover, the economic mechanisms of patronage were addressed, albeit briefly. The economic context of mosaic floors was, however, studied by Dauphin in far greater detail in a subsequent article published in 1980.[39]

At its core was the observation that mosaic pavements of the fourth to the seventh centuries AD were not equally distributed throughout the Mediterranean zone. Dauphin drew specific attention to the heavy concentration of inhabited scroll mosaics in the Eastern Mediterranean (particularly in Cilicia, Syria and Palestine). She argued that this cluster of mosaic pavements stemmed not only from accidents of survival and excavation or survey, but also partly because of artistic preferences (which were transferred from North Africa or Antioch to the Levant). Principally, however, she contended that the high incidence of mosaic pavements was mainly attributable to economic prosperity in the Levant during this period.

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[38] Dauphin, 1978, 21-27.
[39] Dauphin, 1980, 112-134.

In the final part of her article Dauphin considered how images on Early Byzantine mosaic floors were placed in such a way as to influence the movement of the beholder. In the Church of Zahrani (No.5/1) for instance, she suggested that the pavement of the first antechamber was to be looked at upon entering through the ambulatory. It is noteworthy that on the long sides of the pavement, some of the animals enclosed within the vine scrolls appear to stand with their feet pointing towards the walls. On the basis of the orientation of the inhabited scroll decoration of the second antechamber, of the inscription in front of the door to annexe No.3, and of the extension of the mosaic over the thresholds, Dauphin was able to postulate a pattern of movement. Visitors were intended to circulate from the ambulatory towards annexe No.3. The décor and the inscription in the *diaconicon* suggested that clerics would have progressed from east to west. Thus processions moved from two opposite sides of the church towards the baptistery. The clerics came from the sanctuary through the *diaconicon*, the laity from the ambulatory outside the church.

This kinesthetic type of interpretation led the study of mosaic floors from a two-dimensional to a three-dimensional realm. In a similar vein, J.R. Clarke examined in 1979[40] the changing relationship of mosaic to spectator (or "spectator address"), which he viewed as being correlated with architectural change. According to Clarke, three types of mosaic composition influenced spectator address. In the *emblema* type, the address posits a stationary onlooker who, looking into a framed illusionistic scene, finds only one satisfactory viewpoint. In the all-over abstract or figural pattern, the viewing options are more flexible. When the all-over pattern included figures, the decoration gave the impression of a series of separate, static

viewing points. Finally, in the black-and-white composition, figures move around on an undecorated white ground. The spectator responds to the directional movement of the figures and finds his own movement influenced by them ("kinesthetic address").

The interrelationship between the architectural context and the floor decoration was also examined in some depth. In particular, Clarke viewed architectural change as an important factor in determining the emergence of extensive figural programmes in the black-and-white tradition. Such was the shift from trabeated to vaulted architecture which occurred between Nero (AD 54-68) and Hadrian (AD 117-138). The modest floor areas of trabeated architecture did not allow for floor areas big enough to require large or ambitious figural compositions. By the end of the first century, however, large vaulted spaces were created that required decoration on a much larger scale.

The functional approach to mosaic floor art espoused by Clarke and the elucidation of cultural mentality and the socio-economic dimension as manifest in the work of Dauphin, marked the maturity of mosaic studies. Subsequent treatments of mosaic floor art over the past two decades have tended to elucidate one or more of these facets, notwithstanding continued data-cataloguing and traditional art historical approaches.

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[40] Clarke, 1979

5. Approaches to the Study of Graeco-Roman and Early Byzantine Mosaic Pavements, 1980-2000

The Catalogue elaborated by R. and A. Ovadiah is a case in point. The catalogue represents a significant corpus of mosaic pavements in Israel.[41] The work consists of a detailed description of 253 sites, of which the majority were excavated since the publication of Avi-Yonah's corpus. It follows more or less an identical format to the Avi-Yonah catalogue of the 1930s. The decoration is briefly described using the same system of codification, the same type of technical information (area, cube densities, colours) is provided, and the inscriptions are similarly treated, the quotation in the original language being accompanied by an English translation. Finally, the pavements are ascribed a date. The second part of the Ovadiahs' work mirrors the second part of Avi-Yonah's study. This amounts to a general description and discussion of mosaic decoration in the region, the subject matter of church and synagogue floors, composition, style and stylistic development. Artists, workshops and their identification are briefly discussed. Finally, inscriptions are briefly categorised into "dedicatory", "blessings", "commemorative", and so on. Thus in essence, this work is in no way innovative methodologically.

[41] Ovadiah and Ovadiah, 1987.

Alongside the tradition of cataloguing, the descriptive approach prevailed, represented *par excellence* by the comprehensive treatment of mosaics in Jordan by M. Piccirillo.[42]

The first section deals with the history of archaeological excavations in Central Jordan (Madaba, Mount Nebo, Amman, Jerash); Northern Jordan (Rihab, Umm al-Manabi', and Dayr Marwan); the Jordan Valley (Dayr 'Ayn 'Abata); and the excavation of several Umayyad palaces in various parts of Jordan (Amman, Qasr al-Hallabat, Qastal al-Balqa'). The following issues are also discussed: technical research (colours and raw materials, technique, protection and restoration); chronology (the development of mosaics from the Hellenistic period to the sixth century AD); subject matter (walled cities, classical personifications, classical motifs, hunting scenes, and the repertory of animals, birds, plants and flowers); Iconoclasm; the Classical Renaissance of the Justinianic period; inscriptions (the social identity of benefactors, tenure of office, and the identification of provincial and ecclesiastical boundaries) and the mosaics of churches in the Umayyad period viewed principally as attesting the late flourishing of Christian communities under Islamic rule. Of particular interest is the author's emphasis on Jordanian mosaics as historical sources. Taking into consideration the evidence from mosaics and the principle that the ecclesiastical division of a region normally corresponded with political administrative units, Piccirillo was able to define the territory of the diocese of Madaba.

The second part of Piccirillo's work provides a good basic overview, with excellent plans and illustrations, of the floor decoration at each site in Jordan. This is accompanied by a translation of the inscriptions when they occur, and the dating of the

[42] Piccirillo, 1993.

mosaics. This format is reproduced in the third section of the book which reviews the pavements of *Provinciae Palaestinae*. However, despite providing an informative descriptive insight into the floors of the region on the whole, Piccirillo broke no new ground from the point of view of methodology.

The same may be said regarding the predominantly art historical approaches which have prevailed over the past two decades.[43] J. Balty, for instance, has applied an essentially art historical approach to the study of Early Byzantine mosaic floors in the Near East (Syria and Jordan). Her work discusses in general the dating of the floors in the region, subject matter (significance, stylistic development, stylistic influence of decoration), the relationship of subject matter to its architectural context (notably the symbolism of a *triclinium* floor), economics (such as the interrelationship between patron and artisan) and technique, as well as information gleaned from literary sources.

Thus Balty's approach may be considered very much as traditionally art historical. Likewise, the monumental work of P. Donceel-Voûte followed a similar pattern, albeit with a more sociological bent.[44] This represents a comprehensive treatment of ecclesiastical mosaic pavements in the Early Byzantine provinces of Syria and Phoenicia. The first section details 62 sites in Syria and 15 sites in Phoenicia. The format being a familiar one to that above in terms of description and stylistic analysis, it would be fruitless to repeat it. This work, however, includes a functional and sociological approach in its final section, although limited in relation to the rest of the volume. The inscriptions are analyzed in terms of the identity of the benefactor;

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[43] Balty, 1995.
[44] Donceel-Voûte, 1988.

the reason for their dedication and the different formulas of donation. The suitability of the subject matter to the functional context of particular rooms is also examined, for instance, the sanctuary with Paradise, and the nave with the terrestrial world. Specific regional characteristics of churches are reviewed in terms of plan (internal layout of sanctuary, nave, aisles, and so on) and the role of the clergy assessed.

Both approaches are informative insofar as they provide a multifaceted insight into mosaic floor decoration in Syria, compared with previous approaches by C.R. Morey and D. Levi, which dealt primarily with Antioch. In general, however, both works, especially the former, and the great bulk of the latter, tend to simply continue traditional art historical approaches.

A sophisticated inroad into cultural mentality over the past two decades was made by H. Maguire,[45] who has focused upon the significance of Early Byzantine art, especially mosaics. One of the principal themes of his book was the recognition that different designers could invest the same motifs from nature with differing degrees and types of significances. The terrestrial world could be viewed in a purely literal sense as the Lord's estate, as on the floor mosaics of the basilicas of Dumetios at Nikopolis[46] and of Thyrsos at Tegea,[47] both in Greece. It could be viewed also in a literal sense, but with symbolical content, as in the mosaics of the basilica at Khalde (No.3/9) and in the church of SS. Cosmas and Damian at Gerasa.[48] Thirdly, it could be viewed as symbolic (the East Church at Qasr-el-Lebia[49] and in the Emperor

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[45] Maguire, 1987.
[46] Maguire, 1987, fig. 10.
[47] Orlandos, 1973, pl. A.
[48] Kraeling, 1938, pl. 73.
[49] Alföldi-Rosenbaum and Ward-Perkins, 1980, fig. 10.

Justinian's basilica at Sabratha,[50] both in Libya). Maguire also argued that the terrestrial world could be viewed to some extent as moralistic in purpose (the churches of the Priest John[51] and of St. George[52] at Khirbet al-Makhayyat, both in Jordan). Moreover, Maguire viewed the portrayals of Earth and Ocean in the context of imperial iconography: artisans and panegyrists could combine praising God Who made the earth, and the Emperor who ruled it. An important aspect of Maguire's approach is the recognition of pointers or cues to specific interpretations (whether we might regard the depiction of images as literal or allegorical). Thus he stressed the importance of using various media (such as inscriptions), the emphasis laid on particular motifs, or, the framing of a motif (or a set of motifs) in a specific location in an attempt to pinpoint specific significances.

A paper published by H. Trilling in 1989 also dealt with cultural mentality as its central theme.[53] In addressing the highly contentious date of the Great Palace pavement with an excellent analysis of composition and style, Trilling also discussed its significance. The Palace mosaic's antecedents and general place in Roman and Byzantine art were examined by Trilling by focusing on its distinctive composition. He also suggested that it brings together several distinct compositional types which came into existence at different times, but were all well established by the middle of the sixth century. Examples are also drawn from other artistic media (notably the David[54] and Meleager[55] plates), to support the view that the Palace mosaic shared a

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[50] Ward-Perkins and Goodchild, 1953, pl. 26.
[51] Saller and Bagatti, 1949, fig. 4.
[52] Saller and Bagatti, 1949, fig. 8.
[53] Trilling, 1989, 27-72. The date of the Great Palace's mosaic pavement is discussed in Chapter II.
[54] The David plates are a set of nine depicting scenes from the life of David. Six are in the Metropolitan Museum; three in the Cyprus Museum, Nicosia, Trilling, 1989, 51, n. 98. For a set of photographs and bibliography see Weitzman, 1979, 475-483. The David plates are also discussed in Trilling, 1978, 249-263; Spain Alexander, 1977, 217-237.

conception of pictorial space which reached its apogee in the first half of the seventh century. This is known to have embodied two major stylistic currents: figures depicted in the round and set against an abstract, flat background, the combination nevertheless producing a three-dimensional effect.

In terms of mentality, Trilling contended that there existed within the mosaic a combination of three elements of the human soul unified within the Empire, and the Emperor in person: violence, the need for protection, and the serenity of civilization.[56] Following Platonic concepts which he relates to Virgil's *Georgics* Trilling explained that: 'The three divisions of the mosaic's subject matter correspond quite literally to divisions within the personality. Animal violence stands ... for the destructive force of uncontrolled passion, protection for the internal discipline which keeps that force at bay, and idyllic life for the serenity which comes from self-control.'[57]

Three publications which deal with other sociological aspects of mosaic floor art over the past two decades also merit attention. Having examined the significance of various imagery, notably townscapes and rural and pastoral themes, L.-A. Hunt[58] focuses on the complexity of patronage by drawing associations between imagery and epigraphy, noting, for example, the importance of female lay patronage in Jordanian mosaics. She also suggests that the network of patronage was based in the local community, with families or individuals sponsoring various projects,[59] as we will also demonstrate in Chapter V.

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[55] This plate is currently displayed in the Hermitage, Trilling, 1989, 51, n. 96. See also Cruikshank Dodd, 1961, 176-177, no. 57.
[56] Trilling, 1989, 54-69.
[57] Trilling, 1989, 69.
[58] Hunt, 1994, 106-126.
[59] Hunt, 1994, 119-121.

Likewise, A. Carandini, A. Ricci and M. de Vos gave a social dimension to their exegesis of the *villa* mosaics of Piazza Armerina in Sicily.[60] The subject matter of the mosaics is linked specifically to the social status of the owner. Thus it is conjectured that the *villa* might have belonged to the *Praetor* Proculus Populonius, whose office would have placed him under the obligation of staging games. Since the subject matter of the mosaics depicts the circus as well as the transportation of animals for use in the amphitheatre or circus, it is suggested that the iconography of the mosaics was largely a commemorative illustration of games that were financed and presided over by a *praetor*. It is also argued that the subject matter of various mosaic floors in the *villa* was allegorical (notably, Hercules and his Adversaries; the Metamorphoses of Daphne and Cyparissos; the Apotheosis of Hercules; the Vanquished Giants). Thus different themes were interwoven in the *triclinium*. It is argued that the basic theme was the victory of *felicitas* and *virtus* over evil. This was expressed on different planes: firstly, in the gods and heroes (Jove, Dionysus and Hercules who triumph over the powers of evil), secondly, in the person of the Emperor Constantine defeating Licinius), thirdly, in the person of the Roman magistrate who celebrates his entry into the Senate with games and banquets; and fourthly, in the person of the provincial governor who at the onset of his term of office, inaugurates his new country residence and entertains guests in the *triclinium*.

A sociological interpretation has also been applied to the Hellenistic mosaics of the Greek world by R. Westgate, who considered the social and economic factors that led to the initial development of pebble mosaics in the Greek world and the rapid

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[60] Carandini *et alii*, 1982.

increase in the popularity of mosaics in the Hellenistic world.[61] The emergence of mosaics as private luxury items in the Hellenistic period, for example in Delos, Pergamon, Alexandria and Rhodes, are linked to the prosperity generated by the campaigns of Alexander the Great. In tandem with this economic trend, a social trend may also partly explain the emergence of mosaic floors in private residences. A fundamental change in social attitudes from a communal ideal to a more individualistic ethos resulted from the political changes after the death of Alexander the Great. This was reflected in an apparent shift from collective to private religion, with an emphasis on material prestige. The house became a tangible symbol of the owner's status, and its lavishly decorated rooms (notably the *andron*) were the settings for social occasions (*symposia*) at which the patron could impress his rivals, form new ties, and strengthen old ones. In short, an impressive house helped to establish and enhance the patron's position in the social order, and mosaic floor decoration, as well as frescoes, fulfilled this requirement. Westgate gives specific attention to the architectural context of mosaics. She notes that the highest concentrations of mosaics were in the *andron*, the orientation of the mosaics there being particularly important. For example, a frequent decorative scheme involved figural or vegetal decoration, which was orientated so that it could have been viewed by guests from any angle. This would have corresponded to the disposition of the reclining couches, which would have been placed around the periphery of the mosaic. One further observation relates to frequent examples where a figural floor was oriented towards the entrance door of the *andron*. Here, it is suggested that the mosaic may have been oriented towards the most honoured guest who would have sat immediately to the right of the door, as described in Plato's *Symposium*.

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[61] Westgate, 1997-98, 93-116.

A. Discussion

From the above review of different approaches to the study of Graeco-Roman and Early Byzantine floor mosaics in the course of the past century, it appears that methodologies fell under the twin disciplines of art history and archaeology. The methods belonging to the former may be summarised as follows. In the purely descriptive and aesthetic approach, decoration was described literally, with little or no attempt to provide an interpretation of the subject matter. At the same time, the data catalogue provided a detailed description of decoration, emphasis being less concerned with an aesthetic appraisal than with the collection of data. This method likewise tended to shy away from interpretation, but offered instead mosaic pavements as a raw, deconstructed entity. Other approaches examined artistic development, notably composition and style, or its diffusion to other regions. Finally, in the 'shallow' exegetic approach, scholars preferred to view subject matter in purely symbolical terms rather than interpreting the social meaning which might underlie the decoration.

The dividing line between art history and archaeology lies in the leap from exegetic interpretation of art *per se* to a reflection of its social meaning. The methods related to the latter view subject matter as reflecting cultural mentality. In a 'purely' social approach, an attempt is made to build up a picture of patronage, social relations, or view the distribution of decoration in social terms. A third approach views mosaics as reflecting economic conditions. Finally, the functional, kinesthetic approach examines the interaction between the mosaic floor art and its beholder.

This assessment is, of course, an over-simplistic one, since it is clear that representative approaches from each discipline are often blended together to form a multi-faceted interpretation.

Four factors appear to have had a direct bearing on the development of the study of floor mosaics within the context of changing historical approaches which tended towards a deeper and broader understanding of antiquity. Thus the frequently inaccurate comprehension of subject matter which prevailed in many early approaches, is perhaps not surprising. Much early work in the field, which frequently involved the description and synthesis of a large body of material, effectively laid down the framework for subsequent interpretative methodologies.

The rapid rate of archaeological discoveries which stemmed directly from the growth of the archaeological discipline in the course of the twentieth century, dictated a desire for a rapid comprehension of a vast corpus of emerging material, and in particular, its subject matter. This phenomenon was geographically widespread. This led to an inevitable sequence of methodological approaches which are traceable particularly clearly in the Levant. Basic description of mosaic pavements (as by Renan) gave way to a more systematic and synthetic cataloguing (as by Avi-Yonah). Stylistic development and diffusion were suggested by Morey and later detailed by Levi, whose concern with symbolism *per se* was tied to a desire to probe cultural mentality. The focus then shifted to a more profound exegesis of symbolism and to an understanding of patronage through epigraphy by Saller and Baggatti. Dauphin attempted a precise understanding of diffusion within regions, whilst also laying a greater emphasis on the understanding of cultural mentality – an avenue of research

pursued by Maguire. Dauphin also laid the way for socio-economic interpretations and was followed by Hunt. In sum, a pattern of developing methodologies effectively gave rise to new approaches which, in turn were developed further. This developmental sequence ran through mosaic studies on an empire-wide basis, alongside traditional art historical approaches.

6. Conclusion: The Application of a Socio-Economic Approach to the Early Byzantine Mosaics of Phoenicia and Northern Palestine

Mosaic pavements may be used in an attempt to gauge social and economic facets of antique society, particularly in relation to cultural mentality, patronage, social relations and economic conditions. The principal aim of the present thesis is to develop further the investigation of society and economy through the same medium in Phoenicia and Northern Palestine during the Byzantine period. The method adopted differs from previous socio-economic approaches, primarily because it concentrates on decoration from the point of view of its quality and distribution within different types of building, and on materials including technique and bedding. From this base hypotheses and conclusions will be formed.

It is generally accepted that between the late fifth and mid-sixth centuries the eastern provinces of the Roman Empire enjoyed a period of economic prosperity.[62] Nevertheless, our understanding of economic conditions of individual provinces is patchy. One of the main tenets of the present thesis is that by analysing the technique, bedding and distribution of decoration, mosaic pavements have the potential to provide an index of economic conditions, both regionally (in Phoenicia and Northern Palestine), and to indicate the economic resources and expenditure of patrons.

Chapter II views the Byzantine mosaic pavements of Phoenicia and Northern Palestine within their broader economic context. Part One discusses the value and limitations of using the mosaic pavements of the Corpus as an index of economic conditions during the Byzantine period in the region. Parts Two and Three suggest that variations in the quantity of pavements laid during the Byzantine period seem broadly to reflect fluctuating economic conditions in Phoenicia and Northern Palestine respectively. Part Four briefly reviews general economic conditions in the Empire during the fourth-seventh century period and more specifically in Phoenicia and Northern Palestine. In Part Five, other economic indicators (notably epigraphy, demography, oil and wine production and export) in the region are evaluated in relation to the chronological patterns observed in the mosaic corpus and against the historical events such as the Justinianic plague of AD 541, the Persian conquest of the eastern provinces in AD 614-617 and the Muslim conquest of AD 636-640.

Chapter III examines the bedding of the Byzantine mosaic pavements of Phoenicia and Northern Palestine and the techniques involved in laying these floors in relation to economic factors. Part One deals with technique (*tesserae* size, *tesserae* density, range of colours and width of the interstices between *tesserae*) and attempts to assess whether quality is linked to building function, relative wealth of patron(s), or reflects financial expenditure *per se*. Part Two examines the constituents of the bedding of mosaic pavements (the quality and thickness of materials) in relation to room and building function, patronage and direct expenditure. Part Three attempts to gauge (by examining the inscriptions of the Corpus) the relative cost of laying floor

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[62] Lewit, 1991; Randsborg, 1991; Kingsley, 1999.

mosaics in the Byzantine period. This will lead to a discussion and criticism in Part Four of theories that reject mosaic pavements as an economic manifestation.

Chapter IV examines the quality and distribution of mosaic floor decoration in Byzantine Phoenicia and Northern Palestine. Part One discusses previous approaches to the study of the distribution of floor decoration. Part Two defines quality of decoration; examines the interrelationship between technical expertise and quality of decoration; and outlines the framework of the applied methodology (analysis of the quality and distribution of figurative and non-figurative decoration according to functional room building type). Parts Three and Four respectively evaluate the results of the regional analysis of decoration in Phoenicia and Northern Palestine. Part Five addresses several fundamental issues: the interrelationship between mosaic border/field decoration and room function. The interrelationship between quality of mosaic floor decoration and social user is explored in secular buildings. In the Christian sphere, an attempt will be made to examine whether quality of decoration relates to hierarchy of liturgical participation. The correspondence between quality of decoration and social patronage is also explored: how does social level of patronage relate to complexity of decoration? Is there a general corollary between lower levels of social patronage and frequently occurring decorative patterns one the one hand, and higher levels of social patronage and rare decorative patterns on the other? Part Six examines the complexity of geometric decoration in Phoenicia and Northern Palestine in the Byzantine period and attempts to gauge whether patterns become less complex, or more complex during the period.

Chapter V examines the Corpus of inscriptions on the mosaic pavements of Phoenicia and Northern Palestine particularly in relation to social categories of

patronage. Part One emphasizes the fundamental distinction between donors and eponyms (a distinction not always observed by Byzantine scholars of epigraphy, history and archaeology) and evaluates the potential of mosaic inscriptions to contribute to the field of epigraphical studies in general. The mechanisms of patronage (whether public, civil, military, ecclesiastical or private) in Phoenicia (Part Two) and Northern Palestine (Part Three) as a whole are presented. Part Four deals with the Jewish and Samaritan inscriptions of Northern Palestine and evaluates patterns of donation (family and communal, social category of benefactor). In Part Five, the historical aspect of patronage in the Eastern Roman Empire is examined: the decline of the *curial* class and the rise of the bishops, clergy and landowners, against the background of a general overview of the structures of patronage.

The Conclusion defines the main aspects of the present thesis (the chronological, technical, decorative and epigraphic aspects of the Byzantine mosaic pavements of Phoenicia and Northern Palestine) and evaluates their overall contribution to the understanding of the study of ancient mosaic pavements, and to the social history of the Byzantine period both regionally and further afield.

CHAPTER II

THE BYZANTINE MOSAIC PAVEMENTS OF PHOENICIA AND NORTHERN PALESTINE AS AN INDEX OF ECONOMIC CONDITIONS: THE LIMITS OF INFERENCE

The present chapter examines the Byzantine mosaic pavements of Phoenicia and Northern Palestine within their broader economic context. Part One discusses the limitations and value of using the mosaic pavements of the Corpus as an index of economic conditions during the Byzantine period in the region. Part Two suggests that variations in the quantity of pavements laid during the Byzantine period seem to broadly reflect fluctuating economic conditions in Phoenicia. Part Three applies the same hypothesis to Northern Palestine. Thus the apparent peak in the number of floors appears to represent prosperous economic conditions. Conversely, in less favourable economic conditions a lesser number of mosaic floors were laid. Part Four briefly reviews general economic conditions in the Empire during the fourth-seventh century period and more specifically in Phoenicia and Northern Palestine. In Part Five, other media informative of economic conditions in the region are reviewed (notably inscriptions, distribution of settlements, oil and wine production and export). These are compared with the chronological patterns observed in the mosaic Corpus and with the historical events of the period such as the Justinianic plague of AD 541, the Persian conquest of the eastern provinces in AD 614-617 and the Muslim conquest of AD 636-40.

1. The Limits of Inference in Viewing the Byzantine Mosaics Pavements of Phoenicia and Northern Palestine as an Economic Indicator

The hypothesis that mosaic-production was closely related to economic conditions is dependent, however, on the reliability of the dates ascribed to the corpus of mosaics in question. Several factors should be taken into account. The quality of excavation conducted in the region has been variable.[1] Naturally this factor has a bearing on the reliability of the dates ascribed to the material by the excavators themselves. Moreover, owing to a lack of available evidence, many of the examples present in the Corpus cannot be dated with any degree of accuracy other than in broad Byzantine chronological terms. A great number of floors are dated by association with artefacts, coinage and pottery. Such media often provide merely a *terminus ante quem*, or *terminus post quem*.[2] Therefore, dates are ascribed in terms of decades or centuries, rather than years. Many mosaics in the sample examined have been dated by style. This dating method presents its own particular set of problems. The figurative floors of the House of the Nile Festival at Zippori have been dated by its excavators to the fifth century mainly on stylistic criteria.[3] The abstract composition and marked figural linearity in the style of these floors indicate rather the sixth century, in keeping with other pavements in the region.[4] Scholars have also tended to date floors on the basis of style by comparison with other mosaic pavements in the region that have also been dated stylistically in their own right, or with the support of loose archaeological evidence.[5]

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[1] See Whittow, 1990, 15-16.
[2] Butcher (1997-1998, 173-180, fig. 2) has demonstrated that coinage dating to the reign of Emperor Anastasias (AD 491-518) in Beirut remained in circulation for several decades. Also see below, n. 8.
[3] Netzer and Weiss, 1994.
[4] This sixth-century date derived from an examination of these floors *in situ* in November 1999 coincides with that arrived at by R. Talgam (pers. comm., 2000 24th February) on compositional and stylistic grounds.
[5] The work of Balty (1995) and Donceel-Voûte (1998) is typical in this respect.

The problems inherent in dating floor mosaics on stylistic criteria are well demonstrated by the controversial dating of the Great Palace pavement. In 1947, Martiny assigned the Palace mosaic to the early fifth century. In 1960, however, C. Mango and I. Lavin suggested a late sixth century date. Subsequently, in 1963, P. Jones and Nordhagen argued a date *ca* 700. More recently, scholars have generally agreed that the Great palace mosaic dated to no earlier than the reign of Justinian I (AD 527-565). Arguments have tended to focus around one of three chronological brackets: the reign of Justinian I (AD 527-565), Tiberius I (AD 579-582), or Justinian II (AD 685-695, 705-711). A paper published in 1989 by J. Trilling argued for a Heraclean date (AD 610-641).[6] The lifting of the floor for restoration and its thorough re-examination against the background of the archaeology and history of the Imperial Palace have led W. Jobst, B. Erdal and C. Gurtner to opt for a Justinianic date.[7]

Despite the caveats referred to above, mosaics dated on stylistic grounds are often ascribed a date with the support of archaeological material, such as architectural sculpture, as well as artefacts, coins and pottery. Thus a general consensus among scholars has led to a widely accepted chronological scheme for much of the material evaluated in the Corpus. Nevertheless, one should still remain cautious, since future analysis may well result in a reappraisal of much of the material.

Mosaics containing inscriptions offer more reliable evidence for dating. Frequently, these state that a floor was laid in a particular indiction which can be matched to a precise calendar year. Alternatively, the laying of a particular mosaic is

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[6] Trilling 1989, 29-31.

ascribed to an eponym whose tenure can be gleaned from historical sources, often with a fair degree of accuracy.

In terms of the various techniques used to date mosaic pavements, we may discern a hierarchy of accuracy. At the most imprecise end of the scale lies dating on stylistic criteria. More precise dates are obtained by dating floors with the aid of coins and pottery. The most accurate method of dating floor mosaics is through epigraphy. Moreover, only two dating techniques - style and epigraphy – directly suggest a date for floor mosaics. Pottery and coinage, on the other hand, provide a date by association; thus the dating is provided by the pottery and coins *per se* but only by association for the floor mosaics.

2. A Quantitative Approach to the Byzantine Mosaic Pavements of Phoenicia and Northern Palestine

A quantitative method may be applied to the Byzantine mosaics of Phoenicia and Northern Palestine in order to determine economic conditions. It is, however, important to integrate numerical data with other strands of evidence - pottery, demography and inscriptions – also approached quantitatively. There are, of course overlaps within these media. For instance, evidence for demographic expansion often relies partly on the construction of buildings, notably churches, monasteries, ecclesiastical farmsteads, *villae* and synagogues. Such buildings are essentially the architectural "containers" of the mosaics within them and are occasionally dated by

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[7] Jobst *et alii*, 2000, 58-61.

the inscriptions on the mosaics themselves (in addition to other sources of evidence such as coins, pottery and architectural sculpture). Likewise, the Corpus of dated inscriptions reviewed below is dependent on a small number of dated inscriptions on mosaic floors, although many of the inscriptions come from the superstructures of buildings, notably lintels, or other parts of the building fabric itself.

There are also limitations inherent to the quantitative approach of using floor mosaics to gauge economic conditions. Three merit particular attention. Firstly, many of the mosaics represent phases of refurbishment in the buildings concerned, as opposed to constructions *de novo*. Thus the refurbishment of a building with floor mosaics might not necessarily represent an expanding economy, but merely repair as a result of fire damage, the relative wealth of the patron concerned, or the physical reappraisal of the building due to demands of an expanding congregation (in the case of religious buildings). Secondly, building activity *de novo* does not necessarily reflect favourable economic conditions, since, even in times of recession, some building activity might be expected. The Dark Ages (*ca* mid-seventh century AD to the early ninth century AD) of Byzantium, widely held to be an era of chronic recession, are a case in point.[8] Thirdly, a significant proportion of this material cannot be dated accurately, as borne out by the examples contained in Tables 1 and 7. The floors in question either span two or more centuries, or the entire Byzantine period (AD 324-640).

The floors listed in Tables 2 and 8 also lack chronological precision. Typically, some of the examples straddle the turn of the fourth, fifth, sixth or seventh,

centuries. The floor covering the Portico area in Beirut is one such example (No.3/1b) datable to AD 475-525. Many of the examples in Tables 2 and 9 are even less precise and are datable to an entire century overlapping into the next century. The floors of the Church of Mi'lya (No.7/16), for instance, date to AD 400-525.

In order to address these problems, it proved imperative to follow statistical guidelines.[9] Given the inevitable imprecision of dating virtually all examples, we have chosen to base the analysis on the basis of the century to which each example belongs. The examples of Tables 1 and 7 are then too chronologically imprecise to be of any value for even this quantitative approach, and have therefore been rejected. As regards the examples in Tables 2 and 8, the following methodology was devised. When a pavement is ascribed a date straddling the turn of a century and overlapping into the next century whilst also filling much or all of it, the excavator errs on the side of caution by broadening the date. Thus the Church of Mi'lya, discussed above, according to its excavator, most likely dated to AD 400-500, but an extra 25 years were added, just in case it may date to the early part of the next century. Likewise, in cases where a floor is dated to the end of one century, or the early part of the next (such as the Portico at Beirut [No.3/1b]), the excavator applies a 25 year bracket each side of the beginning of the century in question.

Dr Goldrei devised the following solution ("Counting Method") for the floors falling within these date ranges. This is a method of attributing or counting examples with a relatively precise dating to a particular century. This method is crude, no more

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[8] An account of building activity during the Dark Ages of the Byzantine period is given by Mango, 1986, 89-107.

than most of the dating, and designed to match its limitations, but we argue that it is appropriate for the investigation in hand. In the case of Mi'lya, the greater part of the chronological bracket belongs to the fifth century; the probability is, therefore, that it dates to the fifth century. We have thus counted this as an example belonging to this century. However, in the case of the Beirut example, the date is evenly balanced across AD 500 and it is not possible to date it to the end of the fifth, or beginning of the sixth century, on the basis of probability. There is, however, a 50/50 chance that it falls either into last 25 years of the fifth, or the first 25 years of the sixth. Thus we count half of this example towards the fifth century and half towards the sixth. The chronological patterns which emerge are presented below in Charts 1 and 2.

It is contended below that particular chronological clusters (or their absence) gives a general indication of the economic situation of the period examined. In order to scrutinize the results of the analysis, comparison with other media has been sought.

Geographically, the Corpus of mosaics has been evaluated district by district. In Phoenicia, these correspond to contemporary municipal districts of the various cartographic surveys of the Lebanon drawn up in the nineteenth century. In Palestine, the various districts are convenient divisions into which the country of modern Israel has been divided by the Archaeological Survey of Israel. The first eight districts correspond approximately to the Byzantine provinces of *Phoenicia Maritima* and *Phoenicia Libanensis* (modern Lebanon and Northern Israel). The remaining four districts correspond approximately to the northern areas of the Byzantine provinces of

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[9] Great thanks are due to the generous time and precious advice given by Dr Derek Goldrei, Senior Lecturer in Mathematics at the Open University and at Somerville College, University of Oxford, in November 2000 and August 2001.

Palaestina Prima and *Palaestina Secunda*. A small overlap is observable between Phoenicia and Northern Palestine in the Zones of Nahariyya, Haifa and Zefat, since these cut across provincial boundaries. For the sake of convenience, the first eight districts will be referred to as Phoenicia, the last four as Northern Palestine.

3. The Mosaics of Phoenicia and Northern Palestine as an Index of Economic Conditions

In the tables below, each dated pavement, or set of pavements, has been allocated a catalogue number, which appears in all cases together with the site in question. The mosaics in our Corpus tend to represent three different building manifestations. We may assume that a certain number of floors were laid in association with new constructions and thus may be associated with new building activity. Some sites, such as the church of Zahrani (No.5/1), contain one or more floors laid at different times in connection with refurbishments of the building in question. A large sample of floors belong to distinct phases of building construction, such as in the ecclesiastical farm of Shelomi (No.7/5). The floors in our Corpus are grouped chronologically. A great number of pavements belonging to Group 1 (of Phoenicia and Northern Palestine) are fragmentary and in many cases cannot be associated directly with a building of known date or function.

In the tables below, the last column indicates the method by which the floors have been dated (coins, pottery, style, epigraphy, architectural sculpture, *terminus ante quem* [*TAQ*], *terminus post quem* [*TPQ*]). In some cases it is stated that floors have been dated by 'Archaeology'. This means that the pavement(s) in question have been dated by archaeological evidence based on a variety of data, notably inscriptions, pottery, style, mosaics (by comparison) and coins. In many cases, an abridged bibliographical reference is given (such as *SWP* I, and so on) instead of a date. These bibliographical references indicate archaeological evaluation and consensus, rather than precise evidence. A full list of abbreviations for these references with their full equivalents is given below Table 10. The chronological pattern of all the dated pavements is presented below in Charts 2 and 4.

Group 1: The Byzantine mosaic pavements of Phoenicia datable to AD 324-640

For want of associated precise chronological markers, the following 16 pavements are loosely dated to the Byzantine period (between AD 324 and AD 640) and represent around 20% of the total sample of the Phoenician corpus. On the advice of Dr. Goldrei, these examples will be discarded for the purposes of the analysis.

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
7	Nahariyya	3	Horvat 'Erav	Church	324-640	Pottery
7	Nahariyya	6	Ikrit	Unknown	324-640	*SWP* I
7	Nahariyya	8	Horvat Remah	Church?	324-640	Coins, pottery
7	Nahariyya	10	Khirbet Hamsin	Church?	324-640	*SWP* I
7	Nahariyya	11	Akhziv	Unknown	324-640	*SWP* I
7	Nahariyya	12	Fassuta	Synagogue?	300-500	Coins
7	Nahariyya	13	Horvat Sugar	Church	324-640	Pottery
7	Nahariyya	15	Bir el Khazna	Unknown	324-640	*Galilée* II
7	Nahariyya	22	Yehiam	Unknown	324-640	Pottery
7	Nahariyya	27	Kafr Sumei'	Unknown	324-640	*Antichi*, 200-201
7	Nahariyya	28	Horvat Ahir	Unknown	324-640	Pottery
7	Nahariyya	30	Kafr Yasif	Synagogue	324-640	*Synagogen*, I, 250
7	Nahariyya	31	Khirbet ed Deidaba	Unknown	324-640	Pottery
8	Zefat	1	Metulla	Winepress	324-640	Pottery
8	Zefat	2a	Banias	Villa	324-640	Coins, pottery
8	Zefat	6	Khirbet el Muntâr	Synagogue?	300-500	Pottery

Table 1. The Byzantine mosaic pavements of Phoenicia datable to AD 324-640

Group 2: The Byzantine mosaic pavements of Phoenicia datable across the boundaries of the fifth, sixth or seventh century AD

The following 15 pavements are more accurately dated, but straddle either the turn of the fourth, fifth, sixth, or seventh century. Following the dating conventions set out above, the following chronological proportions are obtained in the Phoenician examples: fourth century: 1.5, fifth century: 4, sixth century: 8.5.

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
3	Beirut	1b	Beirut	Portico	475-525	Style
3	Beirut	2a	Beirut	Shop	450-550	Style
3	Beirut	2b	Beirut	Shop	475-550	Style
3	Beirut	3a	Beirut	Villa	450-550	Style
3	Beirut	3b	Beirut	Villa	450-550	Style
3	Beirut	5	Beirut	Villa	450-550	Style
7	Nahariyya	16	Mi'ilya	Church	400-525	Pottery, style
7	Nahariyya	17	El Kabri	Church	500-625	Pottery
7	Nahariyya	18	Khirbet esh Shubeika	Winepress	500-625	Pottery
7	Nahariyya	19	Nahariyya	Church	475-525	Archaeology
7	Nahariyya	24	Khirbet el Habay	Unknown	500-625	Pottery

7	Nahariyya	25	Horvat Kalil	Unknown	500-625	Pottery
7	Nahariyya	29	Nes 'Ammim	Church	500-625	Pottery
8	Zefat	5	Qasrin	Synagogue	375-425	Pottery
8	Zefat	7	Khirbet Shema'	Synagogue	306-419	Coins, pottery

Table 2. The Byzantine mosaic pavements of Phoenicia datable across the boundaries of either the fifth, sixth or seventh century AD

Group 3: The Byzantine mosaic pavements of Phoenicia dated to the fourth century AD

More precise information is provided by the remaining dated floors of the sample. Six examples date to the fourth century, thus accounting for 7.5% of the Corpus.

Zone No	**Zone Name**	**Site No**	**Site Name**	**Building Type**	**Date (AD)**	**Dating Method**
2	Baalbek	2	Soueidie	Villa	375-400	Style
3	Beirut	1a	Beirut	Portico	300-400	Archaeology
5	Tyre	1	Zahrani	Church	375-400	Style
5	Tyre	1	Zahrani	Church	389-390	Inscription
7	Nahariyya	14	Sa 'ar	Unknown	350-400	Coins
8	Zefat	2b	Banias	Church	300-400	Archaeology

Table 3. The Byzantine mosaic pavements of Phoenicia dated to the fourth century AD

Group 4: The Byzantine mosaic pavements of Phoenicia dated to the fifth century AD

The fifth century is represented by 11 examples accounting for 14% of the total Corpus.

Zone No	**Zone Name**	**Site No**	**Site Name**	**Building Type**	**Date (AD)**	**Dating Method**
3	Beirut	4	Beirut	Villa	400-500	Style
3	Beirut	8	Jenah	Villa	475-500	Style
3	Beirut	8	Jenah	Villa	475-500	Style
3	Beirut	10a	Khan Khalde	Church	450-460	Style, *TAQ*
7	Nahariyya	7	Khirbet Karkara	Church	477	Inscription
7	Nahariyya	21a	'Evron	Church	415	Inscription
7	Nahariyya	21b	'Evron	Church	442-443	Inscription
7	Nahariyya	21c	'Evron	Church	490	Inscription

7	Nahariyya	26a	Shavei Zion	Church	400-500	Pottery, glass
7	Nahariyya	26b	Shavei Zion	Church	486	Inscription
8	Zefat	4a	Khirbet Marus	Synagogue	*ca* 450	Coins

Table 4. The Byzantine mosaic pavements of Phoenicia dated to the fifth century AD

Group 5: The Byzantine mosaic pavements of Phoenicia dated to the sixth century AD

The sixth century is represented by 25 examples accounting for 32% of the total Corpus.

Zone No	**Zone Name**	**Site No**	**Site Name**	**Building Type**	**Date (AD)**	**Dating Method**
1	Jebail	1	Ghine	Church	*ca* 550	Coins
2	Baalbek	2	Nebha	Church	557	Inscription
3	Beirut	6	Beit Mery	Church	550-575	Style
3	Beirut	7a	'Ain es-Samake	Church	500-575	Style
3	Beirut	7b	'Ain es-Samake	Church	580-581	Inscription
3	Beirut	8	Jenah	Villa	500-535	Style
3	Beirut	8	Jenah	Villa	500-600	Style
3	Beirut	9	Khalde	Church	500-600	Style
3	Beirut	10b	Khan Khalde	Church	503-506	Inscription
4	Sidon	1	Bostan esh-Sheikh	Church	500-600	Style
4	Sidon	2	Jiye	Church	573-574	Inscription
4	Sidon	2	Nebi Younes	Church	585	Inscription
5	Tyre	1	Zahrani	Church	535	Inscription
5	Tyre	1	Zahrani	Church	541	Inscription
5	Tyre	1	Zahrani	Church	524	Inscription
6	Bennt Jbail	1	Qabr Hiram	Church	575	Inscription
7	Nahariyya	1	Hanita	Church	500-550	Style
7	Nahariyya	2	Khirbet Ma 'sub	Church	500-600	Inscription
7	Nahariyya	4	El Bassa	Unknown	500-600	Dauphin, III, 1/7
7	Nahariyya	5a	Shelomi	Ecc Farm	500-600	Archaeology
7	Nahariyya	9	Khirbet Jalil	Church	500-600	Ovadiah I, 117
7	Nahariyya	20	Suhmata	Church	555	Inscription
7	Nahariyya	23	Khirbet Muslih	Unknown	324-640	Pottery
7	Nahariyya	32	Horvat Hesheq	Church	519	Inscription
8	Zefat	3	Khirbet Yarun	Church	500-600	Ovadiah, I, 117

Table 5. The Byzantine mosaic pavements of Phoenicia dated to the sixth century AD

Group 6: The Byzantine mosaic pavements of Phoenicia dated to the seventh century AD

The seventh century is represented by six examples accounting for 7.5% of the Corpus.

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
2	Baalbek	1	Nebha	Church	632-633	Inscription
2	Baalbek	1	Nebha	Church	646	Inscription
3	Beirut	7b	'Ain es-Samake	Church	605	Inscription
7	Nahariyya	5b	Shelomi	Ecc Farm	610	Inscription
7	Nahariyya	5b	Shelomi	Ecc Farm	685	Archaeology
8	Zefat	4b	Khirbet Marus	Beth Midrash	600-640	Pottery

Table 6. The Byzantine mosaic pavements of Phoenicia dated to the seventh century AD

A. Discussion

Despite representing general expenditure from the fourth to the seventh century, the floors of Table 1 provide little indication of more specific economic conditions within the Byzantine period in the region. Thus for reasons stated above, they may be discarded.

Taking the examples from the Corpus in Phoenicia dated by Goldrei's method[10] the following temporal pattern of mosaic floor laying may be observed (Chart 1).

[10] For an explanation of this method, see above page 4, paragraphs 1 and 2.

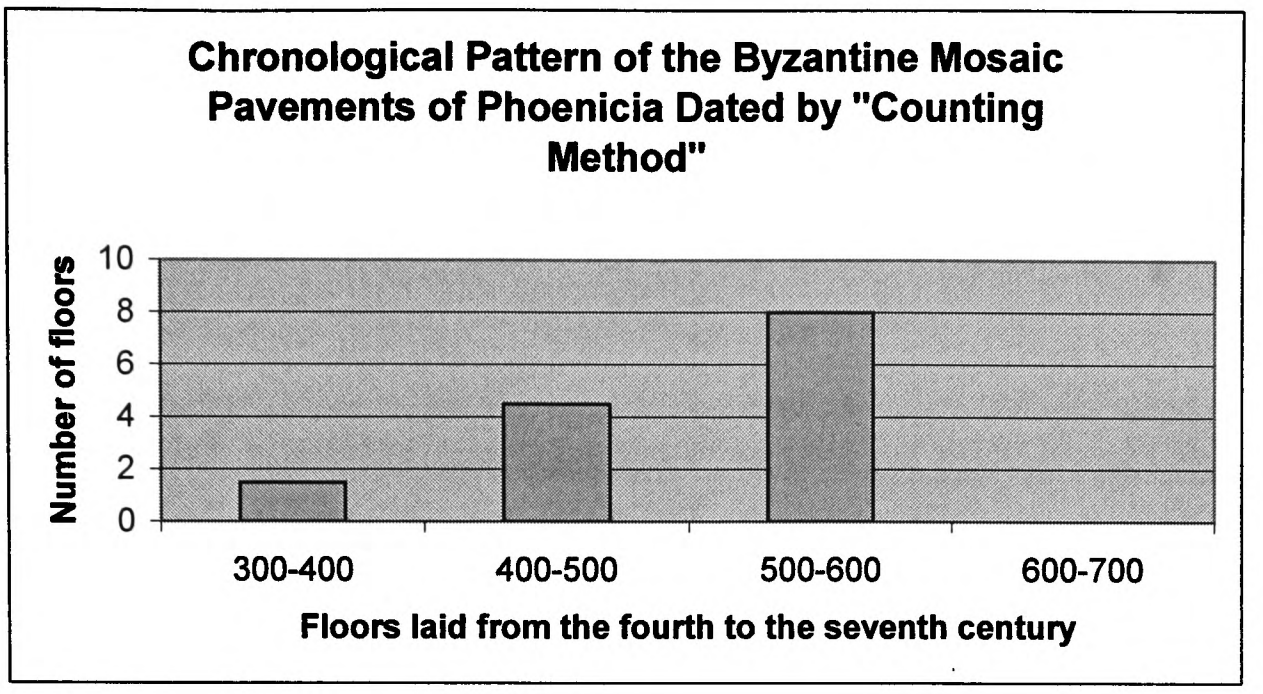

Chart 1. The chronological pattern of the Byzantine mosaic pavements of Phoenicia dated by "Counting Method"

Collating the dates from Tables 2-6, the following chronological proportions are obtained in the Byzantine mosaic pavements of Phoenicia (Chart 2).

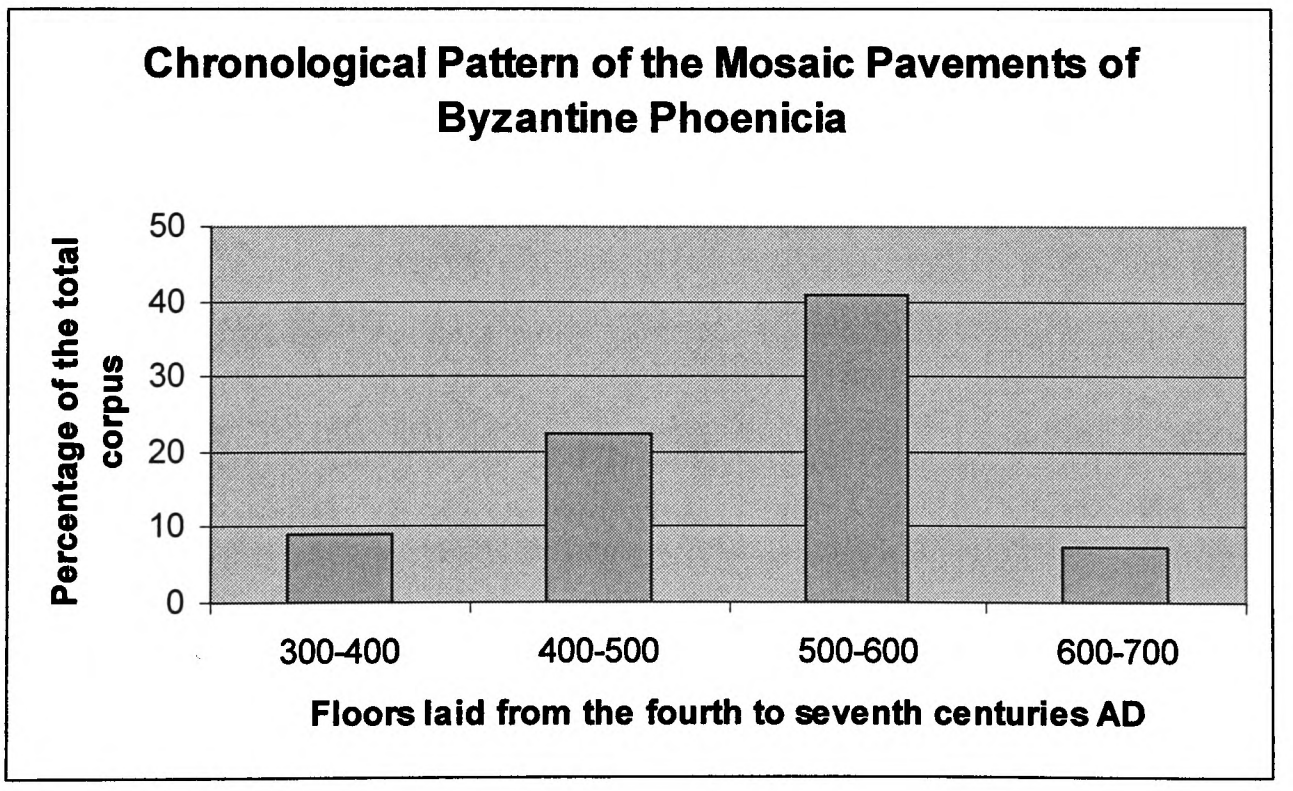

Chart 2. The chronological pattern of the Byzantine mosaic pavements of Phoenicia

It is interesting to observe that the pattern of those floors dated by Counting Method (Chart 1) closely resembles the general pattern of floor laying observed in Phoenicia (Chart 2). This factor would appear to support the validity of this method.

In Chart 2, the fourth century is relatively poorly represented by only 9% of the total Corpus. The number of floors laid markedly increased thereafter to 22.5% in the fifth century, reaching up to 32% in the sixth century. Figures for the seventh century slumped again to levels similar to that of the fourth-century (7.5%). The chronological pattern of floor laying would seem to indicate prosperous economic conditions in the fifth and especially in the sixth century. On the other hand, the scant number of floors laid in the fourth and the seventh centuries support the hypothesis of a slow resumption of economic activity in the fourth century after the third-century crisis, the seventh-century low number of pavements being linked to the decline of the region due to a variety of causes whose cumulative ill-effects became clear only in the seventh century.[11]

Mosaic floors appear to have been fairly uniformly spread throughout the fifth century, this indicating perhaps consistently favourable conditions across that century. The significant number of floors post-dating AD 540 is particularly striking, coinciding with a general flowering of the arts throughout the empire despite the plagues and famines that characterized the second half of the sixth century in the East. In Phoenicia and Northern Palestine, mosaic floors were last laid a few years before the Sassanian conquest of AD 614, as evidenced by the main room of the Shelomi farm (No.7/5a) dated epigraphically to 610. The side-effects of the conquest, notably

the unsuccessful siege of Tyre in AD 616-617 by Jewish irregulars from the Galilee, Jerusalem and Damascus in the pay of the Persians, and the destruction of Christian ecclesiastical sites such as the churches of Nahariyya (No.7/19) and Shavei Zion (No.7/26a-c) as well as the Shelomi farm, disrupted the economy of the coastal zone between Ptolemais and Tyre for half a century at least.[12] Only one example, the crude white mosaic pavement of Courtyard 2 with a Christo-Palestinian inscription dating Phase III of the Shelomi farm (No.7/5b) to the late seventh or early eighth century AD, indicates a renewal of mosaic-laying, albeit of lesser craftsmanship, under Islamic rule.

The clustering of mosaics in cities and on their periphery, as evidenced by the concentration of mosaics in and around Beirut and Tyre, was counterbalanced by the significant number of floors in rural sites (small towns and villages),[13] this suggesting vibrant patronage, both urban and rural.

4. The Mosaics of Northern Palestine as an Index of Economic Conditions

Many of the mosaic pavements of Northern Palestine (Group 1), akin to the Phoenician examples, cannot be dated accurately, are fragmentary and cannot be associated directly with a building of known date or function. These mosaics constitute the largest proportion of the Corpus and may be only generally ascribed to the Byzantine period.

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[11] Dauphin, 1998, II, 502-518.
[12] Dauphin, 1986, 49-50.
[13] Similarly to villages, the towns of Palestine and Southern Phoenicia were predominantly rural. See Kingsley, 1999, 56-60; Dauphin, 1986, 36-50.

Group 1: The Byzantine mosaic pavements of Northern Palestine, AD 324-640

The following 161 examples can only be broadly assigned to the Byzantine period (AD 324-640). Collectively, these pavements comprise 64% of the total number of mosaic pavements in the Corpus for Northern Palestine. These examples will be discarded for the purposes of this analysis.

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
9	Haifa	1	El-Makr	Mon Church	400-600	Ovadiah III, 48
9	Haifa	2	Umm el 'Umdan	Monastery?	324-640	Pottery
9	Haifa	3	Ras al Dar	Chapel?	324-640	Ovadiah IV, 147-148
9	Haifa	4	Khirbet el Qabu	Church?	324-640	Ovadiah IV, 39
9	Haifa	7	Tell Keisan	Church	324-640	Ovadiah V, 139
9	Haifa	9/2	Shiqmona	Chapel	324-640	Ovadiah V, 132
9	Haifa	9/3	Shiqmona	Church	324-640	Ovadiah V, 133
9	Haifa	9/4	Shiqmona	Unknown	324-640	Ovadiah V, 133-134
9	Haifa	9/5	Shiqmona	Unknown	324-640	Ovadiah V, 134
9	Haifa	9/6	Shiqmona	Unknown	324-640	Ovadiah V, 134
9	Haifa	9/7	Shiqmona	Unknown	324-640	Ovadiah V, 134
9	Haifa	9/8	Shiqmona	Unknown	324-640	Ovadiah V, 135
9	Haifa	11	Shafa 'Amr	Synagogue?	324-640	*SWP*, I, 271-273
9	Haifa	12/1	Khirbet Husha	Unknown	324-640	*SWP*, I, 311
9	Haifa	12/2	Khirbet Husha	Winepress	324-640	*SWP*, I, 311
9	Haifa	13	Khirbet Ibtin	Church	400-600	Pottery
9	Haifa	14	Yagur	Unknown	324-640	Pottery
9	Haifa	16	Horvat Mitla	Unknown	324-640	Pottery
9	Haifa	17	Khirbet Lubiya	Unknown	324-640	Pottery
9	Haifa	18	Beit Lehem	Church	400-600	Ovadiah V, 23-24
9	Haifa	20	Allonim	Unknown	324-640	Pottery
9	Haifa	21	Er Reina	Unknown	324-640	Galilée I, 165
9	Haifa	24	El Alaly Zebdah	Unknown	324-640	Pottery
9	Haifa	26	Horvat Shoqef	Unknown	324-640	Pottery
9	Haifa	27	Khirbet el Bustan	Unknown	324-640	Pottery
9	Haifa	28	Khirbet Dubil	Unknown	324-640	Coins, pottery
9	Haifa	29	Khirbet el Karak	Unknown	324-640	Coins, pottery
9	Haifa	30	Summaqa	Unknown?	300-500	Pottery
9	Haifa	32	Jaba'	Church?	324-640	*SWP* II, 42
9	Haifa	34	Sarafand	Church	324-640	Ovadiah, II, 259-261
9	Haifa	35	Khirbet el Mazra'a	Unknown	324-640	Pottery
9	Haifa	36	'En Ayyala	Unknown	324-640	*HA* 17, 1966, 17
9	Haifa	37b	Dor	Church	425-650	Coins, pottery
9	Haifa	38	Jezirat el Makr	Unknown	324-640	Pottery
9	Haifa	40	Abu Shusha	Unknown	324-640	Pottery
9	Haifa	41	'Afula	Unknown	324-640	Pottery
9	Haifa	42	Khirbet Umm et Tut	Unknown	324-640	Pottery
9	Haifa	43	Khallat Abu Hallah	Unknown	324-640	Coins, pottery

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
10	Teverya	8	Majdal	Unknown	324-640	Pottery
10	Teverya	13	Site Ref 201.243	Unknown	324-640	Ovadiah V, 140
10	Teverya	15	Horvat Qoshet	Synagogue	400-600	Pottery
10	Teverya	18	"Kafr Kama South"	Mon Church	324-640	Pottery
10	Teverya	19/1	Khirbet el-Karak	Synagogue	300-625	*Synagogen* I, 73
10	Teverya	20	Dabburiya	Unknown	324-640	Pottery
10	Teverya	21	Tel en Hadatha	Unknown	324-640	Pottery
10	Teverya	23	Har Tavor	Mon Church	300-500	Ovadiah I, 71
10	Teverya	24	Khirbet Sara	Unknown	324-640	Pottery
10	Teverya	25	Jebel el Qafza	Unknown	324-640	Pottery
10	Teverya	26	Sirin	Church	324-640	Ovadiah IV, 149
10	Teverya	27	Khirbet es Safsafa	Unknown	324-640	Pottery
10	Teverya	28	Tamra	Church	324-640	Pottery
10	Teverya	29	Kafra	Synagogue	324-640	Pottery
10	Teverya	30	Khirbet Blick	Unknown	324-640	Pottery

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
11	Netanya	1	Khirbet Kabara	Church	324-640	Pottery
11	Netanya	2	Khirbet Abhariya	Unknown	324-640	Pottery
11	Netanya	3	Tel Tanninim	Unknown	400-600	Arch sculpture
11	Netanya	4/1	Shuni	Unknown	324-640	Shenhav, 58-62, 89-90
11	Netanya	4/2a	Shuni	Winepress	324-640	Shenhav, 58-62, 89-90
11	Netanya	4/2b	Shuni	Winepress	324-640	Shenhav, 58-62, 89-90
11	Netanya	4/3	Shuni	Unknown	324-640	Shenhav, 58-62, 89-90
11	Netanya	5	Regavim	Unknown	324-640	Pottery
11	Netanya	6	Et Tadurra	Unknown	324-640	Pottery
11	Netanya	7	Khirbet esh Sandahawi	Winepress	324-640	Pottery
11	Netanya	8/4	Caesarea	Unknown	324-640	*Caesarea* II, 70-107
11	Netanya	8/5	Caesarea	Unknown	324-640	*Caesarea* II, 70-107
11	Netanya	8/6	Caesarea	Unknown	324-640	*Caesarea* II, 70-107
11	Netanya	8/7	Caesarea	Unknown	324-640	*Caesarea* II, 70-107
11	Netanya	8/8	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/9	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/13	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/14	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/15	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/16	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/17	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/18	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/19	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/20	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/21	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/22	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/24	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/25	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/26	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/27	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/28	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/29	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/30	Caesarea	Silo	400-600	*Caesarea* II, 70-107

11	Netanya	8/31	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/32	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/33	Caesarea	Villa	400-600	*Caesarea* II, 70-107
11	Netanya	8/34	Caesarea	Unknown	400-600	*Caesarea* II, 70-107
11	Netanya	8/35	Caesarea	Granary	324-650	*Caesarea* II, 70-83
11	Netanya	8/36	Caesarea	Granary	324-650	*Caesarea* II, 70-83
11	Netanya	8/37	Caesarea	Granary	324-650	*Caesarea* II, 70-83
11	Netanya	8/38	Caesarea	Granary	324-650	*Caesarea* II, 70-83
11	Netanya	8/39	Caesarea	Warehouse	400-600	*Caesarea* II, 80-81
11	Netanya	8/40	Caesarea	Warehouse	400-600	*Caesarea* II, 80-81
11	Netanya	8/41	Caesarea	Unknown	324-640	*Caesarea* II, 80-81
11	Netanya	8/42	Caesarea	Bath House	324-640	IAA
11	Netanya	8/43	Caesarea	Bath House	324-640	IAA
11	Netanya	8/44	Caesarea	Bath House	324-640	IAA
11	Netanya	8/45	Caesarea	Bath House	324-640	IAA
11	Netanya	8/46	Caesarea	Bath House	324-640	IAA
11	Netanya	8/47	Caesarea	Bath House	324-640	IAA
11	Netanya	8/48	Caesarea	Palaestra	324-640	IAA
11	Netanya	8/49	Caesarea	Palaestra	324-640	IAA
11	Netanya	8/50	Caesarea	Palace	324-640	IAA
11	Netanya	8/51	Caesarea	Palace	324-640	IAA
11	Netanya	8/52	Caesarea	Palace	324-640	IAA
11	Netanya	8/53	Caesarea	Palace	324-640	IAA
11	Netanya	8/54	Caesarea	Palace	324-640	IAA
11	Netanya	8/55	Caesarea	Shrine	324-640	IAA
11	Netanya	8/56	Caesarea	Palace	324-640	IAA
11	Netanya	8/57	Caesarea	Palace	324-640	IAA
11	Netanya	8/58	Caesarea	Palace	324-640	IAA
11	Netanya	8/59	Caesarea	Palace	324-640	IAA
11	Netanya	9	Khirbet ‘Ara	Unknown	324-640	Pottery
11	Netanya	10	Site ref 1563.2102	Winepress	324-640	Pottery
11	Netanya	11	Khirbet es Saharij	Unknown	324-640	Pottery
11	Netanya	12	Pardess Hanna	Unknown	324-640	Pottery
11	Netanya	13	Khirbet Mas‘ud	Unknown	324-640	Pottery
11	Netanya	14	Meser	Unknown	300-500	Pottery
11	Netanya	15	Khirbet Ibreiktas	Unknown	324-640	Pottery
11	Netanya	16	Baka	Unknown	324-640	Pottery
11	Netanya	17	Tel Hefer	Winepress	324-640	Pottery
11	Netanya	18	‘Attil	Church?	324-640	*SWP* II, 151
11	Netanya	19	Gan Hefer	Unknown	324-640	Pottery
11	Netanya	21	Khirbet el-Farisiyye	Unknown	324-640	Pottery
11	Netanya	22	Khirbet Beit Lid	Unknown	324-640	Pottery
11	Netanya	23	Umm el Fulus	Unknown	324-640	Pottery
11	Netanya	24	Khirbet et-Tayyah	Unknown	324-640	Pottery
11	Netanya	25/2	Khirbet Samara	Church	324-640	*SWP* II, 180-181
11	Netanya	26	El-Khirbe	Sam Synagogue	300-500	Coins
11	Netanya	28	Shomron	Shrine	324-640	Crowfoot, 69-70
11	Netanya	29	Kefar Ya‘bes	Winepress	324-640	Pottery
11	Netanya	30	Deir ‘Isfin	Unknown	324-640	Pottery
11	Netanya	31	‘Asira esh-Shamaliyya	Unknown	324-640	Pottery
11	Netanya	32	Khirbet Fahas	Winepress	324-640	Pottery
11	Netanya	32	Khirbet Fahas	Winepress	324-640	Pottery
11	Netanya	33	Nablus	Sam Synagogue	300-400	Magen, 220-222
11	Netanya	34	Khirbet Yawbak	Unknown	324-640	Pottery

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
12	Beth Shean	1	Khirbet Tivon	Unknown	324-640	Coins, pottery
12	Beth Shean	2	Tel Israel	Unknown	324-640	Pottery
12	Beth Shean	3	Site ref 1919.2178	Unknown	324-640	Pottery
12	Beth Shean	4	Khirbet Shatta	Unknown	324-640	Coins, pottery
12	Beth Shean	8	Tel Zahara	Unknown	324-640	*SWP* II, 128
12	Beth Shean	9	Tel Tumis	Church?	324-640	Pottery
12	Beth Shean	10	Tel Zaharon	Unknown	324-640	Pottery
12	Beth Shean	11	Tel Naharon	Unknown	324-640	Pottery
12	Beth Shean	13/3b	Beth Shean	Church	400-640	*ESI*, 1998, 32
12	Beth Shean	14	Tel Amal	Unknown	324-640	Zori, 1962, 184-185
12	Beth Shean	15	'Ein Choma	Unknown	324-640	Pottery
12	Beth Shean	17	Avuka	Unknown	324-640	Pottery
12	Beth Shean	18	'En ha-Naziv	Unknown	324-640	Pottery
12	Beth Shean	19	Beit Qad	Unknown	324-640	Pottery
12	Beth Shean	21	Dabayib 'Antar	Unknown	324-640	Pottery
12	Beth Shean	22	Tel Sofarim	Unknown	324-640	Pottery
12	Beth Shean	24b	Bardala	Church	400-640	Pottery
12	Beth Shean	27	Tayasir	Unknown	324-640	Pottery
12	Beth Shean	28	Khirbet Sumeit	Unknown	324-640	Pottery
12	Beth Shean	29	Khirbet Ferweh	Unknown	324-640	Pottery

Table 7. The Byzantine mosaic pavements of Northern Palestine, AD 324-640

Group 2: The Byzantine mosaic pavements of Northern Palestine datable across the boundaries of either the fifth, sixth and seventh centuries AD

The following 22 pavements are more accurately dated, but straddle either the turn of the fourth, fifth, sixth, or seventh century. The following chronological proportions are obtained in the examples for Northern Palestine: fourth century: 4, fifth century: 5, sixth century: 10, seventh century: 3.

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
9	Haifa	25	Beth She'arim	Villa	500-625	Pottery, style
9	Haifa	37a	Dor	Church	325-425	Coins, pottery
10	Teverya	7/2	El Kursi	Chapel	600-725	Tsaferis, 1-65
10	Teverya	12/1b	Tiberias	Church	475-525	Ovadiah I, 180-181
10	Teverya	19/2b	Khirbet el-Karak	Church	528-640	*TPQ*
11	Netanya	8/2	Caesarea	Public Walkway	550-650	Style
11	Netanya	8/10	Caesarea	Unknown	475-525	*Caesarea* I, 245-46
11	Netanya	8/11	Caesarea	Unknown	475-525	*Caesarea* I, 245-46
11	Netanya	8/17	Caesarea	Official	500-615	*Near East*, I, 169-171
11	Netanya	8/60	Caesarea	Church	550-625	Style
11	Netanya	28/4	Shomron	Church	500-625	Ovadiah I, 158
12	Beth Shean	12	Tell Basul	Monastery	375-425	Pottery
12	Beth Shean	16a	Ma'oz Hayyim	Jew Synagogue	400-525	*Synagogues*, 215-44

12	Beth Shean	16b	Ma'oz Hayyim	Jew Synagogue	525-614	*Synagogues*, 215-44
12	Beth Shean	20b	Rehov	Jew Synagogue	375-500	Coins, pottery, style
12	Beth Shean	20b	Rehov	Jew Synagogue	500-640	Coins, pottery, style
12	Beth Shean	13/8	Beth Shean	Public Walkway	375-425	*ESI*, 1987-88, 17-18
12	Beth Shean	13/9a	Beth Shean	Shop	375-425	*ESI*, 1987-88, 17-18
12	Beth Shean	13/9b	Beth Shean	Shop	375-425	*ESI*, 1987-88, 17-18
12	Beth Shean	13/9c	Beth Shean	Shop	375-425	*ESI*, 1987-88, 17-18
12	Beth Shean	13/13	Beth Shean	Sam Synagogue	375-425	*Synagogen* II, 571-75
12	Beth Shean	13/13	Beth Shean	Sam Synagogue	575-640	*Synagogen* II, 571-75

Table 8. The Byzantine mosaic pavements of Northern Palestine datable across the boundaries of either the fifth, sixth and seventh centuries AD

Group 3: The Byzantine mosaic pavements of Northern Palestine dated to the fourth century

Eleven sites date to the fourth century and comprise around 4% of the total Corpus.

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
9	Haifa	8	Khirbet Jalama	Bath House?	300-400	Coins
9	Haifa	23/3a	Nazareth	Monastery	300-400	Coins
9	Haifa	31	'Arak en-Nataf	Church?	300-400	Coins, pottery
10	Teverya	9	Horvat 'Ammudim	Jew Synagogue	300-325	Coins, pottery
10	Teverya	12/1a	Tiberias	Church	400-425	Ovadiah I, 180
10	Teverya	11	Hammath Tiberias	Jew Synagogue	300-400	Coins, pottery
12	Netanya	27	Khirbet Majdal	Sam Synagogue	300-400	Magen, 222-23
12	Beth Shean	20a	Rehov	Jew Synagogue	324-375	Coins, pottery, style
12	Beth Shean	13/4a	Beth Shean	Tomb	*ca* 325	*TAQ*
12	Beth Shean	13/10	Beth Shean	Public Walkway	300-400	*ESI*, 1987-88, 14-15
12	Beth Shean	13/11	Beth Shean	Public Walkway	300-400	*ESI*, 1987-88, 14-15

Table 9. The Byzantine mosaic pavements of Northern Palestine dated to the fourth century

Group 4: The Byzantine mosaic pavements of Northern Palestine dated to the fifth century

Fifth century examples total 25 and account for 10% of the total Corpus.

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
9	Haifa	5a	Karmiel	Church	475-500	Style
9	Haifa	9/1	Shiqmona	Monastery	400-500	Ovadiah V, 131
9	Haifa	10	Kefar Ata	Chapel	400-500	Ovadiah II, 228
9	Haifa	23/1	Nazareth	Chapel	400-425	Ovadiah V, 115
9	Haifa	23/2	Nazareth	Church	400-425	Ovadiah V, 115
9	Haifa	23/3a	Nazareth	Monastery	400-425	Ovadiah V, 115-116
9	Haifa	23/3b	Nazareth	Monastery	400-425	Ovadiah V, 116

9	Haifa	33	Ijzim	Unknown	400-500	Inscription
9	Haifa	15/2	Zippori	Public Walkway	400-500	Inscription
9	Haifa	15/3	Zippori	Public Walkway	400-500	Inscription
9	Haifa	15/4	Zippori	Jew Synagogue	400-425	*Redemption*, 1996
9	Haifa	39/4	Mishmar Ha 'Emeq	Church	400-500	Pottery
10	Teverya	2	Kefar Nahum	Church	400-500	Churches, 74-76
10	Teverya	3a	Beatitudes	Chapel	400-500	Style
10	Teverya	4	Et Tabgha	Church	400-500	Style
10	Teverya	5/2	Khisfin	Church	400-500	*Jews*, 74-88
10	Teverya	12/1a	Tiberias	Church	400-525	Ovadiah I, 180
10	Teverya	14	Kafr Kanna	Jew Synagogue	400-500	*Ancient*, 228-232
10	Teverya	17	Samra	Mon Church?	400-500	Pottery
11	Netanya	8/1	Caesarea	Jew Synagogue	*ca* 450	Ovadiah I, 46-47
11	Netanya	8/3	Caesarea	Unknown	475-500	Ovadiah V, 216-21
11	Netanya	25/1	Khirbet Samara	Sam Synagogue	400-500	Coins
11	Netanya	28/3	Shomron	Chapel	475-500	Style
12	Beth Shean	13/5a	Beth Shean	Palaestra	400-425	*ESI*, 1987-88, 15-17
11	Beth Shean	13/14	Beth Shean	Villa	*ca* 450	Ovadiah V, 40

Table 9. The Byzantine mosaic pavements of Northern Palestine dated to the fifth century

Group 5: The Byzantine mosaic pavements of Northern Palestine dated to the sixth century

Sixth century examples total 34 and account for 13.5% of the total Corpus.

Zone No	Zone Name	Site No	Site Name	Building Type	Date (AD)	Dating Method
9	Haifa	5b	Karmiel	Church	543	Inscription
9	Haifa	6	Horvat Kenes	Church	500-600	*ESI*, 1996, 25-7
9	Haifa	22	'Isfiya	Jew Synagogue	500-525	Style
9	Haifa	15/1	Zippori	Villa	500-600	Style
10	Teverya	1	Er Rama	Church	500-600	*Excavations*, 83-84
10	Teverya	3b	Beatitudes	Chapel	500-600	Style
10	Teverya	6	'Arraba	Church?	504-594	Inscription
10	Teverya	7/1	El-Kursi	Church	582-587	Inscription
10	Teverya	10	Qal 'at el Hisn	Church	591	Inscription
10	Teverya	12/2	Tiberias	Bath House	500-600	Ovadiah I, 139-140
10	Teverya	14/1	Kafr Kama	Chapel	525-550	Ovadiah I, 98-9
10	Teverya	14/2	Kafr Kama	Chapel	525-550	Ovadiah I, 98-9
10	Teverya	19/2a	Khirbet el-Karak	Church	528-529	Inscription
10	Teverya	22	Hammath Gader	Jew Synagogue	500-600	*Synagogen* I, 154-8
11	Netanya	8/12	Caesarea	Palace?	500-600	Style
11	Netanya	8/23	Caesarea	Palace?	500-600	Style
11	Netanya	20	Bahan	Mon Church?	500-600	Ovadiah, I, 25-26
11	Netanya	28/1	Shomron	Shrine	575-600	Style
12	Beth Shean	5/1	Beth Ha-Shitta	Mon Farm	500-600	Ovadiah I, 20-21
12	Beth Shean	5/2	Beth Ha-Shitta	Winepress	500-600	Ovadiah I, 20-21
12	Beth Shean	6	Sede Nahum	Chapel	500-600	Ovadiah I, 159-60
12	Beth Shean	7	Beth Alpha	Jew Synagogue	518-527	Inscription
12	Beth Shean	23	Tel Abu Faraj	Jew Synagogue	500-600	Coins, pottery
12	Beth Shean	25	El Zababide	Church	500-600	Style

12	Beth Shean	26	Khirbet Jabaris	Mon Church	500-600	Inscription
12	Beth Shean	13/1	Beth Shean	Monastery	*ca* 567	Inscription
12	Beth Shean	13/2	Beth Shean	Church	500-600	*ESI*, 1997-98, 30-33
12	Beth Shean	13/4b	Beth Shean	Tomb	*ca* 550	*QDAP* V, 11-30
12	Beth Shean	13/5b	Beth Shean	Palaestra	500-600	*ESI*, 1987-88, 15-17
12	Beth Shean	13/7	Beth Shean	Odeon	500-600	*ESI*, 1987-88, 19
12	Beth Shean	13/12	Beth Shean	Monastery	500-600	Ovadiah I, 40
12	Beth Shean	13/15	Beth Shean	Jew Synagogue	550-600	Style
12	Beth Shean	13/16	Beth Shean	Unknown	500-600	Style
12	Beth Shean	13/18	Beth Shean	Unknown	500-600	Style

Table 10. The Byzantine mosaic pavements of Northern Palestine dated to the sixth century

Abbreviations used in Tables 1-10

Ancient — *Ancient Christian Villages of Galilee*, Jerusalem, 2001, 228-232.

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Ovadiah IV	Ovadiah, A., and Gomez de Silva, C., "Supplementum to the Corpus of the Byzantine Churches in the Holy Land. Part III: Appendices", *Levant* XVI, 1984, 129-165.
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QDAP	*Quarterly of the Department of Antiquities in Palestine.*
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A. Discussion

Taking the examples from the corpus in Northern Palestine dated by the Goldrei "Counting Method", the following temporal pattern of mosaic floor laying is observable (Chart 3).

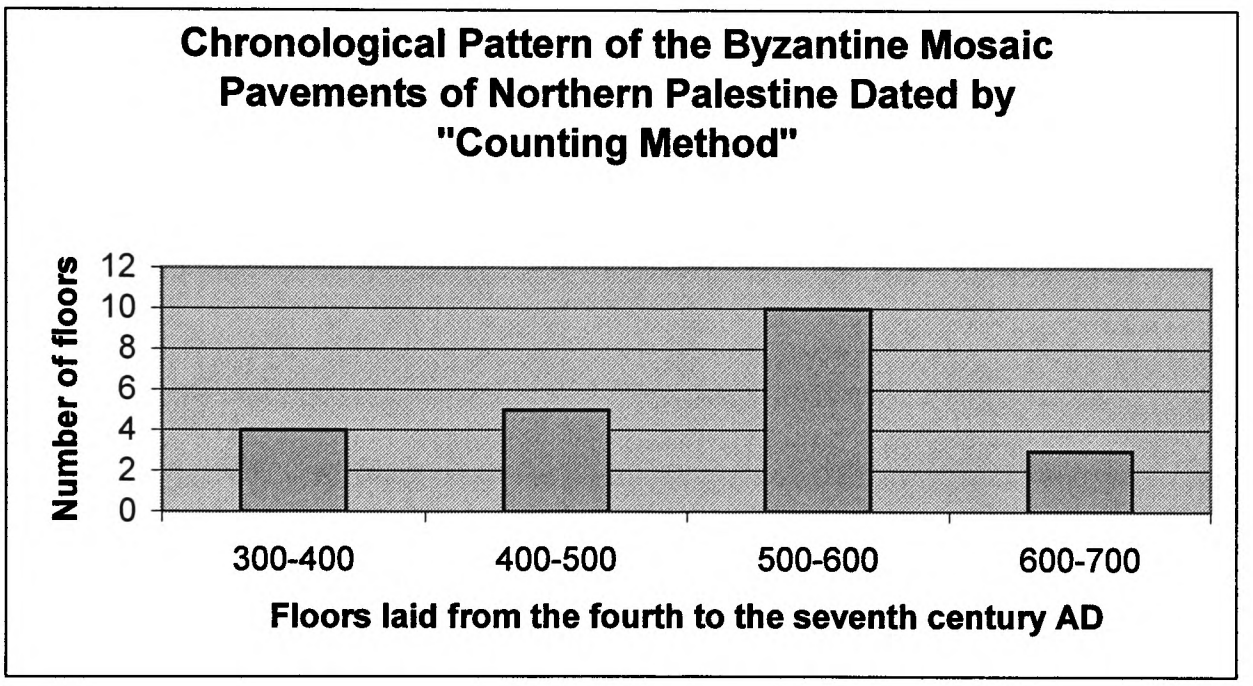

Chart 3. The chronological pattern of the Byzantine mosaic pavements of Northern Palestine dated by "Counting Method"

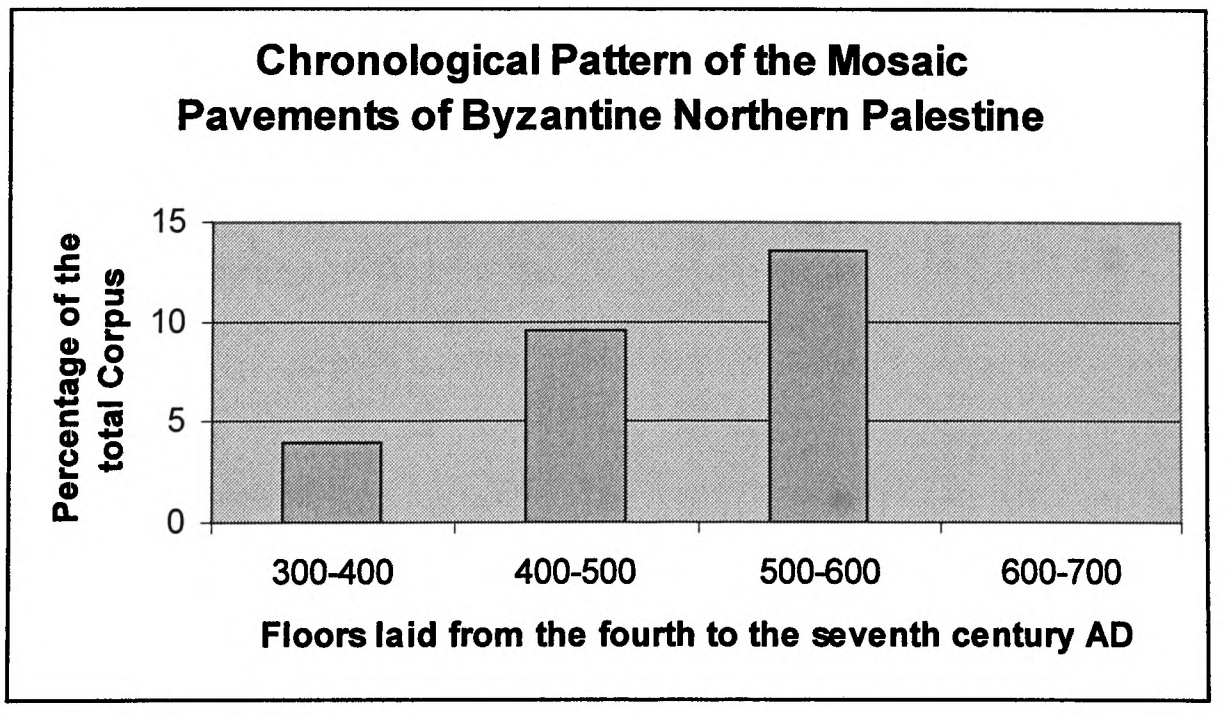

Chart 4. The chronological pattern of the Byzantine mosaic pavements of Northern Palestine

Collating the dates from Tables 7-12, the following chronological proportions are obtained in the Byzantine mosaic pavements of Northern Palestine (Chart 4).

As for the Phoenician examples, it is interesting to note that in Northern Palestine the pattern of those floors dated by "Counting Method" (Chart 3) closely resembles the observed pattern of floor laying (Chart 4), thus validating once more the method adopted here.

The Northern Palestinian Group 1 pavements mirror the Phoenician examples of Group 1 in their chronological imprecision. Taken as a whole, Group 1 floors may represent general expenditure from the fourth to the seventh century, but with little indication as to more specific economic trends during the course of the Byzantine period. Therefore, for the purposes of the chronological analysis, Group 1 floors will be discarded.

From the more precisely dated mosaic pavements of Northern Palestine it is possible to detect several chronological trends clearly paralleled by the Phoenician pavements. In Group 4, the number of floors dating to the fourth century (4%) is relatively low compared with the fifth century pavements of Group 4 (10%) and the sixth century floors of Group 5 (13.5%).

As in Phoenicia, the rate of floor laying peaked markedly in the sixth century. It is notable that the precisely dated floors of the sixth century exhibit a fairly even chronological distribution. Thus as for the pavements of Phoenicia, no radical fall off is detectible after AD 540. Once again, the cut off point seems to be immediately

prior to the Persian conquest of the region in AD 614. Thus if we accept the precisely dated examples of Northern Palestine as representative of economic conditions, the fifth and sixth centuries would appear to have been prosperous. The fourth and the seventh centuries, on the other hand, seem to have been markedly less so.[14]

There is also a clustering of mosaics in the cities of Northern Palestine: a significant number of examples are concentrated in the provincial capitals of *Palaestina Prima* (Caesarea) and *Palaestina Secunda* (Beth Shean). A large proportion of the floors, however, were also laid in rural sites (small towns and villages). Thus patronage was not solely an urban phenomenon, concentrated in the cities, but it spread to the small town and village communities of the hinterlands.

5. The Economy of the Roman Empire in Late Antiquity: General Considerations

Although the mosaics of the Corpus should be reviewed within their broad economic context, a comprehensive treatment of the economy is beyond the scope of the present thesis.

It is now widely accepted that economic conditions were prosperous in many of the provinces of the eastern Roman Empire during the latter part of the fifth and in the first half of the sixth centuries.[15] This is supported both by the textual and

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[14] Father Michele Piccirillo (pers. comm., 2002, 14th May) has drawn attention to the fact that this pattern may be somewhat misleading since the fourth century marks the beginning of Christianity and the seventh century the beginning of Islam. These factors would have had a profound impact on the chronological pattern of church building in the region (and hence the number of floors laid in churches during the periods in question).

[15] Dauphin, 1980, 112-134; Mango, 1986; Lewit, 1991; Cameron, 1993.

archaeological sources.[16] In *Buildings*,[17] the panegyrical work dedicated to Justinian I, the Byzantine court historian Procopius listed scores of building projects across the empire which he attributed to Emperor Justinian I (AD 527-565). Due to the panegyrical nature of this work and the lack of archaeological evidence in support of Procopius' claims, it has been argued that much of this work was also spread across the reigns of Anastasius (AD 491-518) and Justin I (AD 518-527).[18]

The economic prosperity of the fifth and sixth centuries AD did not last much beyond this period. Some scholars view the onset of decline as commensurate with the outbreak of the plague in AD 541 which subsequently swept across the empire and had a devastating effect on both the urban and rural populations.[19] Other scholars, however, argue against this view, since the archaeological evidence for the plague is scant.[20] Decline is also often linked to the historical events of the sustained Persian occupation of the eastern provinces from AD 614 and the Muslim conquest in the mid 630s.[21]

Urban decline is well attested in the historical[22] and archaeological records and is generally regarded as a phenomenon which reached a peak in the seventh century.[23] C. Foss has suggested that the urban culture of the Roman world did not survive the

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[16] For building activity across diverse parts of the Roman empire during the fifth and sixth centuries: Randsborg, 1991, 53; Mango, 1990, 37-50; Foss, 1994, 1-52; Foss, 1997, 469-486; Hattersley-Smith, 1996; Ovadiah, 1970; Ovadiah, Ovadiah and Gomez de Silva, 1981, 1982 and 1984.
[17] Procopius, *Buildings* I-IV (Translated by H.B. Dewing, Loeb, Cambridge, Massachusetts, Harvard University Press, 1962).
[18] An excellent argument for this is presented by Howard-Johnston, 1989, 203-229.
[19] Howard-Johnston, November 1997, pers. comm.; Sarris, 1994.
[20] Whittow, 1996, 66-68.
[21] Schick, 1995; Foss, 1997. 469-486.
[22] The physical alterations carried out at Mocesus and Caesarea in Cappadocia are described by Procopius in *Buildings*, V, iv.
[23] Foss, 1994, 1-52; Mango, 1978, 89-107; Haldon, 1990.

seventh century.[24] Many cities exhibit a general shrinkage of the area covered by the original settlement, this entailing the abandonment of much of the city and most or all of its suburban districts, together with the fortification of a much smaller area. In the provinces of Syria and Palestine, changes in the urban context are typified by subdivision and encroachment, characterized both by the appearance of smaller dwellings and houses and shops in existing public spaces.[25]

Thus it would appear that economic conditions in the eastern empire exhibited signs of prosperity in the second half of the fifth century. This continued into the sixth century but was followed by a period of decline. Although the chronological incipience of this decline is a moot point, the general consensus is that the historical events that followed in the seventh century proved devastating for the economic fortunes of the Roman Empire.[26]

A. The Economy of Phoenicia and Northern Palestine in the Byzantine Period: some General Considerations

With the exception of more recent scholarship,[27] the economy of Byzantine Palestine has largely escaped critical muster. The main theories are summarised as follows.[28] M. Avi-Yonah[29] viewed the adoption of Christianity as the Roman State religion as pivotal to the economy of Palestine. He suggested that prosperity was generated artificially by a massive program of church building sponsored by imperial donations

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[24] Foss, 1977, 469-486.
[25] An excellent discussion of urban change during this period is provided by Kennedy, 1985, 3-27.
[26] Haldon, 1990; Foss, 1977, 469-486; Foss, 1994, 1-52; Mango, 1978, 89-107.
[27] Dauphin, 1988; Kingsley, 1999.
[28] A critical appraisal of the main theories pertaining to the economy of Byzantine Palestine is provided by Kingsley, 1999, 36-40.

in the fourth century and private patronage in the fifth. Thus work was provided for a vast number of skilled labourers whose relative wealth in turn stimulated the provincial economy. Avi-Yonah also argued that the export of biblical relics and pilgrim gifts would have also benefited the provincial economy.

Citing rabbinical literature, Sperber[30] has argued that the Late Roman and Early Byzantine periods were accompanied by a decline in agricultural productivity and commerce, as a result of climatic change and political instability. This was accompanied by a fundamental change in agricultural ownership, notably among the Jewish farming population, whose majority sold their lands and became *coloni* farmers under the patronage of wealthy landowners.

Safrai, has suggested that the economy underwent a period of recovery in the early fourth century, but subsequently declined in the fifth. He specifically views the period between the early fifth century and *ca* AD 490 as a period of agricultural, demographic and economic decline as a consequence of overpopulation and the barbarian conquest of the Western Empire. Safrai based this theory on numismatics. In particular, the lack of fifth century coin finds from archaeological settlements across Palestine and the Mediterranean appeared to him to indicate widespread economic decline.[31]

By combining historical and archaeological sources pertaining to 2,930 settlements, C. Dauphin, in her recent work *La Palestine byzantine*,[32] has

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[29] Avi-Yonah, 1958, 43, 45-47.
[30] Sperber, 1978, 11, 13, 45-46, 51, 59 and 136.
[31] Safrai, 1998, 34-35, 71, 99, 103, 105 and 130.
[32] Dauphin, 1998.

demonstrated a demographic expansion in the second half of the fourth, fifth and sixth centuries. Decline is viewed by her as already underway from the early part of the sixth century, culminating in the seventh century. She argues that the initial stimulus for demographic growth was manifest in the vast ecclesiastical building programmes of Constantine in the fourth century. This gathered pace in the fifth century under the patronage of aristocrats migrating to the province after the fall of the Western Empire. Thus growth in population and demand led to the intensification of agricultural production "olive and wine plantations being the classic response of Mediterranean agriculture to demographic expansion."[33] Decline is seen as having been induced by several factors, both internal (disease, deficient diet and technological stagnation) and external (plagues, drought and famine) against the background of a rate of population growth outstripping the pace of economic development.[34]

More recently, drawing extensively on quantitative pottery studies from several sites in Palestine, S. Kingsley[35] has challenged the central framework underpinning the various interpretations of the Palestinian economy in Late Antiquity. He suggests, for instance, that Sperber[36] and Safrai[37] have relied in large measure on the outmoded primitivist interpretation of the economy espoused by Jones.[38] Furthermore, the integrity of the historical texts on which Sperber and Safrai predicate their theories is questioned. Kingsley noted, for instance, that many of the rabbinical texts cited by Sperber have a clear apocalyptic bias and thus might not necessarily be historically accurate. Moreover, he is of the opinion that Safrai's interpretation of a

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[33] Dauphin, 1999b, 80.
[34] Dauphin, 1998, I, 119-121; 1999b, 88-89.
[35] Kingsley, 1999.
[36] Sperber, 1978.
[37] Safrai, 1998.
[38] Jones, II, 1964, 778, 802-810, 817, 822-833; Jones, 1974, 83, 87

fifth century decline is fundamentally flawed. Drawing on the work of numismatists, Kingsley points out that the lack of coinage in the fifth century owed much to the reuse of fourth century coinage.

The hypothesis of an 'artificial economy' espoused by Avi-Yonah is also questioned by Kingsley. Rather than benefiting from an external injection of wealth, the economic prosperity of Palestine is viewed as being underpinned by self-sufficiency in oil and wine production. Essentially, the demands of taxation stimulated and intensified the production of these commodities in Palestine and opened up a thriving export market notably in wine to other parts of the Mediterranean.

Apart from dated mosaic pavements, various economic indicators of the region during the Byzantine period include pottery, epigraphy and coinage. The picture for much of Central and Northern Phoenicia is unclear. This is due to the civil war that dogged the Lebanon in recent decades. As a result, archaeological survey, excavation and subsequent publication have lagged behind other regions of the Levant, especially neighbouring Israel. This picture has begun to change in the last decade, but the picture is still patchy at best, since the publication reports tend to be preliminary and confined to specific geographical areas of the Lebanon.[39] The available archaeological evidence for economic conditions in Central and Northern Phoenicia may perhaps best be regarded only as a 'snapshot'.

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[39] Excavations have concentrated particularly on the Souks area of Beirut Central District. Several papers describing preliminary results from recent excavations in the Souks area have recently been published: Perring, 1997-98; Reynolds, 1997-98; Jennings, 1997-98; Sheehan, 1997-98; Morss, 1997-

Southern Phoenicia and Northern Palestine (modern Northern Israel) contrast markedly with Central and Northern Phoenicia (modern Lebanon). Archaeological survey, excavation in and subsequent publication on the former region have been prolific in recent decades.[40] As a result, it is possible to gain a more comprehensive insight into economic conditions in the region during the Byzantine period from the available archaeological material (pottery, coinage, epigraphy and demography).

6. Specialized Production, Long-Distance Trade, Settlement and Building Construction in Byzantine Phoenicia and Northern Palestine

Additional economic indicators during the Byzantine period in the region are examined below. These include the production and distribution of pottery (notably containers of wine and foodstuffs), industrial processing (glass and dye) and demographic trends (as attested by building activity and settlement patterns). The evidence deals specifically with Phoenicia and Northern Palestine. Occasional references, however, will be made to Central and Southern Palestine for comparative purposes.

A. Agricultural and Industrial Production

Another way of gauging economic conditions in the Byzantine period is to assess agricultural production in terms of self-sufficiency and export. S. Kingsley has recently demonstrated that Palestine was self sufficient in the production of wheat,

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98; Butcher, 1997-98; Boivin and French, 1997-98; Williams and Murray *et alii*, 1997-98; Seeden and Thorpe, 1997-98; Ward, 1997-98 and Ludvigsen and Seeden, 1997-98.

[40] For a comprehensive account of archaeological activity in modern Israel, *Excavations and Surveys in Israel*, 1981-2000, vols 1-19.

olive oil and wine. The area under cultivation expanded a great deal during the Byzantine period. This was commensurate with the demographic expansion discussed above. The main archaeological evidence for the production of wheat, oil and wine is reviewed below.[41]

Ai. Wheat

Historical and archaeological sources provide a relatively clear picture of wheat production in Palestine during the Byzantine period. Dauphin has identified 174 millstones and bread ovens from 50 sites in Byzantine Palestine.[42] A large concentration of hourglass millstones from fifteen sites are known in the Golan. These include examples which date to the first half of the fourth century.[43] Other examples have been excavated at Tel es Sarija, Khirbet el Ghureiyib,[44] Bethlehem,[45] Nahal Haggit,[46] Nazareth[47] and Tel Jezreel.[48] Examples from the central coastline have been recorded at Dor,[49] Caesarea,[50] Sumaqa[51] and Antesion.[52] From along the Crocodile River, 5km north of Caesarea, four large and sophisticated flour mills date to the Byzantine period.[53]

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[41] A detailed treatment of wheat, oil and wine production, and wine export, is given by Kingsley, 1999, 77-98. For a more concise appraisal, particularly of wine production and export see also Kingsley, 1999a, 3-8.
[42] Dauphin, 1998, 496.
[43] Urman, 1985, 146, fig. 54.
[44] Frankel and Getzov, 1997, 86, 126.
[45] Raban, 1982, 48.
[46] Seligman, 1997, 62.
[47] Bagatti, 1969, 317, fig. 240.
[48] Moorhead, 1997, 146.
[49] Kingsley and Raveh, 1996, 18.
[50] Patrich, 1996, fig. 14.
[51] Dar, 1999, 44, 47, 50, 56.
[52] Neidinger *et alii*, 1994, 6.
[53] Schioler, 1989, 138.

Aii. Oil

Byzantine Palestine is generally considered to have been self-sufficient in olive oil production. A total of 365 oil presses of probable Byzantine date have been identified and catalogued by Kingsley.[54] 90% of these are located north of Tel-Aviv. In Northern Israel a cluster of sixty presses has been recorded in the Nahariyya zone, 28 in the Haifa region and 53 around Netanya. The largest concentration of oil presses is distributed in the Golan, where 128 installations have been recorded.

An understanding of Palestinian oil export is severely impaired by the difficulty of distinguishing visually between Palestinian oil and wine *amphorae* at sites around the Mediterranean. It has been argued by Kingsley that wine *amphorae* were pitch-lined. Pitch is, however, rarely preserved on sherds from land excavations. Kingsley is of the opinion that the trade in exported oil was on a massive scale in the Mediterranean zone.[55]

Aiii. Wine Production Trade and Export

Byzantine pottery workshops are well attested in Southern Phoenicia and Northern Palestine, in large villages and small towns.[56] For instance at Kfar Hananya[57] in the Galilee, a diverse range of bowls, cooking-pots, *amphorae* and jugs was produced. In the western Acco valley, white-painted Carthage Late Roman 5 (CLR 5) *amphorae*,

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[54] Kingsley, 1999, table 3, Figs 34-35.
[55] Kingsley, 1999, 83.
[56] Kingsley, 1999, 72-75.
[57] Adan-Bayewitz, 1993.

water-wheel jars, cooking-pots, casserole vessels and jar lids were manufactured at Horvat 'Uza[58] during the fourth and fifth centuries AD. Carthage Late Roman 5 (CLR 5) was manufactured at Kfar Nahf[59] during the Late Roman/Early Byzantine period and at Umm Khaled[60] during the sixth and seventh centuries AD. Finewares tended not to be produced in Palestine and were imported from Cyprus, North Africa and Phocaea in Asia Minor during the Early Byzantine period.[61] In Phoenicia, wine *amphorae* were manufactured in and around Beirut and there is little evidence for local production of finewares.[62]

Self-sufficiency in wine production in Palestine is apparent from the large quantity of winepresses dating between the fourth and seventh centuries. A total of 899 winepresses of probable Byzantine date were catalogued by Kingsley.[63] The vast majority of these (706) are located in Northern Palestine and Southern Phoenicia. They were predominantly located in the countryside, inside or on the edge of vineyards and were mainly associated with villages, farmsteads, and to a lesser degree with rural estates. Press sizes differed considerably, but the average installation consisted of a treading-floor measuring 3.40 x 3.60m, with a collecting-vat measuring 1.30 x 1.70m and 1.10m in depth (with a capacity of holding 2,400 litres of wine). Approximately 42% of recorded vats exceeded these dimensions and could store the juice of pressed grapes in excess of 4,000 litres.[64]

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[58] Getzov, 1995, 20.
[59] Vitto, 1980.
[60] Levy, 1988, 88-89.
[61] Kingsley, 1999, 73.
[62] John Hayes, pers. comm., 2000 August 21st.
[63] Kingsley, 1999a, 94.
[64] Kingsley, 1999a, 96.

A particularly large installation, with a liquid capacity of around 40,000 litres was recorded in the Christian village of Khirbet Zikhrin in Northern Palestine.[65] Five winepresses located in the Jewish village of Sumaqa in the Carmel could have processed 45,000 litres.[66] The largest recorded Palestinian winepress is dated to the fourth century at Achziv. The four vats of this installation could have produced up to 59,000 litres of wine.[67]

The precise dating of the majority of winepresses is complicated by poor publication standards. However, the best known type of Byzantine winepress is characterized by a screw system identifiable by a mortise cut or inserted into the middle of a treading floor.[68] Numismatic evidence suggests that this kind of press dated from the fourth century.[69] One of the five presses from Sumaqa was of the screw type and is dated by pottery and coins to the fourth and fifth centuries.[70] Kingsley has suggested that the screw press was less reliant on manpower than other press types, and perhaps reflects intensive, efficient large-scale wine production.

The production of wine processing seems to have diminished markedly after the Islamic conquest of Northern Palestine.[71] The one dated installation at Ramat Hanadiv[72] appears to have been abandoned immediately prior to, or immediately after the Arab conquest. The majority of dated installations from Central and Southern

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[65] Fischer, 1985, 196.
[66] Dar, 1999, 95-107.
[67] Syon, 1998, 7.
[68] Frankel, 1997, 75, 79, 82; figs 39-46.
[69] Amit, 1992, 150-151.
[70] Dar, 1999, 95-107.
[71] Father Michele Piccirillo (pers. comm., 2002 14th May) has informed me that his excavations in Jordan have revealed a contrary picture.
[72] Hirschfeld and Birger Calderon, 1991, 104, fig. 41.

Palestine conveys a similar picture: Kiludiya,[73] the estate at Khirbet 'Azzun,[74] Kfar Saba,[75] Khirbet Hilal[76] and Pisgat Ze'ev East A.[77]

Quantitative pottery studies in the Souks' area of Beirut (BEY 006) have proven informative concerning the local production and trade in wine. For the period between AD 325 and 350, Phoenician wine *amphorae* (predominantly type BEY 006.2349) represent 50% of the total *amphorae* sample. Between AD 360 and 400, the percentage of local *amphorae* (predominantly type BEY 006.9429) falls to 37% of the total sample, slipping further between AD 375 and 475, when local *amphorae* (predominantly type BEY 006.2318) constituted 34.5% of the total sample. Imported wine *amphorae* (of which a significant proportion emanated from Palestine and Southern Phoenicia) represent 49.9% of the total *amphorae* sample in the AD 325 and 350 period, increasing to 57.9% of the total *amphorae* sample between *ca* AD 360 and 400, and to 64.4% of the total *amphorae* sample between AD 375 and 475.[78]

A pottery sequence from Beirut (BEY 004) was recently published by J.W. Hayes.[79] Following a lacuna of some 200 years, the late fifth century AD until the earthquake of AD 551 was a major period of deposition. Ceramic deposition continued until around AD 800, albeit on a reduced scale. This included a variety of locally produced and Palestinian *amphorae*, imported processing tubs from the Adriatic, locally produced cooking wares and imported tablewares/finewares from Africa, Phocaea and Cyprus.

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[73] *ESI*, 1984, 61.
[74] Roll and Ayalon, 1981, 124.
[75] Ayalon, 1995b, 47.
[76] Amit, 1992, 150-151.
[77] Seligman, 1994, 52-54; fig. 46.
[78] Reynolds, 1997-1998, 35-110.

Quantitative pottery studies have proven particularly informative for the general scale of Palestinian wine export around the Mediterranean. Wine export is most commonly associated with Palestinian Carthage Late Roman 4 (CLR 4) and Carthage Late Roman 5 (CLR 5) types. Forty-six quantified assemblages recorded at 29 sites around the Mediterranean indicated that the main period of Palestinian wine export began in the late fourth century and intensified in the early fifth century. Consumption remained high in many provinces of the empire between the fifth century and *ca* AD 650.[80] Palestinian imports accounted for 13% of all *amphorae* in a deposit dated between AD 575 and AD 621 at Calle Solledad in Spain,[81] 20% of *amphorae* in La Bourse Phase 2B in Marseille between the late sixth century and first half of the seventh century,[82] 16% in late sixth or early seventh century Naples,[83] 69% at Ostrakine in Northern Sinai from *ca* AD 550 to the early seventh century,[84] 73% in sixth-century Alexandria, 20% in Sector G[85] at Argos during the sixth century[86]and 11% in Rome *ca* AD 600-650.[87]

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[79] Hayes, 2000, 1-8.
[80] Kingsley, 1999, tables 12-13; Kingsley, 1999a, 7.
[81] Reynolds, 1995, 182, 264-265.
[82] Bonifay, 1986, 303-304.
[83] Arthur, 1985, 255.
[84] Oked, 1996, 168-169.
[85] Majcherek, 1992, 106, 116-117.
[86] Abadie, 1989, 54.

Aiv. Glass

The archaeological evidence for glass production during the Byzantine period in Phoenicia and Northern Palestine is considerable.[88] Waste from a possible fourth or fifth century glass-kiln has been identified in the Jewish village of Sumaqa in the Carmel[89], and glass slag has been recorded at Tel Shiqmona.[90] Industrial glass waste from Horvat Qav in the Upper Galilee has been associated with a farmhouse dating to between the seventh and eighth centuries AD.[91] Late Byzantine glass kilns have also been excavated at Bet Eli'ezer, about 8 km south of Caesarea. The kilns consisted of twin firing furnaces and a rectangular melting chamber (2 x 4m), each capable of producing a maximum of between eight and ten tons of glass in a single firing.[92] This is the largest known example of the preliminary production stage of glass in the region. Glass slag has also been recorded in a late sixth to early seventh century commercial district at Sepphoris in the upper Galilee.[93]

The combined production of raw glass and vessels is attested in estates, towns and cities. At Jalame in the lower Galilee, a workshop produced bowls, jugs, bottles, lamps, jars and *amphoriskoi*.[94] This site has been dated by coin finds to between AD 351 and 383. In the Carmel, a rural estate inhabited by Samaritans is currently being excavated.[95] This site also provides evidence for both stages of glass production. The Jewish town of Beth She'arim in the Galilee was renowned for its

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[87] Whitehouse *et alii*, 1985, 186.
[88] An excellent review of glass production is provided by Kingsley, 1999, 66-69.
[89] Dar, 1999.
[90] Hirschfeld, 1998, 20.
[91] Gorin-Rosen and Stern, 1995, 17-18.
[92] Gorin-Rosen and Stern, 1995, 42-43.
[93] Meyers *et alii* 1995, 70.
[94] Weinberg and Goldstein, 1988, 38.

glassworks from the fourth century onwards;[96] a nine ton glass slab has been recorded inside a melting-tank within this site.[97]

Evidence of specialized glass vessel manufacture only is known from several other urban settlements. A workshop producing polycandelon lamps, wine goblets, spherical bottles, juglets, bowls and window glass has been excavated adjacent to a sixth century 'bazaar' located along the north-eastern city wall of Scythopolis.[98] The stems of about 400 bowl-shaped glass lamps excavated in Area L18a at Caesarea are thought to originate from an unexcavated glass workshop in the city.[99] Glass furnaces have also been recorded at Acco in Phoenicia.[100]

There is ample evidence for local glass vessel production in the Souks area of Beirut during the Byzantine period. This grew significantly from the late Hellenistic period to the sixth/seventh century, from occasional vessels of limited shape to large numbers in everyday use for a large range of functions. Vessels from the late first century BC and first century AD were found in significant numbers, but material from the second/third century AD much less so. Amongst the fourth to sixth centuries vessels found, few vessels appear not to have been locally produced either in the immediate vicinity or in the surrounding region. This is in direct contrast to the first century AD when a number of high quality vessels were imported from abroad,

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[95] Dar, pers. comm. to Sean Kingsley, August, 1997.
[96] Vitto, 1996, 140-141.
[97] Brill, 1965, 261-262.
[98] Mazor and Bar-Nathan, 1998, 28.
[99] Peleg and Reich, 1992, 155.
[100] Schwartz, 1998, 171.

probably Italy. It was not until the eighth or ninth century that identifiable imports occurred again in any significant number.[101]

Av. Dye Production

The commercial activity of dye production in coastal sites of the Eastern Mediterranean, notably purple dye from the *Murex*, is known from the *Codex Theodosianus*. Compiled during the reign of Theodosius II (AD 401-450), various provisions were reiterated for the restriction, use and sale of purple dye.[102] The Code makes it clear that the dye factories of Phoenicia were especially productive:[103]

> 'We command that every seventh man from the bureau of secretaries and every sixth man from the bureau of regular taxes and every fifth man from the bureau of registrars shall be sent to the dye works of Phoenicia for a fixed period of time, so that by the astuteness of these officials all fraud may be prevented, since they shall feel the forfeiture of their credit for terms of service which they have acquired with much toil. Furthermore a fine of twenty pounds of gold is proposed. (March 8, 436 AD).'

At Dor, in Northern Palestine, A. Raban[104] has identified a possible dye factory adjacent to the north harbour. The site was established in the first century BC and reused in the fourth and sixth centuries AD. The Byzantine installation comprised a

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[101] Jennings, 1997-1998, 111-146.
[102] *The Theodosian Code* 10.21.3 (translated by Pharr, 1952, 287).
[103] *The Theodosian Code* 10.20.18 (translated by Pharr, 1952, 288).
[104] Raban, 1995a, 301; Raban, 1981, 20-21; Raban and Galili, 1985, 34.

central structure, an open courtyard and three rock-cut basins measuring 3.50 x 4.30m fed by a water conduit.

B. Coinage

It was pointed out above that coinage may be misleading as an economic indicator since certain issues may have remained in circulation for decades. Indeed it is now becoming increasingly clear that this phenomenon was common practice.[105] This may well have explained the apparent rarity of coin issues for much of the fifth century AD.[106] Excavations have confirmed this picture at Caesarea[107] and Tel Jezreel.[108] There is indeed a marked discrepancy in the number of coins between the fourth and fifth centuries and the issues dated to between the second half of the sixth and the seventh centuries at the following Jewish sites in the region: Khirbet Shema (6 to 361), Meiron (1 to 567), Gush Halav (3 to 161), [109] Sumaqa (9 to 449)[110] and Zippori (0 to 92).[111]

The majority of the Byzantine coins recovered from the Beirut Souks' (BEY 006) excavations are issues of the Emperor Anastasius (AD 491-518). The pattern reflects perhaps a regional or local variation in the pool of coinage in circulation. The latter part of the sixth century is less well represented. There are few coins of Justin I, Justinian, Justin II and Maurice.[112]

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[105] Christopher Howgego, pers. comm., 2001 December 5th. (C. Howgego is a specialist of numismatics at the Ashmolean Museum, University of Oxford.)
[106] This is discussed by Kingsley, 1999, 36, 98-99 (see above).
[107] Hohlfelder, 1981, 37.
[108] Moorhead, 1997, 155, 158.
[109] Hanson, 1980, 52.
[110] Meyers *et alii*, 1986, 9.
[111] Kindler, 1999, 347-362.
[112] Butcher, 1997-1998, 173-180, fig. 2.

Coinage from three sites in the upper Galilee prove informative of the economic vitality of Tyre.[113] Khirbet Shema, Meiron and Gush Halav, all yielded a large quantity of coins, notably minted at Tyre, from the early fourth century, and throughout the fifth century. Numbers dropped markedly in the sixth and seventh centuries. This, according to Hanson, indicates two matters of economic interest: a major supplier of coinage in the Levant, Tyre also exerted direct economic influence over an area (that included the Upper Galilee) peripheral to the borders of its administrative and ecclesiastical diocese.[114] Moreover, Hanson has drawn attention to the possible trickle of Tyrian coinage into the Lower Galilee, as suggested by the results of Meshorer's excavations at Migdal.[115]

A hoard of 180 coins dating to between the reigns of Anastasius and Phocas was uncovered in the synagogue of the village of Qazrin in the Golan.[116] An even larger hoard of around 1,000 coins, dating to the late sixth and early seventh centuries, was found near the synagogue in the village of Korazin.[117] A synagogue at Gush Halav[118] and at Sumaqa[119] in the Carmel yielded hoards of 1,943 and 458 Byzantine coins respectively. The coins had been minted in various parts of the Mediterranean, including Aquileia, Thessalonica, Nicomedia, Cyzicus, Heraclea, Constantinople, Antioch, Alexandria and Carthage.

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[113] Hanson, 1980.
[114] On the diocese of Tyre extending into Western Galilee, Dauphin, forthcoming.
[115] Meshorer, 1976, 54-71.
[116] Ariel, 1996.
[117] *ESI*, 1984b, 67.
[118] Ariel, 1987, 148.
[119] Kindler, 1999, 347-362.

The re-circulation of coinage in the fifth century and shifting local and regional exchange and trade patterns cloud the picture obtained, but a general temporal pattern may be observed. This suggests that the circulation of coinage was particularly vibrant from the end of the fifth-century onwards and into the seventh century. This pattern may be equated with the successful anti-inflationary reforms of coinage introduced by Anastasius in AD 498 and Justinian I in AD 539.[120] The lack of coinage dating to the second half of the seventh century may be related to the dislocation and subsequent termination of coinage production due to the respective Persian invasion and Arab conquests of the period.[121]

C. Demographic Archaeology

Rural and urban settlement patterns based on the archaeological data culled by the Archaeological Survey of Israel indicate that the population of Palestine increased markedly from the Roman to the Byzantine period.[122] The increase in the number of settlements from available published sources in Northern Palestine and Southern Phoenicia is: Akhziv/Hanita, Nahariya (Zone 7), 10%;[123] Haifa East, Haifa (Zone 9) 90%;[124] Hahalal, Haifa (Zone 9), 30%;[125] Gazit, Teverya (Zone 10), 205%[126] and Ma'anit, Netanya (Zone 11) 105%.[127]

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[120] Jones, I, 1964, 443-444. The reversal of inflation by Anastasius and Justinian I is discussed by Harl, 1996, 191-194.
[121] The disruption of the production and circulation of coinage in the Byzantine Empire as a consequence of these factors is discussed by Hendy, 1985, 640; 1989, 147-150.
[122] Kingsley, 1999, 48-50, tbl 1.
[123] Frankel and Getzov, 1997, 34-37.
[124] Ronen and Olamy, 1983, viii.
[125] Raban, 1982, vii.
[126] Gal, 1991, 68-69.
[127] Ne'eman, 1990, 19.

In *La Palestine byzantine*, C. Dauphin analyzed comprehensively the demographic trends in Palestine during the Byzantine period.[128] Her evaluation, based on the marshalling together of a broad range of archaeological evidence, which included the explorations of V. Guérin (1868-1880), the descriptions and maps of the Survey of Western Palestine by C.R. Conder and H.H. Kitchener (1881-1883), the archaeological archives of the Mandatory Government of Palestine (1922-1948), those of the State of Israel since 1948 and of the Archaeological Survey of Israel since 1964, as well as data from numerous archaeological excavations. As a result of this archaeological scrutiny, Dauphin established a database of 2,930 Byzantine sites. These are depicted on a series of 20 regional demographic maps.

Between the fourth and mid-sixth century, Palestine witnessed a dramatic demographic and economic expansion evidenced by density of settlement in specific geographical zones. Dauphin is the first to have recognised a basic correspondence between density of settlement and fertility of soil in Byzantine Palestine. The main trends in Southern Phoenicia and Northern Palestine elucidated by Dauphin may be summarised as follows. Settlement was at its highest in the central highlands, on Terrae Rossae (Type A soils) on which the trilogy of cereals, olive, vine and fruit trees were grown, and on Brown and Pale Rendzinae (Type B soils) which are not rich but easily cultivated soils on which the olive and vine flourished. The dark basaltic soils (Types D and F) of the Golan and Lower Galilee were slightly less populated, despite these soils sharing similar properties with Terrae Rossae. The Lower Golan and Eastern Lower Galilee were pasturelands, suitable for growing wheat and barley characterized by basaltic Protogrumosols, basaltic brown Grumosols and pale

[128] Dauphin, 1998.

Rendzinae (Type D). The highest part of the Golan plateau, with its deep basaltic brown Mediterranean soils (Type F) were ideal for growing cereals and fruit trees. The cultivation of these areas, considered to be more 'harsh' in view of their topography or climate, resulted in a cyclical Boserupian pattern:[129] the increase of agricultural production gave rise to a demographic boom which required further extension of arable land as well as the intensification of agricultural productivity, olive and vine plantations being the classic response of Mediterranean agriculture to demographic expansion.

Together with this demographic and economic expansion, Dauphin observed changes in the religious make-up of Palestine. This was achieved by applying an analytical method of religious demography which combines the distribution of archaeological remains bearing religious symbols and signs, with cartography and the historical sources, notably legislation. During the fourth century, the Christians were still a minority in relation to the Jews and Samaritans. By the beginning of the seventh century, the Christians constituted the majority of the population in relation to the Jewish and Samaritan populations.[130]

During the course of the seventh century, Dauphin traced a dramatic population decrease. Dauphin rejects 'the simplistic explanation which until recently put the onus on the Persian and Arab invaders'[131] and suggests that in accelerating and ultimately outstripping the pace of economic development beyond its agricultural

[129] Boserup, 1965.
[130] Dauphin, 1998, figs 42-107.
[131] Dauphin, 1988a, 5.

potential, the growth of population engendered a poverty trap. This was exacerbated by diseases, famines and plagues.

Focusing away from an overview to specific examples of demographic expansion, Byzantine Berytus (Beirut) greatly expanded in the fourth and fifth centuries. The town plan was improved by the construction of new public spaces, the baths were enlarged and high and low-status housing increased. The earthquake of AD 551 profoundly affected the city: many houses were almost certainly abandoned after this date, although some of the shops in the portico were perhaps restored.[132] Similarly, at Caesarea the city wall, dating to the second half of the fourth century, encompassed an area approximately twice as large as the Roman fortification (about 178 hectares).[133] The circumference of the fortification wall of Beth Shean had also doubled by the early fifth century AD to 4.8 km (encompassing 134 hectares).[134] Zippori also expanded during the Byzantine period as evidenced by the extension of its north-west street area.[135]

[132] Perring, 1997-1998, 9-34, Figs 1-15.
[133] Peleg and Reich, 1992, 166.
[134] Tsafrir and Foerster, 1997, 100, 118.
[135] Weiss and Netzer, 1996, 81.

D. The Epigrapic Evidence for Building Construction in Phoenicia and Northern Palestine

Dated building inscriptions are another medium with the potential to indicate economic conditions. In a recent paper, L. Di Segni[136] applied a quantitative approach to the dated building inscriptions of Arabia, Palestine and Southern Phoenicia in an attempt to gauge the intensity of building activity in the Byzantine period.[137] A variety of types of monuments were analyzed: sacred buildings, Jewish and Samaritan synagogues and study houses, Christian churches, monasteries and their annexes; defensive works and forts; public inns and *burgi*; fortifications in cities; baths; aqueducts; *stoa*s and piazzas and civil basilicas. Some of the inscriptions are associated with floor mosaics, the others with other monumental elements (superstructures, chancel screens, lintels). In her treatment of the dated inscriptions, Di Segni analyzed the number of buildings erected in the reign of individual emperors together with an index of building activity *per annum* in each reign. Since the building index is calculated to include Arabia, we will summarise only the buildings erected under individual emperors and only those in the pertinent region.

The following dedicatory inscriptions recorded either new buildings or their refurbishment or new structures or their renovation:

Constantius II (AD 337-379): church built at Dor[138] (AD 340-366).[139]

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[136] Di Segni, 1999, 149-178.
[137] My review of Di Segni's work is here only concerned with the dated inscriptions of Phoenicia and Northern Palestine.
[138] *SEG* 37, no. 1478.

Theodosius I (AD 379-395): aqueduct renovated at Caesarea[140] (AD 385).

Arcadius (AD 395-408): restoration of portico at Beth Shean[141] (AD 400-404), restoration of *nymphaeum* at Beth Shean,[142] various works conducted at Beth Shean[143] (AD 400-404).

Theodosius II (AD 408-450): first building phase of the church at 'Evron[144] (AD 415), second building phase of the church at 'Evron[145] (AD 443), second stage of mosaic pavement in church at Shavei Zion[146] (after AD 427).

Marcianus (AD 450-457): refurbishment of the bath-house at Hammath Gader[147] (AD 455).

Zeno (AD 474-491): paving of church mosaic of Horvat Karkara[148] (AD 478), third stage of mosaic pavement of church at Shavei Zion[149] (AD 485-486), third building stage of the church at 'Evron[150] (AD 489-490).

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[139] This date is incorrect. The dedicatory inscription in question was found by Leibovitch in 1952 on the mosaic pavement of Room 8 in the external North Aisle on the upper floor of the church and belongs to the fifth century (Claudine Dauphin, pers. comm., 2001 October 31st).
[140] *SEG* 18, no. 626.
[141] Unpublished inscription. Mentioned by Foerster and Tsafrir, 1987/88, 33; Foerster and Tsafrir, 1992, 29; Di Segni, 1999, 166, n. 4.
[142] Mentioned by Foerster and Tsafrir, 1987/88, 27-28; Foerster and Tsafrir, 1989/90, 123; Di Segni, 1999, 166, n. 5.
[143] Mentioned by Foerster and Tsafrir, 1992, 12-13; Di Segni, 1999, 166, n. 6.
[144] *SEG* 37, no. 1516; Meimaris 138, no. 1.
[145] *SEG* 37, no. 1512, 1514; Meimaris 138, no. 2.
[146] *SEG* 37, no. 1509A.
[147] Di Segni, 1992, 310-312, 319, fig. 1, 321, fig. 3.
[148] Avi-Yonah, 1966, 209-210, pl. 24B; Meimaris 64, no. 6.
[149] *SEG* 37, no. 1509B; Meimaris 65, no. 7.
[150] *SEG* 37, no. 1517; Meimaris 139, no. 3.

Anastasius I (AD 491-518): construction of the propylaea of the bath-house at Beth Shean[151] (AD 499-500), construction of the *burgus* at Caesarea[152] (*ca* AD 500-501), construction of a basilica at Beth Shean[153] (AD 500-501 or 515-516), construction of the monumental piazza at Beth Shean[154] (AD 506-507), restructuring of the bath-house at Hammath Gader[155] (*ca* AD 505-508), laying of the mosaic pavement at Horvat Damun[156] (*ca* AD 518).

Justin I (AD 518-527): laying of the mosaic pavement at Horvat Hesheq[157] (AD 519), construction of a new street and water pipes at Beth Shean[158] (AD 521-522), laying of the mosaic pavement in the monastery of Abba Justinus[159] (AD 522), renovation of the city wall at Beth Shean[160] under two successive governors (AD 524-525 and 525-526), laying of the mosaic floor in the later church of Horvat Bata[161] (AD 526-527), laying of the mosaic pavement in the synagogue of Beth Alpha[162] (AD 518-527), laying of the mosaic pavement in the synagogue of Beth Shean[163] (AD 518-527).

Justinian (AD 527-565): laying of the mosaic floor in the diaconicon of the church at Beth Yerah[164] (AD 528), renovation of city wall at Beth Shean[165] (AD 530-531?), laying of mosaic pavement in church of Horvat Hesheq[166] (AD 534),

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[151] Unpublished. Mentioned by Mazor, 1987/88, 16; Di Segni, 1999, 167, n. 18.
[152] Lifshitz, 1961, 123-126.
[153] Unpublished. Mentioned by Tsafrir and Foerster, 1997, 124-125; Di Segni, 1999, 167, n. 20.
[154] Unpublished. Mentioned by Tsafrir and Foerster, 1997, 121; Di Segni, 1999, 167, n. 21.
[155] Di Segni and Hirschfeld, 1986, 251-268.
[156] Kuhnen, 1981/82, 185.
[157] *SEG* 40, nos 1444-1448.
[158] Di Segni, forthcoming. Mentioned by Foerster and Tsafrir, 1987/88, 41.
[159] *SEG* 8, no. 37.
[160] *SEG* 8, nos 34-35.
[161] *SEG* 42, no. 1456.
[162] *SEG* 8, no. 93.
[163] Zori, 1967, 159, pl. 31.
[164] *SEG* 37, no. 1474B.
[165] Cumont, 1913, no. 144.
[166] *SEG* 40, nos 1444-1448.

construction of the portico of the *palestra* in the bath-house at Beth Shean[167] (AD 534-535), construction of the church at Khirbet 'Alya[168] (AD 539-540), laying of the mosaic floor in the later church of Horvat Bata[169] (AD 541-542), construction of the bath-house at Beth Shean[170] (*ca* AD 536-550), laying of the mosaic pavement in the church of Suhmata[171] (AD 555), marble furbishment in the church of Nahariya[172] (*ca* AD 555), renovation of bath-house in Beth Shean[173] (AD 558/9), construction of the synagogue of Kefar Neboraia[174] (AD 564), foundation of monastery of Kyra Maria[175] at Beth Shean (before AD 567).

Justin II (AD 565-582): second building phase of Kyra Maria[176] (AD 568-569).

Mauricius (AD 582-602): construction of the church baptistery at Chorsia[177] (AD 585).

Phocas (AD 602-610): laying of mosaic pavement in the ecclesiastical farm of Shelomi[178] (AD 610-611).

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[167] Mazor, 1987/88, 17.
[168] *SEG* 8, no. 1.
[169] *SEG* 42, no. 1456.
[170] Unpublished. Di Segni, 1999, 168, n. 44.
[171] *SEG* 8, no. 21.
[172] Dauphin and Edelstein, 1984, 91-93, pl. 8B, fig. 13. The date of AD 555 is based on the interpretation of Di Segni, 1999, 169, n. 51. Dauphin and Edelstein date the inscription to *ca* AD 536.
[173] Avi-Yonah, 1963, 325-326, pl. 34E.
[174] Naveh, 1978, 31-32, no. 13.
[175] Fitzgerald, 1939, 7, 13-16, pls 6-8, 20-22; *SEG* 8, nos 39-42.
[176] Fitzgerald, 1939, 16, no. 6; *SEG* 8, no 38.
[177] SEG 26, no. 1677; 30, no. 1697; 33, no. 1270.
[178] Dauphin, 1977, 256-259.

Umayyad period (AD 640-750): renovation of the bath-house at Hammath Gader[179] (AD 662).

The epigraphic evidence from Phoenicia and Northern Palestine suggests that building activity in the fourth century was scant, since there is only one inscription up to the reign of Arcadius.[180] During the fifth century, between the reigns of Arcadius and Anastasius I, building activity (represented by 13 dated inscriptions) markedly increased. From the end of the fifth and well into the sixth century building activity surged further in the reigns of Anastasius I, Justin I and Justinian. This period is represented by a total of 28 dated inscriptions. The remainder of the sixth century is represented by only three inscriptions; the early seventh by one. Only one inscription dates to the Umayyad period. After the Islamic conquest, building activity, as evidenced by inscriptions, appears scant.

In sum, the chronological pattern emerging from building-inscriptions in Northern Palestine and Phoenicia is closely paralleled by that offered by dated mosaic floors in the same region. Expenditure in the form of mosaic floors does not appear to have been particularly high in the fourth century, in comparison with the fifth, and particularly the sixth century. There is no evidence for a marked decline in building activity in the second half of the sixth century. A sharp decline in building activity, did however, coincide with the side-effects of the Persian conquest in the region.[181] This trend persisted throughout the remainder of the seventh and eighth centuries.

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[179] *SEG* 30, 1687; 32, no. 1501.
[180] Taking into account the incorrectly dated inscription at Dor observed by Claudine Dauphin.
[181] Dauphin, 1998, I, 339-340.

7. Phoenicia and Northern Palestine: the General Economic Picture

The various markers of economic conditions in Phoenicia and Northern Palestine generally attest to prosperity, both urban and rural, from the second half of the fifth century AD onwards. The economic boom continued throughout the sixth century, decline setting in only in the early part of the seventh century. This pattern corresponds to the general economic picture in the eastern Mediterranean in the fourth-seventh century period.[182]

The initial stimulus for economic prosperity and sustained growth may be due to several factors. The foundation of Constantinople as the imperial capital in AD 324 opened up new trading opportunities in the region.[183] The adoption of Christianity as the Roman State religion allowed for a programme of church building in the Holy Land on an unprecedented scale.[184]

Similarly, decline may be due to several causes. In the second half of the sixth century, decay was induced both by internal factors (disease and diet-deficiency) and external factors (plagues, drought and famine) which combined to wreak havoc in the region (Dauphin, 1998, II, 502-518). Further profound disruption to the economy was

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[182] John Hayes, pers. comm., 2000 August 21st, 2000.
[183] Ward Perkins, 2000, forthcoming.
[184] Ovadiah, 1970; Ovadiah, 1981, 200-261; Ovadiah, 1982, 122-170.

triggered by the seventh-century Persian and Arab invasions and occupation.

These data appear to suggest that prosperity was not limited to a single ethnic group, but permeated the entire urban and rural society of Phoenicia and Northern Palestine. Although production, trade and patronage remained predominantly urban phenomena, the traditional interdependence of town/city and rural hinterland continued.[185] The evidence points to intense rural production and trade, as well as patronage in small towns and villages. The social, economic and religious data provided by the plentiful inscriptions on the mosaic pavements of Phoenicia and Northern Palestine will enable us in Chapter V to differentiate between urban and rural patronage and weigh their role together and individually.

8. Conclusion

In the present chapter, mosaic pavements have been examined in their broader economic context, the main inference being that variations in the quantity of pavements laid between the fourth and the mid-seventh century AD reflected fluctuating economic conditions in the region. This hypothesis is largely dependent on the reliability of the date of mosaics in the Corpus. Despite the fact that the best-dated floors form a relatively small proportion of the overall sample, it is possible to observe a parallel chronological pattern both in Phoenicia and Northern Palestine. In Phoenicia, it seems that the fourth century was a time of little activity in the laying of floor mosaics. The fifth century was marked by an increase in the number of floors laid. A further increase in the sixth century remained consistent throughout that

[185] Jones, 1964, 712-714; Whittow, 1990, 27.

century. In the seventh, century, on the other hand, the number of floors laid dropped sharply. This seems to correspond initially to the Persian conquest of AD 614 and subsequently to the Muslim conquest of AD 636-640. This pattern is approximately repeated in Northern Palestine.

The plausibility that floor mosaics reflect economic conditions is further supported by other strands of evidence which may be regarded as economic indicators. A similar pattern is discernible in the dated inscriptions commemorating building activity in Phoenicia and Northern Palestine. Evidence for building activity is scant in the fourth century. A brisker activity in the fifth century was followed by a peak in the sixth century. The golden era seems to approximate to the reigns of Anastasius I, Justin I and Justinian I. The remainder of the sixth century is, however, less well represented by building activity. In the seventh century, at about the time of the Persian and Muslim conquests, the rate of construction of new buildings markedly dropped.

The numismatic evidence is less clear in the region. This is due to the lack of fifth century issues and the considerable length of time during which issues remained in circulation after minting. There is, however, ample evidence for much circulation of coinage from the end of the fifth century throughout the sixth and into the seventh century.

A similar pattern is clear from demographic archaeology. Between the fourth and mid-sixth century, the region witnessed a dramatic demographic and economic

expansion, represented by a densification of settlement in specific topographical zones which supported the intense cultivation of wheat, vine, olive and fruit. An abrupt demographic decline took place during the course of the seventh century. One of the factors cited by Dauphin for this[186] – the over exploitation of agricultural resources – had already sown the seeds of decline in the course of the sixth century.

Agricultural and industrial production and consumption might also be viewed as economic indicators, particularly in the case of the production of glass and dye and the production and export of wine in the region (and Central and Southern Palestine more generally). This seems especially the case with the production and export of Palestinian wine. Despite the difficulty of dating the majority of winepresses in Palestine, it seems clear from dated examples that wine production intensified in the fifth century. This continued in the sixth century, but decline set in after the Muslim conquest. This picture is further supported by quantitative studies of pottery assemblages at many coastal sites around the Mediterranean. The export of Palestinian wine seems to have begun in the late fourth century and intensified in the early fifth century, with levels of export remaining high until around the middle of the seventh century.

In sum, then, it would seem that variations in the number of floor mosaics laid in Phoenicia and Northern Palestine in the Byzantine period are reliable indicators of fluctuating economic conditions. It is clear that the very period when the majority of the floor laying occurred – the fifth and sixth centuries – corresponds to the exact period of economic prosperity as evidenced by the other media reviewed. The

[186] Dauphin, 1998, II, 521-522.

relatively low proportion of accurately dated floors guards against using floor mosaics in isolation, especially since a proportion of these represent refurbishment as opposed to floor laying *de novo*. Thus a more holistic approach such as we have attempted is desirable, floor mosaics being contextualised with other archaeological media in order to gain a more coherent picture of economic conditions.

CHAPTER III

TECHNICAL AND ECONOMIC CONSIDERATIONS ON THE BYZANTINE MOSAIC PAVEMENTS OF PHOENICIA AND NORTHERN PALESTINE

The present chapter examines the bedding of the Byzantine mosaic pavements of Phoenicia and Northern Palestine and the techniques involved in laying these floors in relation to economic factors. Part One deals with technique (*tesserae* size, *tesserae* density, range of colours and width of the interstices between *tesserae*) and attempts to assess how quality was related to absolute expenditure, and how it often reflected the functions(s) not of a building as a whole but its constituent parts; and, finally, how it often reflected the relative wealth of the patron, though there were instances, as we shall see in Chapter IV, of good quality pavements being sponsored by patrons of relatively modest means. In these cases the patronage tended to be collective rather than individual. Part Two examines the constituents of the bedding of mosaic pavements (the quality and thickness of materials) in relation to room and building function, patronage and direct expenditure. Part Three attempts to gauge the relative cost of laying floor mosaics in the Byzantine period. Several floor inscriptions referring to sums of donation are examined in order to assess whether it is at all possible to gauge the cost of laying a floor mosaic. Epigraphic and literary sources are reviewed in an attempt to reconstruct the numbers of workers and their specialized tasks in a mosaic team, as well as their wages. This will lead us to question in Part Four theories that reject mosaic pavements as an economic manifestation.

1. General Considerations of the Study of the Technical Aspects of the Byzantine Floor Mosaics of the Levant

A. Tesserae

Ai. Size

With the occasional exception, [1] most of the pavements of the region consist of *opus tessellatum.*[2] Occasionally, use is made of small triangular or curved *tesserae* for the finer details of figurative pavements. Less fine details of figurative pavements tend to be composed of larger cubes. In the field of the upper pavement of the El Hammam Tomb Chamber (No.12/13/4b) for instance, the cubes are 0.3 x 0.4cm in the faces of the figures and 0.5 x 0.7cm in the bodies. The remainder of the field decoration (notably the background and vegetal decoration) is composed of cubes measuring either 1 x 1cm or 0.9 x 1.2cm. The same cube sizes are present in the border, characterized by similar vegetal and figurative decoration. On the floors of the Nile Festival House (No.9/15/1) at Zippori, the cube sizes tend to differ between figurative and geometric decoration. The former is characterized by *tesserae* the length of whose sides varied between 0.2 and 1cm, the latter by *tesserae* whose sides measured between 0.2 and 1.2cm. In Room 5, the white surround was executed in slightly larger *tesserae* with sides 0.5 to 1.5cm. Larger still are the *tesserae* of the coarse pavements

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[1] *Opus sectile* decorates the nave of the church of Horvat Kenes (No.9/6), a floor of unknown function in the area of the Palaestra (No.11/8/47), and another in that of the Shrine (No.11/8/56) at Caesarea Maritima and in the north aisle of the Church at Qal 'at el Hisn (No.10/10). The term *opus sectile* refers to the revetment of both walls and floors with pieces of marble and other materials cut into the specific shapes of a design, and fitted together to form a smooth surface. For an excellent discussion of the technique of *opus sectile*, Dunbabin, 1999, 254.

[2] *Opus tessellatum* refers to all types of floor mosaics, monochrome or polychrome, geometric or figurative, made with *tesserae* (cubes of stone or marble) measuring up to 2 x 2cm. See Farneti, 1993, 150; Smith, 1983, 116; and in particular Clarke, 1979, 6. The term also includes the laying of *tesserae* in straight lines, usually horizontal, used in particular for neutral backgrounds or simple ornaments. See Farneti, 1993, 150; Goodwin, 1985, 156; and, Fischer, 1971, 147.

of Caesarea. A floor from Field KK (No.11/8/41) for instance, is composed of cubes with sides between 1 and 3.2cm in length (this figure is actually exceeded in some cases at Caesarea, as discussed below). Cube size necessarily determines to a great extent the density of cubes per square decimetre.

Aii. Interstices

Interstices - the space between *tesserae* - vary in width with the way in which the cubes have been laid, loosely or tightly. In certain cases, where the work is particularly fine, individual *tesserae* abut onto each other so as to leave no space between them. This is particularly the case in the figures of the Nile Festival House at Zippori (No.9/15/1). At the other end of the scale, on coarse pavements, the width of interstices might exceed a centimetre or more. The pavements of Caesarea tend to exhibit this trait (Nos11/8/35-38). Thus the way in which the cubes were laid (tightly or loosely) played an important role in cube density.

Aiii. Material and colour range

In Byzantine Phoenicia and Northern Palestine, *tesserae* were manufactured almost exclusively from local limestones which offer a wide range of colours: shades of white to yellow, shades of red to pink, orange to brown, and grey to black. The polychrome mosaic pavements of the region predominantly made use of white, red and black. Green and blue are not present in limestone and, as colours, were more rarely

included, being then of glass,[3] marble, and occasionally of glazed terracotta. In general, the greater the number of shades and gradations of tone employed, the more elaborate and better quality the floor.

Aiv. Cube density

M. Avi-Yonah was the first scholar to examine the technique of Byzantine floor mosaics of Palestine in any detail.[4] On the basis of cube density, he distinguished three qualities of mosaic pavements:

(i) coarse pavements with 4 to 20 *tesserae* per square decimetre, mostly white (with two sub-groups 4-10dm^2 and 15-20dm^2);

(ii) a middle quality with 20 to 30 *tesserae* per square decimetre (most commonly 25 cubes to the dm^2);

(iii) fine work, 42 to 100, or 157 *tesserae* per square decimetre, there being a distinct group of pavements of the finest quality of about 90 to 100 *tesserae* per square decimetre.

The various densities observed were linked by Avi-Yonah to the function of specific installations, rooms and buildings. Thus he observed that the first group of

[3] Glass (*smalto*) was used for green and turquoise in the wreaths presented to Nilus, and in the reeds behind the river-god on this pavement (No.9/15/1). The same material was also employed for green in the parrots on the floor of the House of Kyrios Leontis at Beth She'an-Scythopolis (No.12/13/14).
[4] Avi-Yonah, 1934, 61, 71 and 72.

coarse white floors belonged to oil and wine presses, borders round the mouths of wells or cisterns, baths, reservoirs and water-channels; the second group to rooms of lesser importance within buildings, found next to polychrome or patterned floors in the main chambers (aisles of basilicas, sacristies, chapels, synagogues, funerary halls), or in domestic use, in smaller rooms, entrance halls, corridors, courtyards, terraces and vaults. Avi-Yonah noted that the second and third categories of pavements belonged to geometric and figurative pavements.

He suggested, therefore, that the different ranges of density on Palestinian pavements during the Byzantine period reflected floor quality. Primarily, however, Avi-Yonah viewed quality as determined by function rather than by economic reasons.

A slightly different categorization of cube densities in Palestine was given by R. and A. Ovadiah.[5] This is perhaps understandable, since their observations were based on an extensive corpus of material. Four groups were defined by them:

(i) 10 to 40 cubes per dm^2 (in monochrome floors);

(ii) 40 to 80 cubes per dm^2 (pavements with simple designs);

(iii) 80 or more cubes per dm^2 (more complex patterns);

(iv) a much greater number of *tesserae* per dm^2 (for fine details such as facial features).

Unlike Avi-Yonah, the Ovadiahs did not consider the relationship between cube density and function. Instead, they factually explained: 'The average size of the

tesserae varies from pavement to pavement. The average number of *tesserae* in a $10cm^2$ sample determines the quality of the work.'

Neither study was concerned with relating cube densities to broader economic issues. In each case, the analysis of *tesserae* densities constituted only a small aspect of a broader synthetic approach to the mosaic floors of the region and was thus merely incidental.

The first comprehensive approach to the study of *tesserae* densities in the Levant was that inaugurated by C. Dauphin.[6] The density of cubes in the Byzantine inhabited scroll pavements of the Levant was assessed in order to identify several distinct 'schools' and 'workshops'. Three qualities of pavements were also distinguished on the basis of cube density. These differ slightly from the categories above:

(i) coarse pavements with 20 to 60 cubes per dm^2;

(ii) a middle quality with 60 to 110 cubes per dm^2;

(iii) fine work with over 110 cubes per dm^2;

(iv) a 'mixed' group consisting of pavements in which smaller *tesserae* were used for certain areas such as faces, arms, hands and legs.

Tesserae density was also considered by Dauphin to be a chronological indicator. She noted, for instance, that density counts tended to be very high in

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[5] Ovadiah and Ovadiah, 1987, 149.
[6] Dauphin, 1974, 74-79, 271-275; Dauphin, 1976, 123-125.

inhabited scroll pavements of the second and third centuries. For example, in Syria, the following counts were made: in the second-century Atrium House, Antioch (324 *tesserae* per dm^2); at Mariamin,[7] dating to the third quarter of the third century (440 per dm^2); and two mid-third century floors at Shahba (380 per dm^2 and 156 per dm^2 respectively). After the fourth century, density dropped to the levels quoted above, although there were several notable exceptions: the Imperial Palace, Constantinople (420 *tesserae* per dm^2);[8] the House of the Rams' Heads at Antioch (239 per dm^2);[9] the Constantinian Villa at Antioch (160 per dm^2)[10] and the Church of the Nativity in Bethlehem (200 per dm^2).[11]

Thus the four main aspects of technique, namely *tesserae* size, density, colour range and interstice width, tended to correspond to the quality of the floor concerned. At the lower end of the scale, coarse pavements exhibited larger cubes, a low density, a limited range of colours, and wide interstices. At the upper end of the scale, the finest pavements were characterized by small cubes, a high cube density, a wide range of colours and narrow interstices. A detailed set of available technical data (*tesserae* sizes and cube densities) is provided below in Tables 11 and 12.

B. Technique and Ornamentation

The four technical aspects of mosaic art highlighted above also tended to correlate with complexity of decoration. For instance, coarse pavements were generally either

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[7] Zaqzuq and Duchesne-Guillemin, 1970, XX, 93-125.
[8] Talbot Rice, 1947; 1958.
[9] Levi, 1947, 350; Pl. LXXXIId.
[10] Levi, 1947, 227-250; Pls LII-LVII.
[11] Kitzinger, 1965, 347, n. 29.

monochrome or exhibited very simple geometric decoration; finer floors on the other hand, generally corresponded to more elaborate geometric decoration or well-executed figurative designs. Thus the relative quality of mosaic pavements as indicated by *tesserae* size, density, colour range, interstice width and degree of ornamentation, may be considered as reflecting the quality of the floor concerned. The relationship between ornamentation (figurative and non-figurative) on the one hand, and expenditure, function and social category of ownership on the other hand, will be discussed in Chapter IV.

The present chapter aims to examine the correspondence between technical quality on the one hand, and expenditure, function and social category of patronage on the other. This is best fulfilled by discussing several case studies.

Seven sites are considered below; choice being dictated by two considerations. Where possible they represent various building types (despite some overlaps). In general, the sites are relatively widespread geographically in order to avoid any technical bias in favour of one localised 'school' or 'workshop'. It should be stressed that the examples below were chosen to represent broadly technical quality across a range of building types. As such, they constitute only a small part of a much larger corpus of material. Thus such inferences should not be regarded as definitive. Attention is drawn to Charts 5-10 and Tables 11 and 12 below.

C. Technical Case Studies: Phoenicia

Ci. Zahrani

Zahrani (No.5/1) is a basilica with three phases, decorated with a variety of geometric and figurative floors.

Nave Entrance Mosaic

Decorated with a field of pattern type C1xVII (2IVb) framed by a border of Pl. 72e.

Tesserae size: 1.5 x 1.5cm

Cube density: 70 per dm^2

Colours: 5 (cream, grey, pink, red ochre, white)

First Antechamber Mosaic

Decorated with a field of C1xVIb and framed by a border of Pl. 6a (Var.).

Tesserae size: 1.3 x 1.5cm

Cube density: 55 per dm^2

Interstice width: large, grey cement bed being visible between *tesserae* not tightly laid

Colours: 6 (white, grey, red ochre, yellow ochre, pink, black)

Second Antechamber Mosaic

Decorated with a field of (B+C1) xVb) and framed by a border of Pl. 24i.

Tesserae size: 1.3 x 1.5cm

Cube density: 55 per dm^2

Colours: 7 (white, 2 shades of yellow ochre, pink, grey, black, dark brown)

Baptistery Border Mosaic (Mosaic B)

A floor decorated with Pl. 64d.

Tesserae size: 1.5 x 1.3cm

Cube density: 76 per dm^2

Colours: 4 (white, grey, black, red ochre)

Diaconicon Border (Mosaic B)

A floor decorated with Pl. 64d.

Tesserae size: 1.3 x 1.3cm

Cube density: 76 per dm^2

Interstice width: medium, dark grey cement bed visible between *tesserae*, but to a lesser degree than in other Phoenician mosaics

Colours: 5 (white, grey, pink, red ochre, yellow ochre)

Cii. Shelomi

The ecclesiastical farm of Shelomi (No.7/5a-c) had three building phases (A, B and C). The most complete set of technical data is provided for Phase B, which comprised three mosaic-paved areas. Courtyard 1: several fragments decorated with pattern type Pl. 105a (Var.). Room 1: Pl. 175 (Var.), Pl. 244f (Var.), No. 536 (Var.) and Pl. 175 (Var.). A border of Pl. 82c (Var.) frames the field panels. Room 2: M.P. J6 framed by a border of Pl. 5 (element) and Pl. 72.

Tesserae size: 2.5 x 2.5cm (Courtyard 1), 0.9 x 1cm (Room 2), 0.8 x 1cm (Room 1)

Cube density: 104 per dm^2 (Room 1)

Colours: 10 (light pink, pinky orange, pinky grey, dark grey, light grey (in *kantharos* Room 1), red ochre, wine red and orange, orange, yellow ochre and pinks, pink, greyish white (Room 2).

Ciii. Qabr Hiram, The Church of St Christopher

The Church of St Christopher (No.6/1) is a basilica with a nave, two aisles and a chancel. The nave is decorated with an inhabited scroll pavement of type C1xVIb framed by a border of Pl. 101b and Pl. 75c. In the northern and southern aisles, various personifications are enclosed within a geometric pattern of Pl. 235b (Var.) and framed within a border of type Pl. 2j, Pl. 1j and Pl. 72e.

Tesserae size: 0.4 x 0.4cm (nave), length and width vary between 0.9 and 1cm (other areas), 1.3cm (in diam.) for round *tesserae* in intercolumnar borders

Cube density: 200 per dm^2 (nave), 118 per dm^2 (other areas)

Interstice width: grey cement bed visible between loosely-laid *tesserae*

Colours: white, yellows, pinks, reds, greens (some of glass), greys, black

D. Technical Case Studies: Northern Palestine

Di. Caesarea, Granary Floors KK F243, KK F246, KK F249 and KK F252

The first group of mosaic pavements under consideration consists of floors in Area KK, Nos11/8/35-38, (KK F243, KK F246, KK F249 and KK F252) at Caesarea Maritima. Several buildings in this sector are thought to be storerooms for grain.[12] These are located 13m (on their eastern flank) due west of the main *cardo* and 17.68m (on their northern flank) due south of the northernmost *decumanus*. The floors are arranged in two rows of two. Each measures approximately 2.5m^2 in area. Technically, the floors are extremely coarse. *Tesserae* sizes are generally very large, their length and width varying between 1 and 4.5cm. Cube density is correspondingly low, averaging 7 cubes per dm^2. The pavements also exhibit very wide interstices between the cubes, ranging from 0.5 to 2cm. Technically, the pavements were thus executed very poorly, as though the cubes had been pushed into the mortar haphazardly, in contrast to tessellated pavements laid with care. The floors are white and monochrome.

Dii. Caesarea, 'The Archive Building', Floors C I-VIII

The 'Archive Building' (No.11/8/17) is located close to the south of the Crusader fortifications and 6.1m due west of the main *cardo*. It has been interpreted by its various excavators as either the 'Public Record Building'[13] or 'Archive Building'.[14]

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[12] Patrich *et alii*, 1999, 70, fig. 1.
[13] Bull, Krentz and Storvick, 1986, 34.
[14] Holum, Hohlfeder, Bull and Raban, 1988, 169, 171; Bull, Krentz, Storvick and Spiro, 1990, 78.

A. Negev, its first excavator, identified it as a possible monastic complex, Christian public building, or the library of Origen, Pamphilus and Eusebius.[15] More recently, K.G. Holum has offered the plausible suggestion that the building was the imperial revenue office of the city.[16] The building measures 18.50 x 14.70m and consists of seven rooms (I-III and V-VIII) arranged around a central hall (IV). The mosaic floors in rooms II, III, IV and VI are in fragmentary condition. The mosaics of rooms I, V, VII and VIII are well preserved. For practical reasons, the review will focus on the better-preserved floors.

Floor I

A white mosaic pavement containing an inscription enclosed within a circular medallion rendered in black *tesserae*. These vary in length and width between 1 and $2cm^2$. As in the case of the inscriptions in floors V, VII and VIII, black *tesserae* are often wedge-shaped in the finer details (Greek letters and leaves). The length and width of the *tesserae* vary between 1 and 3cm with a density averaging 21 cubes per dm^2 loosely laid (the interstices between *tesserae* being *ca* 0.5cm wide).

Floor V

Floor V resembles Floor I very closely. It contains an inscription within a circular medallion rendered in black *tesserae*. These vary in length and width between 1 and $2cm^2$. The frame of the medallion is rendered in white, blue and grey *tesserae*. The remainder of the floor is composed of white *tesserae*.

Tesserae size: length and width vary between 1 and 3cm

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[15] Negev, 1963, 731.
[16] Holum, 1995, 333-345, figs 1-6.

Cube density: 26 per dm^2

Interstice width: *ca* 0.5cm, *tesserae* generally loosely laid

Colours: white, blue, grey and black

Floor VII

A white floor decorated with a simple diaper pattern in yellow containing a two-lined inscription enclosed within a *tabula ansata* (located just inside the north-eastern doorway of the room).

Tesserae size: length and width vary between 1 and 3cm

Cube density: 21 per dm^2

Interstice width: *ca* 0.5cm, *tesserae* generally loosely laid

Colours: 2: white and yellow

Floor VIII

A mosaic decorated with a simple diaper pattern. This preserves several cruciform motifs. Near the eastern doorway is an inscription in four lines rendered in black *tesserae* enclosed within a *tabula ansata.*

Tesserae size: length and width vary between 1 and 2.5cm

Cube density: 37 dm^2

Interstice width: *ca* 0.5cm, *tesserae* generally loosely laid

Colours: 4: white, red, grey and yellow

Diii. Caesarea, Floor NN29 F002 (Ibex Mosaic)

The Ibex Mosaic (No.11/8/33) is located opposite the 'Archive Building' immediately east of the main *cardo*.[17] The mosaic covers an area 8.65 x 8.40m. The main field of the mosaic is divided into four parts by a vine emerging from each of the four corners. In each sector, a pair of horned animals, ibexes, deer, goats and stags, confront each other symmetrically. The field is framed by a geometric border of type Pl. 74b. Technical details may be summarised as follows.

Tesserae size: length and width vary between 0.5 and 1.8cm (surround), between 0.2 and 1.5cm (border), between 0.5 and 1.7cm (large vines), between 0.5 and 1.5cm (ibexes), between 0.5 and 1.7cm (background), between 0.1 and 1.5cm (bird)

Cube densities: 73 per dm (in general)

Interstice width: *tesserae* generally tightly laid with occasional cement infill where *tesserae* do not abut onto each other

Colours: 8 (light grey, blood red, red, black, white, mustard, beige and dark brown)

[17] Patrich *et alii*, 1999, 97-98, figs 1, 33.

Div. Zippori, The House of the Nile Festival

The Nile Festival House (No.9/15/1) covers an area of 50 x 35m and is divided into two main wings linked by corridors.[18] The house contains 14 mosaics of which 13 are *in situ* and one (Floor 8) has been moved to the Hebrew University, Jerusalem. The excavators believe that the building had a public function, possibly as a municipal basilica, in the fifth century AD.[19] More recently, R. Talgam has challenged both assumptions, arguing that this may have been a private residence dating to the sixth century.[20]

Floor 1, The Nile Festival Mosaic

Scenes depicting the celebration of the Nile Festival and hunting are framed by a border of type Pl. 10g, Pl. 71c.

Tesserae size: length and width vary between 0.2 and 1cm (border), between 0.2 and 1cm (general)

Cube density: 170 per dm^2 (border), 241 per dm^2 (main motifs), 241 per dm^2 (background)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 18 (black, brown, green, pink, red, shades of brown, shades of grey, shades of red, shades of white, white)

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[18] For a detailed treatment of the mosaic floors in this building, Netzer and Weiss, 1994, 46-51; Netzer and Weiss, 1995, 162-176, figs 1-10; Talgam, 2000, 1-41.
[19] Weiss and Netzer, 1995, 170.
[20] Talgam, 2000, 31.

Floor 2, The Centaur Mosaic

A centaur leaping on his hind legs holds an object containing a Greek inscription.

Tesserae size: length and width vary between 0.2 and 1cm (in general)

Cube density: 178 per dm^2 (centaur), 121 per dm^2 (background)

Interstice width: in general small, *tesserae* being tightly laid

Colours: shades of red, black, shades of grey, white

Floor 3, The Long Corridor Mosaic

A geometric floor of type Pl. 124b framed by a border of type Pl. 75b.

Tesserae size: length and width vary between 0.2 and 1.2cm (border), between 0.3 and 1cm (field)

Cube density: 133 per dm (border), 111 per dm (field)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 8 (shades of brown, shades of red, shades of grey, white, black)

Floor 4, The Flower Bud Mosaic

A geometric floor of type Pl. 219c (Var.) framed by a border of an interlaced band with alternating circles and squares.

Tesserae size: length and width vary between 0.2 and 1.2cm (surround), between 0.2 and 1.2cm (border), between 0.2 and 1.2cm (field)

Cube density: 125 per dm^2 (surround), 135 per dm^2 (border), 135 per dm^2 (field)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 8 (shades of brown, shades of red, white, black)

Floor 5

A geometric floor of type Pl. 161f (Var.) framed by a border of Pl. 75c.

Tesserae size: length and width vary between 0.5 and 1.5cm (surround), between 0.5 and 1.3cm (border), between 0.3 and 1.5cm (field)

Cube density: 73 per dm^2 (surround), 73 per dm^2 (border), 113 per dm^2 (field)

Interstice width: varies according to the *tesserae* being tightly or loosely laid

Colours: 8 (white, black, shades of red, mustard, grey)

Floor 6

A geometric floor in two fragments decorated by pattern type Pl. 156e framed by a border of Pl. 39e (Var.).

Tesserae size: length and width vary between 0.2 and 1.8cm (border and field)

Cube density: 117 per dm^2 (border and field)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 8 (mustard, shades of grey, white, black, red, pink)

Floor 7, Basilical Hall Mosaic (strip adjacent to long corridor)

A geometric floor of type Pl. 163c (Var.) framed by a border of Pl. 75b.

Tesserae size: length and width vary between 0.5 and 1.2cm (surround), between 0.2 and 1.3cm (border), between 0.8 and 1.3cm (field)

Cube density: 91 per dm^2 (surround), 135 per dm^2 (border), 91 per dm^2 (field)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 7 (white, black, shades of red, grey, mustard, pink)

Floor 8, Basilical Hall Mosaic (The Mosaic of the Amazons)

Comprises two figurative panels framed by borders of Pl. 72d, Pl. 72f and a strip of Pl. 219f. Currently located in the Hebrew University, the first panel which is partly destroyed, depicts two almost naked hunters with a boar at their feet. The second panel depicts two amazons mounted on horses and accompanied by a dog, participating in a leopard hunt.

First hunting panel

Top Border: multiple stranded guilloche. *Right hand Border*: Pl. 213 'paisley' motifs.

Field: A partially preserved mosaic depicting two naked hunters standing next to a tree with a wild boar beneath them.

Tesserae size: length and width vary between 0.2 and 1.2cm (top border, right hand border), between 0.2 and 0.8cm (amazons, boar, tree, flower plant, background)

Cube density: 144 per dm^2 (top border, right hand border), 225 per dm^2 (hunters, boar, tree, flower plant, background)

Interstice width: in general small, *tesserae* being tightly laid

Colours: shades of brown, shades of grey, white, shades of red, black, pink.

Second hunting panel

Tesserae size: length and width vary between 0.2 and 1cm (amazons, background, architectural representation guilloche border and frame)

Cube density: 225 dm^2 (background, architectural representation, amazons), 135 per dm^2 (guilloche border), 101 per dm^2 (guilloche frame)

Interstice width: in general small, *tesserae* being tightly laid except in the guilloche frame where laying of *tesserae* varies from loose to tight

Colours: white, black, grey, shades of red, pink, mustard

Floor 9

A geometric floor of type Pl. 219f framed by a border of Pl. 70f.

Tesserae size: length and width vary between 0.2 and 1.2cm (border and field)

Cube density: 144 per dm^2 (border and field)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 9 (shades of brown, shades of grey, white, red, black, pink)

Floor 10

A geometric floor of type Pl. 244f framed by a border of Pl. 40 (Var.).

Tesserae size: length and width vary between 0.2 and 1.2cm (surround, border, field)

Cube density: 113 per dm^2 (surround), 133 per dm^2 (border), 133 per dm^2 (field)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 6 (white, black, mustard, shades of red, grey)

Floor 11

A floor decorated with pattern Pl. 219c (Var.) framed by a border of Pl. 72e.

Tesserae size: length and width vary between 0.3 and 1.3cm (surround), between 0.2 and 1.2cm (border and field)

Cube density: 113 per dm^2 (surround) 135 per dm^2 (border), 133 per dm^2 (field)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 7 (white, black, grey, shades of red, pink, mustard)

Floor 12

A geometric floor of type Pl. 156e enclosed by a border of Pl. 33e.

Tesserae size: length and width vary between 0.3 and 1.3cm (surround), between 0.5 and 1.5cm (border), between 0.2 and 1.2cm (field)

Cube density: 113 per dm^2 (surround), 122 per dm^2 (border), 111 per dm^2 (field)

Interstice width: in general small, *tesserae* being tightly laid

Colours: 7 (white, shades of red, black, shades of grey, pink, mustard)

Floor 13, The Mosaic of the Dancing Amazons

A figurative floor in fragmentary condition depicting four amazons (three of whom are dancing) and horses. These are framed by a wide border comprising interlooped shaded bands forming squares enclosing a pomegranate and lozenges.

Tesserae size: length and width vary between 0.2 and 1.2cm (border), between 0.2 and 0.8cm (animals, trees, amazons, background)

Cube density: 144 per dm^2 (border), 225 per dm^2 (animals, trees, amazons, background)

Interstice width: in general small, *tesserae* being tightly laid

Colours: brick red, black, shades of brown, dark red, black, grey, white

E. Quality, Function and Decoration

The seven Northern Palestinian and Phoenician sites reviewed above, exhibit a clear hierarchy in terms of technical quality (Charts 5-10). At the lower end of the scale are

the monochrome pavements characterized by large *tesserae*, low cube density and wide interstices between the *tesserae*. These pavements conform to the lowest quality of floor defined by Avi-Yonah and the Ovadiahs, and are cruder than the lowest quality of floors according to Dauphin's classification. Marginally superior in technique are the floors of the 'Archives Building' (No.11/8/17) at Caesarea Maritima, with smaller *tesserae*, higher cube densities, narrower interstices and a wider colour range. These fit into the middle quality suggested by Avi-Yonah, and into the first categories defined by the Ovadiahs and Dauphin. The Ibex mosaic conforms to the fine quality recognised by Avi-Yonah, the Ovadiahs' second quality-level, and the middle quality suggested by Dauphin. The floors of the Nile Festival House (No.9/15/1) at Zippori are markedly superior in quality to the other floors under review. The geometric floors of this House exhibit in general a quality corresponding to Avi-Yonah's 'fine work' and the Ovadiahs' 'third level'. Technically, they range between the upper end of Dauphin's 'middle quality floors' and 'fine work'. The figurative pavements were markedly superior in technique to the geometric floors. The very small *tesserae* (with consequent high cube densities) were laid very tightly, and the range of colours was very wide. These pavements fall into the top range of the categories defined by Avi-Yonah, the Ovadiahs and Dauphin.

A clear hierarchy in quality is also discernible in the Phoenician pavements. At the lowest end of the scale are the pavements of Zahrani, with cube densities between 55 and 88 *tesserae* to the dm^2 and a 'modest' range of colours. The floors of this site compare to Dauphin's first and second quality-levels, the Ovadiahs' second and third groups, and Avi-Yonah's third level. The Shelomi floors, with a modest colour range but a higher cube density (Room 1), are comparable to pavements in Dauphin's

second category, and to the highest of the Ovadiahs' and Avi-Yonah's quality-groups. The Qabr Hiram pavements (No.6/1), with high densities and a wide colour range, conform to the highest quality category of all three technical scales.

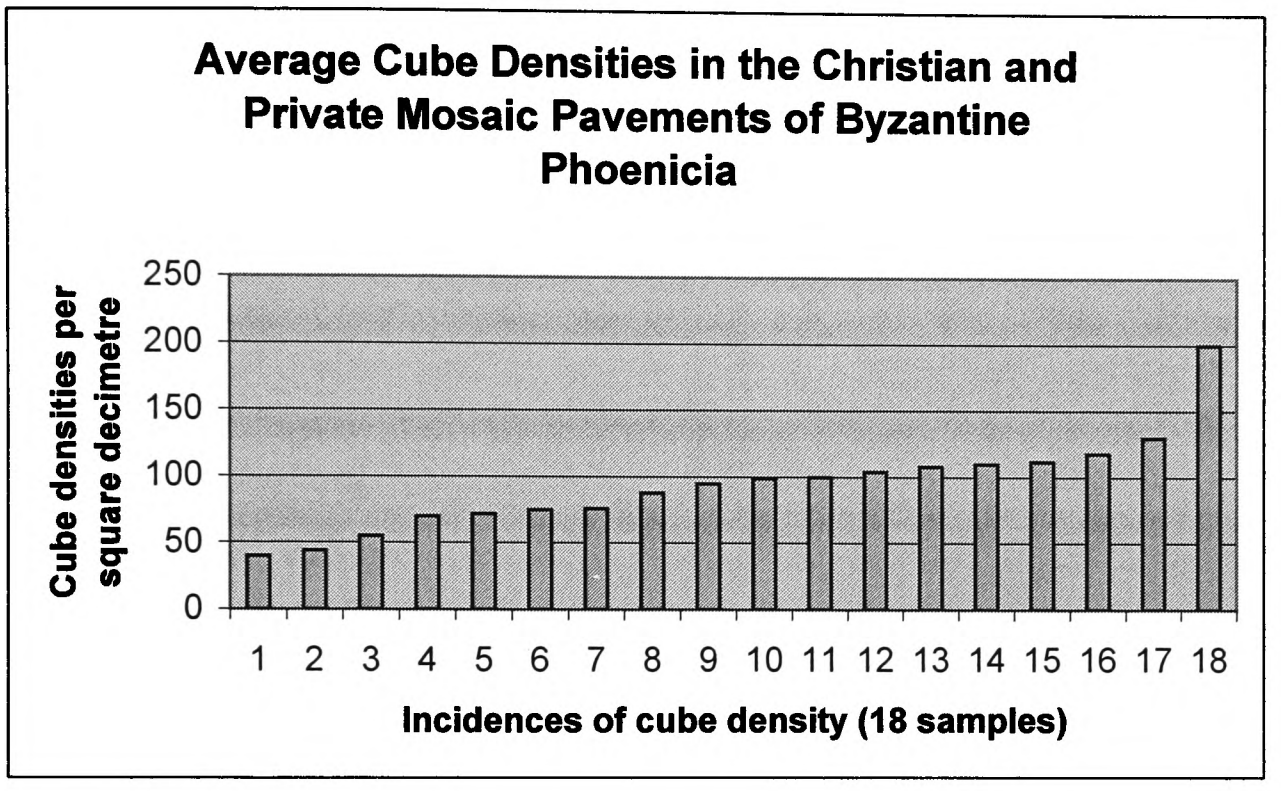

Chart 5. Average cube densities in the Christian and Private mosaic pavements of Byzantine Phoenicia

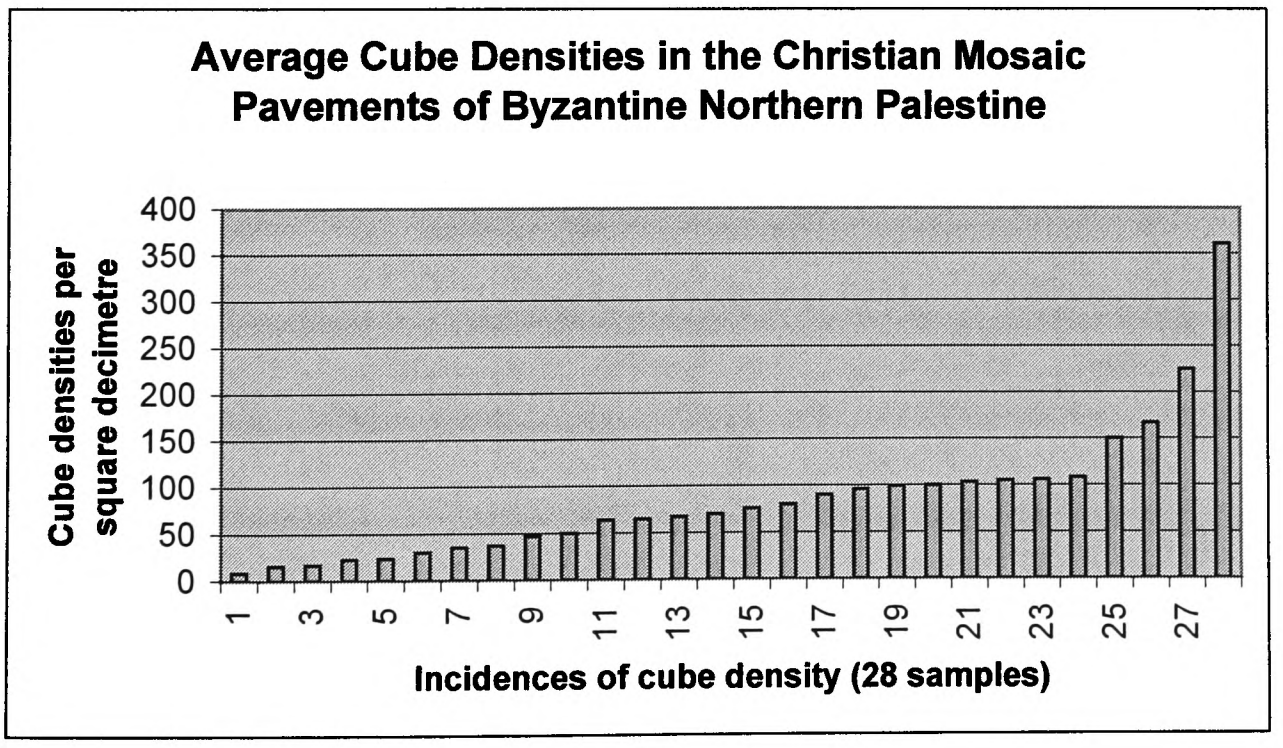

Chart 6. Average cube densities in the Christian mosaic pavements of Byzantine Northern Palestine

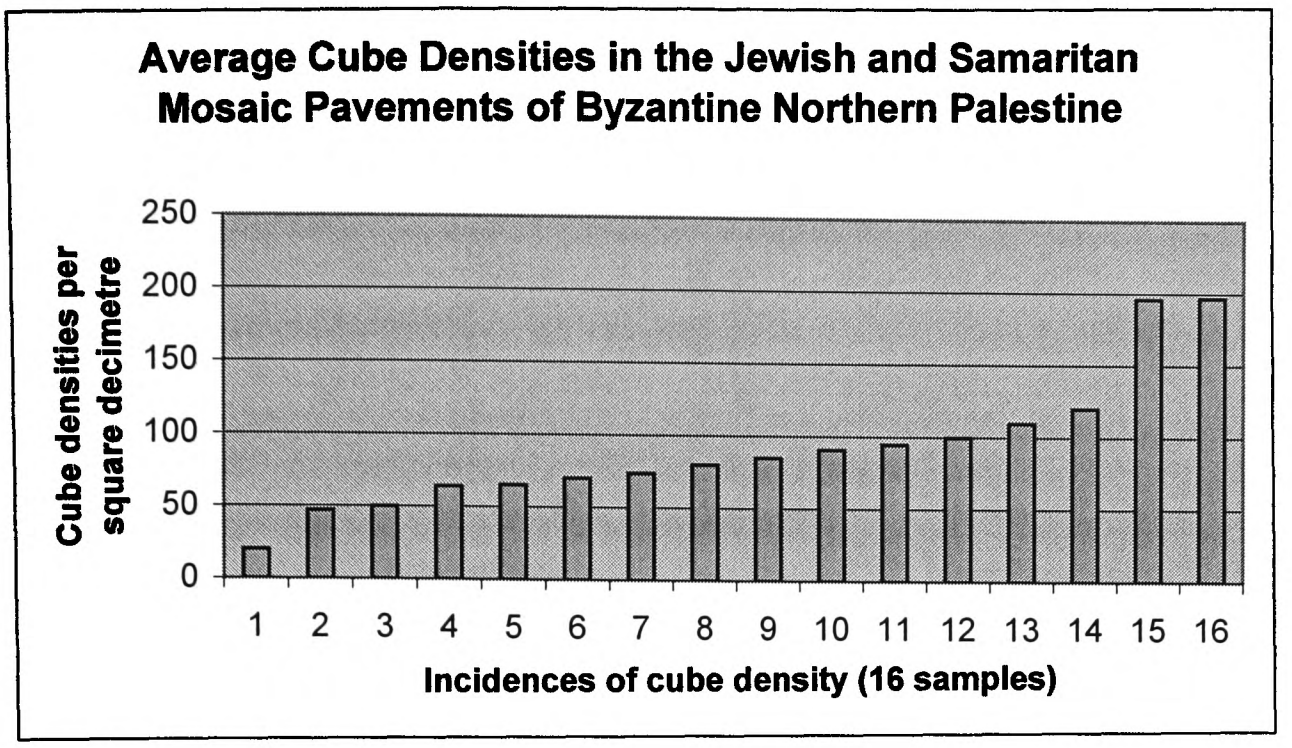

Chart 7. Average cube densities in the Jewish and Samaritan mosaic pavements of Byzantine Northern Palestine

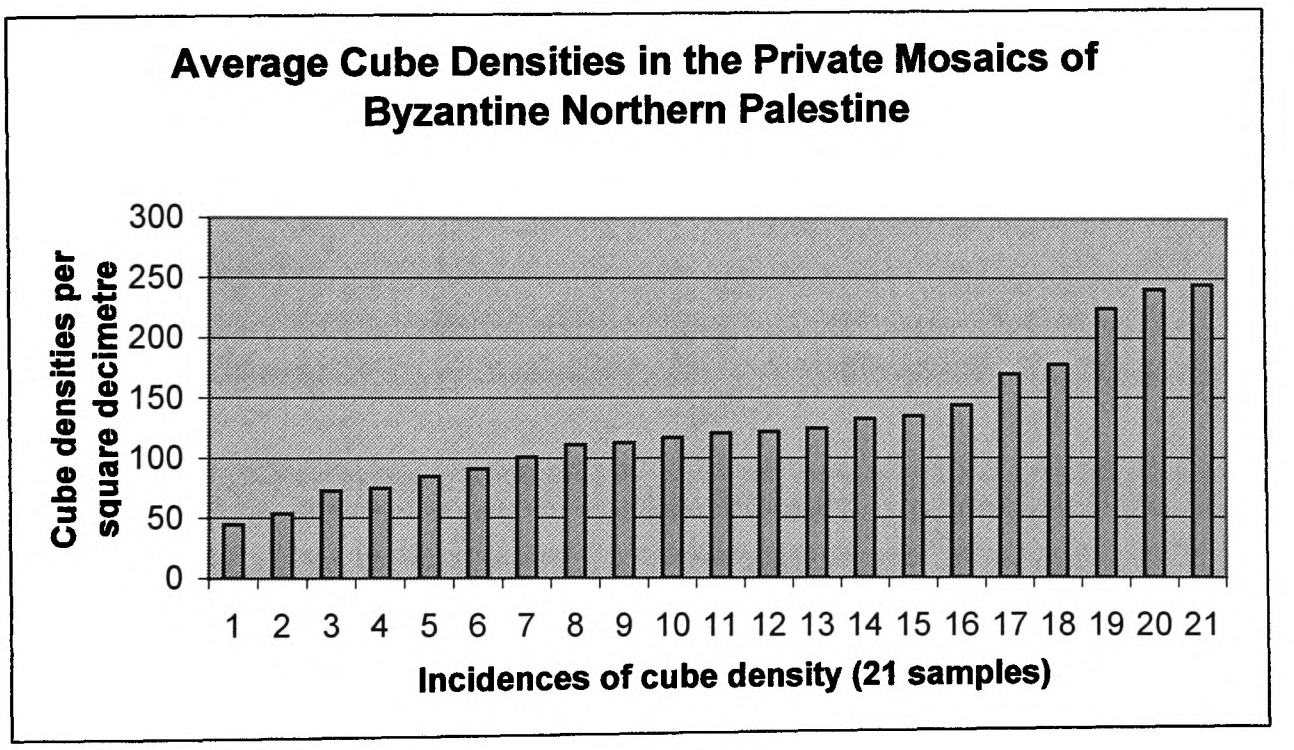

Chart 8. Average cube densities in the Private mosaic pavements of Byzantine Northern Palestine

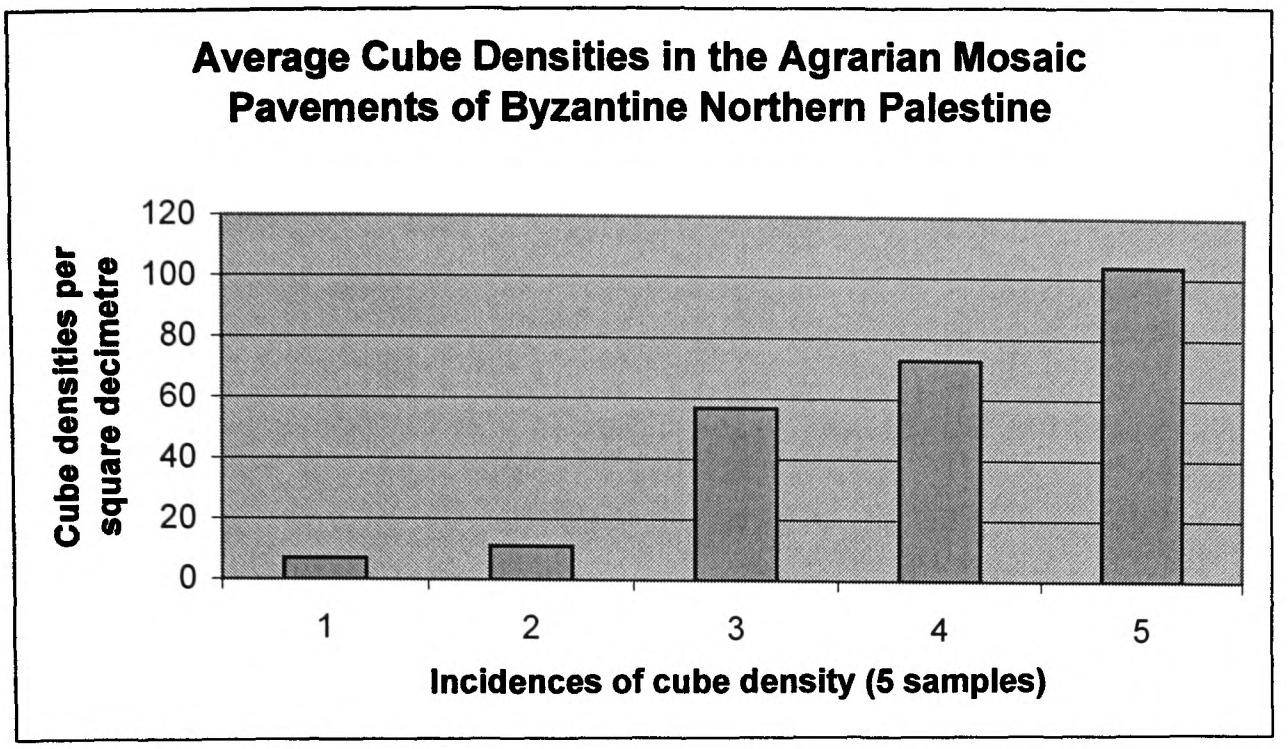

Chart 9. Average cube densities in the Agrarian mosaic pavements of Byzantine Northern Palestine

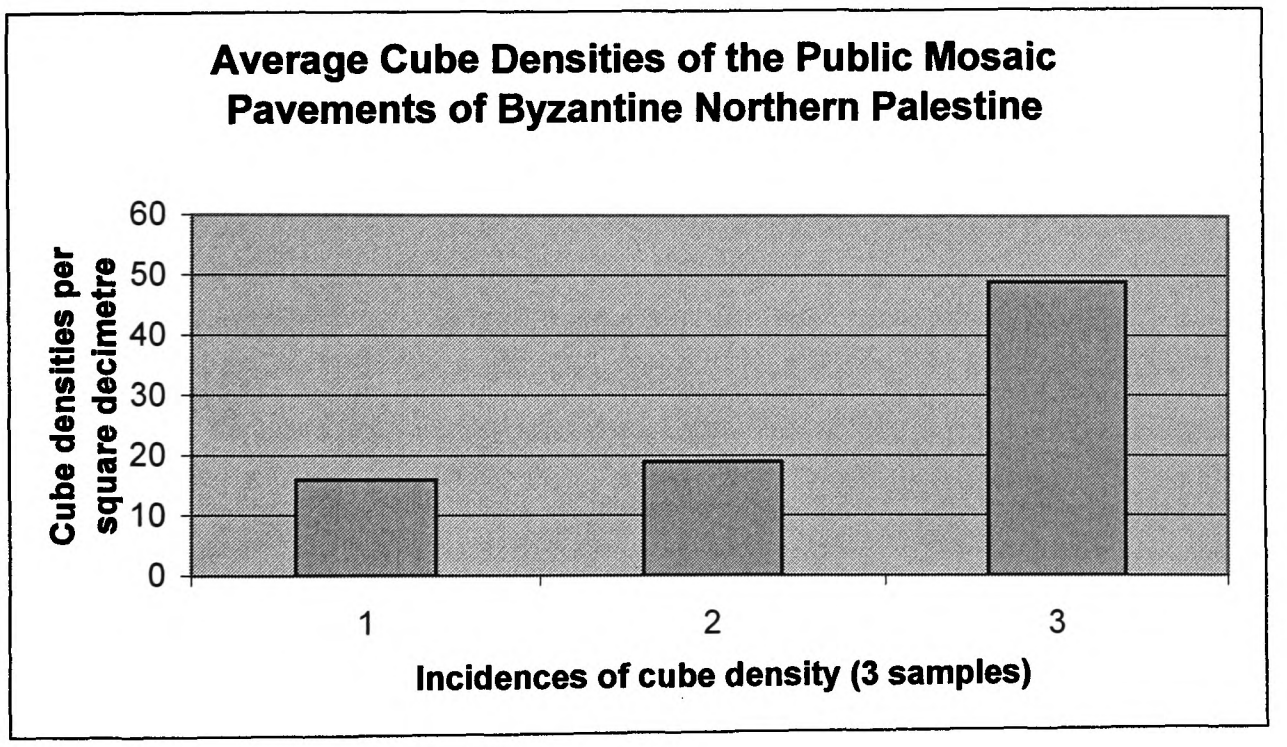

Chart 10. Average cube densities in the Public mosaic pavements of Byzantine Northern Palestine

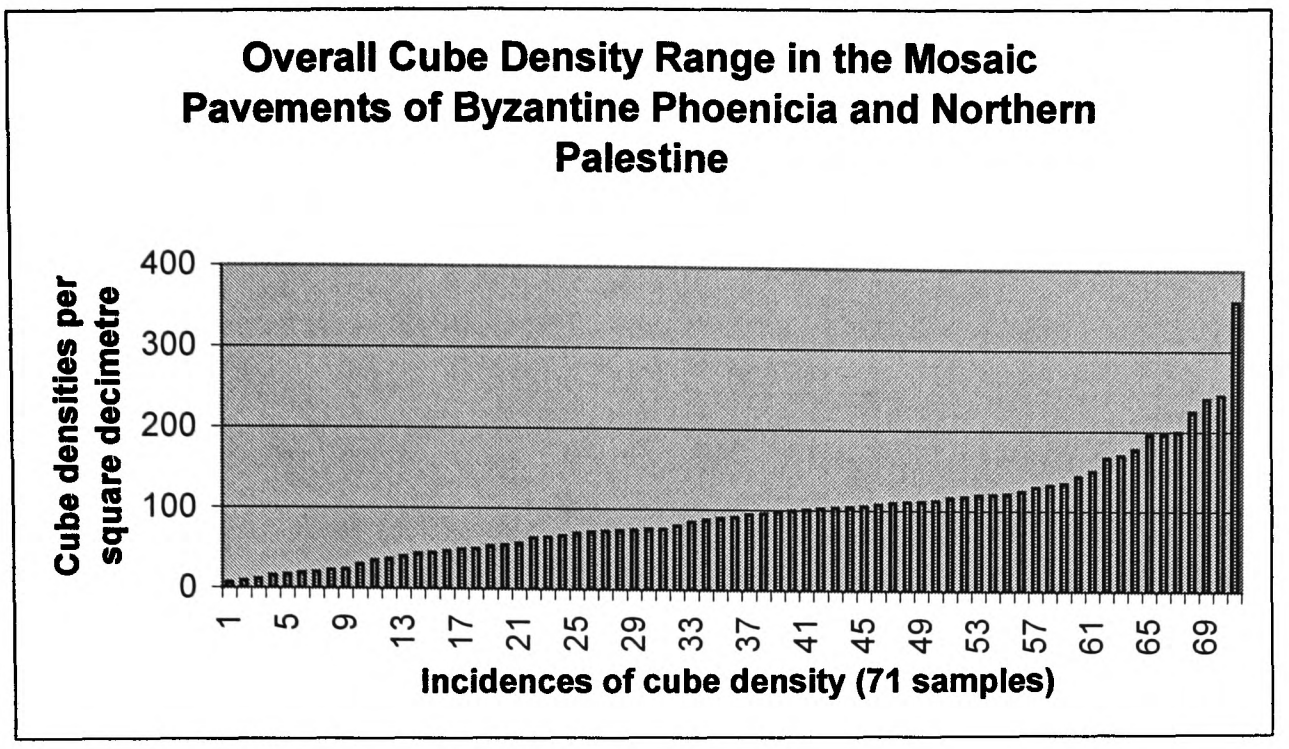

Chart 11. Average cube densities in the Byzantine mosaic pavements of Byzantine Phoenicia and Northern Palestine

The evidence presented above in Charts 5-11, presents the average cube densities per dm^2 in the Byzantine mosaic pavements of Phoenicia and Northern Palestine. It should be stressed that these data comprise the most comprehensive inventory of cube densities assembled thus far in the study of Graeco-Roman floor mosaics (see Tables 11-12). It is thus desirable to compare the density ranges overall with the groupings of Avi-Yonah, the Ovadiahs and Dauphin.

The available evidence for cube densities in the private buildings of Phoenicia is scant. Consequently, these have been included in Chart 5 together with Christian buildings. Since a more comprehensive range of evidence is available for Northern Palestine, we felt it would be appropriate to present these data by building type (Christian, Jewish and Samaritan, private, agrarian, public).

The crudest floors belong to agrarian buildings and public walkways. The cube densities of the former are somewhat skewed by two incidences of 73 per dm^2 and 104 per dm^2 in a warehouse (No.11/8/40) at Caesarea. The first is a border, the second comprises a small area of vegetal motifs in the same area. Generally however, cube densities in agrarian buildings are exceptionally low and do not exceed 57 per dm^2. The same is true for the public walkways at Zippori (No.9/15/3-4), Caesarea (No.11/8/2) and Beth Shean (No.12/13/10) where the maximum reached is 49 *tesserae* per dm^2.

The finest floors belong to private and religious buildings: 225 per dm^2 in the figurative floors of the House of the Nile Festival at Zippori (No.9/15/1) and 200 per dm^2 in the Church of St Christopher at Qabr Hiram (No.6/1). These data are somewhat skewed by an exceptionally high count of 361 *tesserae* per dm^2 recorded in the Monastery of Lady Mary at Beth Shean (No.12/13/1), but such a high density tended to be confined to the finer details (faces) of the figurative mosaics in question.

It is difficult to apply a system of cube density groupings to the floors of other building types, since Charts 6-10 make it clear densities vary considerably between floors. This factor was highlighted in the discussion of the case studies reviewed above and is borne out further by Chart 11 and the different parameters observed for each of the grouping systems observed (Avi-Yonah, Ovadiahs, Dauphin). Moreover, densities varied within the same floor area. Consequently the densities given are usually an average. It is certainly true that the crudest pavements exhibited low cube densities, while the most sophisticated were characterized by high cube densities. Variability between these extremes was however considerable. It is perhaps more

pertinent to view the quality more in terms of a variable range: from the most coarse pavements to progressively finer floors, and by degree, to the finest. We would thus-prefer to view quality by degree rather than expressed by widely-spanning categories.

An explanation for the variations in technical quality observed in the above examples is called for. Building function may have played a significant role. The large cubes and correspondingly low densities of the granary floors at Caesarea Maritima may have been deliberate in view of the considerable wear and tear undergone by these floors as a consequence of the function of these *horrea*. The similarly low quality of the floors of the 'Archive Building' is also perhaps explicable in terms of function, given the number of feet stepping in and out of the administrative offices which it housed. That the pavements of the 'Archive Building' were marginally superior in quality to the granary floors may be due solely to the slightly less crude usage which the mosaicists envisaged for the former as opposed to the latter.

At the better end of the quality scale, the finer technique displayed by the figurative floors at Caesarea (the Ibex mosaic) and Zippori (Nile Festival House) appears to be related not so much to function (if indeed these belonged to private buildings), as to decorative scheme. Likewise, in the ecclesiastical farm of Shelomi, while the coarse courtyard pavement might be best explained by its function, the same does not hold true for Room 1. Here, the ornamentation dictated a relatively fine technique for a high quality pavement in the main room of a wealthy Byzantine farmstead. It is thus clear that the function of the complex as a whole did not hold total sway over technique and that other factors were also at work.

It has been persuasively argued that the figurative decoration of the Church of St Christopher at Qabr Hiram (and indeed of many Phoenician and Palestinian churches) embodied various permutations of meaning within a Christian context.[21] Thus the function of the building appears to have dictated the subject matter of the floor mosaics, and this in turn required the fine technique observable on these floors. Other, inter-related factors, however, also played a role. Churches were thronged with standing worshippers, especially during the Sunday liturgy and on the Great Feasts of the Byzantine Church to which corresponded peak periods of pilgrimage. This naturally exacted considerable wear and tear on the floors. The liturgical practice of the time, moreover, required pilgrims to approach the altar or crypt along the sides of the church. The combination of these two factors resulted in some highly-trodden naves and side-aisles being predominantly decorated with a simple scale pattern, as in the churches of Shavei Zion (No.7/26) and Nahariyya (No.7/19), with a *trompe-l'oeil* rosette constituting the central focus of the latter's pavement. Conversely, the Nahariya mosaicist concentrated on ornate borders of inhabited acanthus scrolls to be seen at close quarters by worshippers moving around the edges of the nave and side-aisles in an anti-clockwise direction (and thus wishing to have all the motifs facing them to their right). The apses, whose access was restricted to the officiating clergy, were paved with complex geometric mosaics. Other churches of Northern Palestine and Phoenicia display highly elaborate designs over their entire surface, suggesting that the real explanation for the technical quality of the best examples in the catalogue may be provided perhaps by a social and financial categorization of patronage which will be attempted in Chapter V.

F. Technique as an Index of Financial Expenditure

Technique may be regarded, too, as a manifestation of financial expenditure *per se*: the better the technical quality, the greater the expenditure. This premise may be extended to include man-hours: the finer the technique displayed by a floor, the greater number of man-hours required. Thus we could draw a corollary between technical complexity and a great number of man-hours on the one hand, and technical simplicity and a minimal number of man-hours on the other. This argument will be developed in detail below.

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[21] Dauphin, 1978, 11-34; Merrony, 1998, 441-482.

Table 11. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Phoenicia

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
1	Jebail	1	Ghine	Church			1 x 1	
3	Beirut	6	Beit Mery	Church			0.9 x 0.9	
3	Beirut	7b	'Ain es-Samake	Church	Room F		1 x 1	
					Room F	Field (figurative panel)	0.8 x 0.8	
3	Beirut	8	Jenah	*Villa*	Room M		1.3 x 1.5	44
					Room G		1.5 x 1.5	
					Room L		1 x 1	
3	Beirut	9	Khalde	Church			0.8 x 0.9	
3	Beirut	10a	Khan Khalde	Church			1 x 1	112
3	Beirut	10b	Khan Khalde	Church	General		1 x 1	
					Nave		0.9 x 0.9	
4	Sidon	1	Bostan esh-Sheikh	Church			1 x 1	
5	Tyre	1	Zahrani	Church	Nave entrance		1.5 x 1.5	70
					First antechamber		1.3 x 1.5	55
					Second antechamber		1.3 x 1.5	55
					Baptistery border		1.3 x 1.5	88
					Diaconicon border		1.3 x 1.3	76
6	Bennt Jbail	1	Qabr Hiram	Church	Nave		0.4 x 0.4	200
					General		0.9-1 x 0.9-1	118
					Intercolumnar panels		1.3 (diam)	?
7	Nahariyya	1	Hanita	Church			?	100

Table 11. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Phoenicia

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
7	Nahariyya	2	Khirbet Ma'sub	Church			0.6 x 0.8	
7	Nahariyya	5a	Shelomi	Ecclesiastical Farm	Courtyard 1		2.3 x 2.9	
7	Nahariyya	5b	Shelomi	Ecclesiastical Farm	Courtyard 1		2.5 x 2.5	
					Room 2		0.9 x 1	
					Room 1		0.8 x 1	
					General			104
7	Nahariyya	19	Nahariyya	Church	General			110
						Faces and details		200
7	Nahariyya	23	Khirbet Muslih	Tomb?			1.2 x 1.5	
7	Nahariyya	24	Khirbet el Habay	?			1 x 1.3	
7	Nahariyya	26a	Shavei Zion	Church	Chancel			130
					South aisle			108
					NE Chapel			100
7	Nahariyya	26b	Shavei Zion	Church	*Esonarthex*			99
					Corridor			40
					NE Chapel			72
					North Room			70
7	Nahariyya	28	Horvat Ahir	?			2 x 2.2	
7	Nahariyya	29	Nes'ammim	Church			1 x 1	
7	Nahariyya	32	Horvat Hesheq	Church	General		1-1.2 x 1-1.2	
					Upper Storey	Fragment		75
					Nave			95
8	Zefat	4a	Khirbet Marus	Jewish Synagogue			8 x 8	
8	Zefat	6	Khirbet el Muntar	Jewish Synagogue?		Fragment	2 x 2	

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
9	Haifa	5b	Karmiel	Church			1.8	
9	Haifa	9/1	Shiqmona	Church	N lateral rooms			100
					S lateral rooms			100
					Hall room			30
9	Haifa	12/1	Khirbet Husha	?				22
9	Haifa	15/1	Zippori	*Villa*	Hall	Border	0.2-1	170
					Hall	Main Motifs	0.2-1	241
					Hall	Field	0.2-1	241
					Floor 2	Border	0.2-1	121
					Floor 2	Field	0.2-1	178
					Floor 2	Figure		178
					Floor 3	Border	0.2-1.2	133
					Floor 3	Field	0.3-1	133
					Floor 4	Surround	0.2-1.2	125
					Floor 4	Border	0.2-1.2	135
					Floor 4	Field	0.2-1.2	135
					Floor 5	Surround	0.5-1.5	73
					Floor 5	Border	0.5-1.3	73
					Floor 5	Field	0.3-1.5	113
					Floor 6	Border	0.2-1.8	117
					Floor 6	Field	0.2-1.8	117
					Floor 7	Surround	0.5-1.2	91
					Floor 7	Border	0.2-1.3	135
					Floor 7	Field	0.8-1.3	135

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
					Floor 8	Border	0.2-1.2	101
9	Haifa	15/1	Zippori	*Villa*	Floor 8	Border	0.2-1.2	135
					Floor 8	Border	0.2-1	144
					Floor 8	Main motifs	0.2-0.8	225
					Floor 8	Background	0.2-0.8	225
					Floor 9	Border	0.2-1.2	144
					Floor 9	Field	0.2-1.2	144
					Floor 10	Surround	0.2-1.2	113
					Floor 10	Border	0.2-1.2	113
					Floor 10	Field	0.2-1.2	113
					Floor 11	Surround	0.3-1.3	113
					Floor 11	Border	0.2-1.2	135
					Floor 11	Field	0.2-1.2	113
					Floor 12	Surround	0.3-1.3	113
					Floor 12	Border	0.5-1.5	122
					Floor 12	Field	0.2-1.2	111
					Floor 13	Border	0.2-1.2	144
					Floor 13	Background	0.2-1.8	225
					Floor 13	Main motifs	0.2-1.8	225
9	Haifa	15/2	Zippori	*Cardo*		Pavement	0.5-2.5	16
9	Haifa	15/3	Zippori	*Cardo*		Pavement	0.5-2.5	16
9	Haifa	18	Beit Lehem	Church	S Aisle			100
9	Haifa	20	'Isfiya	Jewish Synagogue	Nave			65

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
9	Haifa	22/1	Nazareth	Chapel	Chapel			50
					Cave			80
9	Haifa	22/2	Nazareth	Church	Nave			64
					S Aisle			64
					Diaconicon			35
9	Haifa	22/3a	Nazareth	Monastery	Room P			80
					Room H			30
					Courtyard			16
9	Haifa	22/3b	Nazareth	Monastery	S Aisle			150
9	Haifa	24	Beth She'arim	*Villa*	Room A		1 x 1.2	75
					Room B		1 x 1.2	75
					Room C		1 x 1.2	75
9	Haifa	27	Khirbet Dubil	?		Fragment		50
9	Haifa	28	Khirbet el Karak	?		Fragment		18
9	Haifa	37a	Dor	Church			1.3 x 1.5	67
9	Haifa						1.7 x 1.2	
9	Haifa	32b	Dor	Church	Nave		1.1 x 1.1	47
9	Haifa				Aisles		1.1 x 1.1	47
9	Haifa	40	Abu Shusha	?			1 x 1	
9	Haifa	41	'Afula	?		Fragment		25
9	Haifa	42	Khirbet Umm et Tut	?		Pavement	2 x 2	

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
10	Teverya	4	Et Tabgha	Church	Chancel			76
					R Transept			105
					L Transept			99
					W T Corridor			105
					Nave			105
					N Aisle			54
					N Intercolumniations			106
					S Intercolumniations			106
					Narthex			23
					L Sacristy			37
					R Sacristy			24
					Atrium			17
10	Teverya	7/1	El-Kursi	Church	Nave			225
					Elsewhere			96
10	Teverya	7/2	El-Kursi	Church			1 x 1	

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	**Zone Name**	**Site No**	**Site Name**	**Building Type**	**Building Part**	**Mosaic Part**	***Tesserae* Size (cm)**	**Cube density dm^2**
10	Teverya	10	Hammath Tiberias	Jewish Synagogue	Nave	Surround	0.5-1	91
						Border	0.5-1	91
					Aisles	Field	0.5-1	91
					Nave	Field (Ark)	0.5-1.2	91
					Nave	Field (faces of figures)	0.3-1	197
					Nave	Field (bodies of figures)	0.5-1	197
					Nave	Border (Ark)	0.5-1.2	91
10	Teverya	15/1	Kafr Kama	Chapel				80
10	Teverya	17	"Kafr Kama South"	?				65
11	Netanya	4/1	Shuni	?			1.5 x 2	
11	Netanya	4/2b	Shuni	Winepress			1 x 1	
11	Netanya	7/2	Caesarea	Esplanade			1-3.5	19

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
11	Netanya	7/3	Caesarea	?				65
						Fragment		110
11	Netanya	7/4	Caesarea	?			2 x 2	
11	Netanya	7/5	Caesarea	?			2 x 2	
11	Netanya	7/7	Caesarea	?		Fragment	1-2	50
						Fragment	0.8-1.5	64
						Fragment	1-3.5	31
						Fragment	0.8-1.5	64
						Fragment	1-1.7	49
11	Netanya	7/8	Caesarea	?		Field	1-2	43
						Band	2-3	43
						Inscription (general)	1-1.5	43
						Inscription (letters)	0.8-1	43
11	Netanya	7/9	Caesarea	?		Surround		
						Field	1.2-2	43
							1.2-2	43
11	Netanya	7/10	Caesarea	?				38
11	Netanya	7/12	Caesarea	Palace?		Field (details of figures)	0.3	245
						Field		85
11	Netanya	7/13	Caesarea	?			1 x 1	

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
11	Netanya	7/14	Caesarea	?		Surround	1-2	57
						Outer Band	0.8-1.5	73
						Middle Band	1-2	50
						Field	0.8-1.7	50
						Medallion	0.8-1.7	
						Inscription	0.8-1.7	
						Repair		16
11	Netanya	7/15	Caesarea	?			2.2 x 2.2	
11	Netanya	7/16	Caesarea	?			2 x 2	
11	Netanya	7/17	Caesarea	Official	Floor 1	Field	1-3	21
					Floor 1	Inscription	1-2	
					Floor 2	Surround	1-2	73
					Floor 2	Strip	1-2	73
					Floor 3	Surround	0.8-1.5	100
					Floor 3	Field	0.8-1.5	100
					Floor 5	Field	1-3	26
					Floor 6	Surround fragment	1-2	50
					Floor 6	Surround fragment	3.5	31
					Floor 6	Surround fragment	0.8-1.5	64
					Floor 7	Field	1-3	
					Floor 7	Inscription	1-2	
					Floor 8	Field	1-2.5	
					Floor 8	Inscription	1-2	
11	Netanya	7/18	Caesarea	?		Surround	1-3	17
						Field	1.5-3	17

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
11	Netanya	7/19	Caesarea	?		Pavement	0.5-3	19
11	Netanya	7/20	Caesarea	?		Medallion background	0.8-1.6	
						Inscription letters	0.8-1.2	
						Inscription leaf	0.5-1	
11	Netanya	7/21	Caesarea	?		Field	0.5-1.3	19
11	Netanya	7/22	Caesarea	?		Field	0.5-1.3	19
11	Netanya	7/23	Caesarea	*Villa*		Surround	1-2	54
						Border	0.5-2	54
						Field	1-2	73
						Kantharos	0.7-1.5	
						Figurative details	0.3-0.5	
11	Netanya	7/24	Caesarea	?		Surround	0.5-1.8	43
						Border	0.5-1.8	43
						Field	0.5-1.8	43
11	Netanya	7/25	Caesarea	?		Surround	0.5-3	19
11	Netanya	7/26	Caesarea	?		Surround	1-2.2	31
						Field	0.5-1.6	57
11	Netanya	7/27	Caesarea	?		Surround	0.8-2.5	37
						Field	0.2-0.5	37
11	Netanya	7/28	Caesarea	?		Pavement	1-1.5	100
						Pavement	1-1.5	100
11	Netanya	7/29	Caesarea	?		Surround	1-2	43
						Field	1-2	43

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
11	Netanya	7/30	Caesarea		First Mosaic	Surround	1-2	36-64
					First Mosaic	Surround motifs	1-2.2	
					First Mosaic	Field	1-2.2	50
					First Mosaic	Medallion	0.5-1	175
					Second Mosaic	Surround	0.5-2	82
					Second Mosaic	Border	0.5-2	82
					Second Mosaic	Field	0.5-1.5	82
11	Netanya	7/33	Caesarea	*Villa*		Surround	0.5-1.8	73
						Border	0.2-1.5	73
						Field (background)	0.5-1.7	73
						Field motifs (vines)	0.5-1.7	
						Field motifs (ibexes)	0.5-1.5	
						Field (figurative details)	0.1-1.5	
11	Netanya	7/35	Caesarea	Granary		Pavement	1-4.5	7
11	Netanya	7/36	Caesarea	Granary		Pavement	1-4.5	7
11	Netanya	7/37	Caesarea	Granary		Pavement	1-4.5	7
11	Netanya	7/38	Caesarea	Granary		Pavement	1-4.5	7
11	Netanya	7/39	Caesarea	Warehouse		Pavement	1.5-4.5	11
11	Netanya	7/40	Caesarea	Warehouse		Border	1-1.5	73
						Border (leaves)	0.7-1.5	104
						Field (background)	1-1.5	57
						Field (floral motifs)	0.8-1.2	
11	Netanya	7/41	Caesarea	?		Fragment 1	1-3.2	31
						Fragment 2	1-3.2	31

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
11	Netanya	7/43	Caesarea	Bath House		Pavement	1.1-1.5	
						Pavement	0.5-1	
11	Netanya	7/50	Caesarea	Palace Garden		Pavement	1.5-2.8	
11	Netanya	7/51	Caesarea	Palace Garden		Pavement	0.8-1.2	
11	Netanya	7/52	Caesarea	Palace Garden		Pavement	0.8-1.5	
11	Netanya	7/53	Caesarea	Palace Area		Pavement	1-1.5	
11	Netanya	7/54	Caesarea	Palace Area		Pavement	2.5 x 2.5	
11	Netanya	7/55	Caesarea	Shrine		Pavement	1.5-2.2	
11	Netanya	7/56	Caesarea	Shrine		Pavement	0.8-1	
11	Netanya	7/58	Caesarea	Promontory Palace		Pavement	1.5-2	
11	Netanya	7/59	Caesarea	Promontory Palace		Pavement	0.8 x 0.8	
11	Netanya	7/8	Khirbet 'Ara	?		Fragments		80
11	Netanya	7/16	Baka	?		Fragment		150
11	Netanya	19	Gan Hefer	?		Fragments		15
11	Netanya	26	El-Khirbe	Samaritan Synagogue	General		0.8-1	

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm^2
12	Beth Shean	5/1	Beth Ha-Shitta	Monastic Farm		General		35
12	Beth Shean	6	Sede Nahum	Chapel		General	0.8 x 1.1	90
						Figurative details	0.5 x 0.5	150
12	Beth Shean	7	Beit Alfa	Jewish Synagogue	Courtyard	General	0.2 x 2.2	
						General	2.1 x 2.4	
					W Aisle	Border	0.5-2.5	64
					W Aisle	Field	0.5-2.5	64
					E Aisle	Border	0.5-2.5	64
					E Aisle	Field	0.5-2.5	64
					N Area	Surround	0.5-2.5	64
					Vestibule	Pavement		64
					Nave	Border (general)	0.2-1.5-	100
					Nave	Field (general)	0.2-1.5-	
					Nave	Field (body of figures)		95
12	Beth Shean	9	Tel Tumis	Church?		Fragments		70
12	Beth Shean	16a	Ma'oz Hayim	Jewish Synagogue		General		70
12	Beth Shean	16b	Ma'oz Hayim	Jewish Synagogue	W Aisle	General repair		70
						General		50
12	Beth Shean	20a	Rehov	Jewish Synagogue		General	1 x 1	
12	Beth Shean	20b	Rehov	Jewish Synagogue		General	1 x 1	
12	Beth Shean	20c	Rehov	Jewish Synagogue	E Aisle	General	1.5 x 1.5	
12	Beth Shean	26	Khirbet Jabaris	Monastery Church		General		90

Table 12. *Tesserae* size and cube densities of the Byzantine mosaic pavements of Northern Palestine

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	*Tesserae* Size (cm)	Cube density dm2
12	Beth Shean	13/1	Beth Shean	Monastery		General	1 x 1	103
						Figurative (faces)	0.6 x 0.5	361
12	Beth Shean	13/2	Beth Shean	Church	Narthex			30
					Nave			90
12	Beth Shean	13/4b	Beth Shean	Tomb	Hall (general)		1 x 1	108
					Hall (general)		0.9 x 1.2	
					Hall	Bodies of figures	0.7-0.5	167
					Hall	Faces of figures	0.3 x 0.4	167
12	Beth Shean	13/10	Beth Shean	*Cardo* Walkway		Pavement	1-2.5	49
12	Beth Shean	13/12	Beth Shean	Monastery	Room 5			17
					Room 6			64
12	Beth Shean	13/13	Beth Shean	Samaritan Synagogue	Apse			85
					Nave			120
					S Aisle			65
					N Aisle			80
					Room 7			20
					Room 8			47
					Room 9			120
12	Beth Shean	13/14	Beth Shean	*Villa*	General			55
12	Beth Shean	13/15	Beth Shean	Jewish Synagogue		Border	1.5 x 1.3	74
						Field	1.5 x 1.3	74
12	Beth Shean	13/16	Beth Shean	?		General	0.9 x 1	110
						Figures (details)	0.7 x 0.6	196

2. Bedding

Bedding has been neglected all too often in mosaic studies. Saller was the first scholar to give bedding due consideration. In 1935, he attempted to use floor bedding for the purposes of relative dating.[22] On the Mount of Beatitudes (No10/3), he observed that the lower floor (decorated with geometric motifs and dated to the fourth or fifth century) had a one-layer bed, while the upper sixth-century floor had two layers of bedding. More recently, C. Dauphin[23] has reiterated the potential of mosaic bedding for dating purposes.

In her analysis of the mosaic pavements of the Monastery of Khirbet el-Murassas in the Judean Desert, R. Talgam noted a correlation between complexity of design and the number of bedding layers. Thus the bedding of the church mosaic, the most delicate and ornate mosaic on the site was supported by eight layers of bedding, the less elaborate mosaic of the chapel by six layers, and the least elaborate mosaics of the same building by five layers.[24]

With these exceptions, and apart from general descriptions, the study of bedding has been overlooked in studies of mosaics in Phoenicia and Palestine. The approach, which is described below, represents a novel attempt to include bedding in general economic considerations pertaining to floor mosaics.

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[22] Saller, 1946, 150, Pl. 22.
[23] Dauphin, 1974, 69-70.
[24] Magen and Talgam, 1990, 149.

We have demonstrated above that the technical quality of Byzantine floor mosaics in Phoenicia and Northern Palestine represented a direct index of financial expenditure. Analysis was limited to size of *tesserae*, density of *tesserae*, tight or loose laying of *tesserae* and colour range. It is argued below that the quality of mosaic bedding also represented financial outlay. This hypothesis is based on the close scrutiny of the constituents of the various layers of bedding and their thickness in selective examples from the region under examination.

Ai. The Constituents of Bedding

Writing in the Augustan period (33 BC – AD 14), Vitruvius in *The Ten Books on Architecture* provided an informative description of mosaic bedding.[25] He prescribed first of all a level and solid soil surface upon which a layer of broken stone should be laid as foundation. The next layer was to be composed of 'stones not smaller than can fill the hand (*statumen*).' The layer above comprised a layer of broken stone 'nine cubits' (23cm) thick in the proportions of three parts to one part of lime (*rudus*). If the material was in reuse, Vitruvius recommended a ratio of five to two. The final layer of bedding - the *nucleus* - consisted of pounded tile mixed with lime in the proportions of three parts to one, forming a layer 'not less than six digits thick' (15 cm). Finally, the cubes were to be laid by rule and level and rubbed down.

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[25] Vitruvius, 7.1 (Morgan, 1914, 203-205).

The bedding of Byzantine floors in Northern Palestine and Phoenicia tended, in many cases, to be shallower, and to exhibit fewer layers than the Roman ideal stipulated by Vitruvius.[26]

In Phoenicia, the sixth-century *villa* mosaics of Jenah (No.3/8) had in general only one layer of mortared lime into which the cubes were set. The beds of the portico mosaic of the Upper Church of Khan Khalde (No.3/10) consisted of two layers: a lower layer of stones embedded in crude mortar, and an upper layer of fine mortar. Similarly, the mosaic of the central nave had a lower bedding of stones set in crude mortar and an upper layer of fine mortar of sand and lime.

In Northern Palestine, the foundation layer of the Hamman Baisan pavement (No.12/13/4) consisted of a 23cm-thick layer of rubble and earth. Over this, a 7cm-thick layer of lime mixed with plaster of Paris had been spread, in which the *tesserae* were set. On a mosaic near the apse section in the Chapel on the Mount of Beatitudes (No.10/3a), the bedding comprised a layer of bedrock or stones covered by a single layer of lime into which the *tesserae* had been inserted.[27] At Et Tabgha, the nave floor of the Church of the Multiplication of the Loaves and the Fishes (No.10/4) exhibited a floor-bedding more akin to that recommended by Vitruvius.[28] The bottom layer (*statumen*) consisted of stones the size of a fist. The next layer (*rudus*) was of coarse mortar of ground shingle, between 4 and 6cm thick. The final layer (*nucleus*) in

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[26] The lower floor of the Peristyle Court of the Great Palace of the Byzantine Emperors in Constantinople is an example of high quality workmanship approaching the Vitruvian ideal: *statumen*: very thick (0.30 to 0.50m) bed of packed quarrystone, insulated with shards of pottery; *rudus*: mortar screed (0.9cm), topped by a compacted insulating layer of loam, soil and charcoal (0.30cm) and a screed layer hard as concrete containing a high rate of stone chips (0.30cm); finally, a *nucleus* of embedding mortar and *tesserae* (Jobst *et alii*, 2000, 28-29.)

[27] Saller, 1946, 150, Pl. 22.

which the cubes were set, was of pure lime mortar, 2 to 4cm thick (thickness is hereafter abridged to Th.)

At Caesarea, many of the Byzantine floors exhibit multiple layers of bedding. A floor located in Field NN18 (No.11/8/30), for instance, comprises: a *statumen* (Th. 12cm) of soil, clay, shells, ceramics, stones (Gr.[29] 0.1-0.3cm), stones (Gr. 0.1-0.3cm) and refuse; a *rudus* (Th. 11cm) of sand, stones (Gr. 0.05-0.3cm), stones (Gr. 0.4-0.8cm), shells and ceramics; a *nucleus* (Th. 5.5cm) of sand, lime, ash and stones (Gr. 0.03-0.05cm); and a *tesselatum* (Th. 1.5cm) of lime and sand. Likewise, a mosaic located east of the Hippodrome in Locus 3450 (No.11/8/53) comprises: a *statumen* (6.4cm thick), associating ash, grey sand, stones, small stones (Gr. 0.5-2cm), fragments of *tesserae* and smithereens; the *rudus* (Th. 4.6cm) was of lime, ash, small stones (Gr. 0.5-2cm) and smithereens; the *nucleus* (Th. 7.4cm), contained lime, ash, sand, stones, small stones (Gr. 0.5-1.5cm), sherds (Gr. 0.1-15cm) and smithereeens. The *tesserae* were set into a *tesselatum*[30] of lime and white sand of only 0.4cm thick. A pavement located in the Sunken Garden Area of the Terraced Palace in Locus 3376 (No.11/8/51) comprised a foundation layer of rock; a *statumen* (Th. 12cm) of bright sand, shells, small stones (Gr. 0.5-2cm), stones and smithereens; a *rudus* (Th. 8.2cm) of stones (5-12cm), grey sand, ceramic, and stones (1-2.5cm); a first *nucleus* (Th. 1cm) of lime and bright sand; a second *nucleus* (3cm) of ash, grey sand, lime, shells and smithereens; and, a *tesselatum* (Th. 0.8cm) of lime and bright sand. In the Alley Area of the Terraced Palace, Locus 3420 (No.11/8/52), a pavement comprised the

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[28] Schneider, 1937, 52.
[29] Gr. is an abbreviation of Grade. Grade is a term used in the modern building construction industry for the varying fineness of gravels.
[30] The *tesselatum* is the name given by the restorers of the Israel Antiquities Authority (following restorers in Italy) to the uppermost layer in which the *tesserae* are set.

following bedding constituents: a *statumen* (Th. 8cm) of stones, bright sand and ash; a *rudus* (Th. 9cm) of ash, lime, bright sand, lime, stones (5-8cm), shells, and, broken stones (1-2cm); a *nucleus* (Th. 3cm) of ash, lime, sand, ceramics (Gr. 0.01-0.02cm) ceramics, small stones (0.5-1cm); and, a *tesselatum* (Th. 1cm) of ash and white sand.

In some cases, the bedding consisted of multiple layers of *statumen*, *rudus* and *nucleus*. Several floors exhibit this phenomenon at Caesarea Maritima, selectively described as follows. Floor 91 (Field CC, Area 52) (No.11/8/16) comprises the following layers (from bottom to top): a first *statumen* (Th. 9.6cm) of sand, stone, ceramics and clay; a second *statumen* (Th. 5cm) of lime; a third *statumen* (Th.10.4cm) of small stones, sand and ceramics (length and width between 6 and 7cm); a fourth *statumen* of soil and stones (Th. 8cm); a *rudus* (Th. 6.5cm) of soil, ceramics and stones; a first *nucleus* layer (Th. 3.2cm) of ash; a second *nucleus* layer (Th. 3.2cm) of lime, stones and sand; a third *nucleus* layer (Th. 6.8cm) of grey sand and ash; finally, a *tesselatum* (Th. 2.5cm) of lime ceramics and sand.

Floor 006, Field NN17 (No.11/8/27), included a *statumen* (Th. 10cm) of sand, shells, ceramics, soil, stones (Gr. 0.2-0.5cm and 0.5-1cm); a lower *rudus* (Th. 6cm) of sand, lime, ash and stones (Gr. 0.01-0.05cm); an upper *rudus* (Th. 11cm) of sand, ceramics, shells, clay and stones (Gr. 0.05-0.1 and 0.15-0.4cm); a *nucleus* (Th. 1cm) of sand, lime, ash, small stones (Gr. 0.01-0.04cm) and a *tesselatum* (0.4cm) of lime and sand.

In the bedding of the Bath House floor (No.11/8/44), the foundation layer comprised an earlier Roman mosaic floor (4367); a first *statumen* layer (Th. 7cm) of

sand, stones (Gr. 0.1-0.3cm), *tesserae*, lime, ash, and local sandstone; a second *statumen* layer (Th. 10cm) of sand, stone (Gr. 0.2-1.1cm), ceramics, *tesserae*, shells, lime, and ash; a third *statumen* layer (Th. 9.6cm) of stones (Gr. 0.5-1.2cm), grey sand, ceramics, *tesserae*, and shells; a fourth *statumen* layer (Th. 8cm) of stones (Th. 0.3-0.7cm), ash, lime, and sand; a *rudus* (thickness unspecified) of lime, sand, and ceramics (Gr. 0.03-0.08cm); a *nucleus* (Th. 1.2cm) of ash, sand, lime, and ceramics (0.5-1.5cm); and a *tesselatum* (Th. 0.3-1cm) of lime, ash, and sand.

The Bath House floor 4116 (No.11/8/45), consisted of a first *rudus* layer resting upon Floor 4367 (Th. 9cm) consisting of sand, ash, soil, and small *tesserae* (1 x 1.2cm); a second *rudus* layer (Th. 39cm) of sand, shells, soil and lime; a lower *nucleus* layer (Th. 5cm) of sand and ash; a middle *nucleus* layer (Th. 11cm), composed of lime, ceramics, soil and stones (Gr. 3-10mm); an upper *nucleus* layer (Th. 18cm) of lime, sand, ash and stones (Gr. 3-70mm); and, finally, a *tesselatum* (Th. 1cm) of lime mortar into which the cubes were set.

A floor located in the area of the Bath House (No.11/8/47) comprised a *statumen/rudus* of sand (Th. 3.2cm), a layer of lime (Th. 1cm), a layer of red soil (Th. 6cm); a first *nucleus* layer (Th. 1.2cm) of ash, sand, lime and gravel; a second *nucleus* layer (Th. 5.8cm) of sand; a parallel *second* nucleus layer of ash and sand. A floor located in the area of the Big Palaestra (No.11/8/48) comprised a *statumen* (Th. 12cm) of stones (Gr. 3-12cm), sand, lime, ceramics, and shell; a first *rudus* (Th. 2.2cm) of lime, sand, broken stones, shells and ceramics; a second *rudus* (Th. 9.6cm) of clay, sand, ceramics, sandstone, stones (1-2cm), and broken shells; a first *nucleus* (Th. 2.4cm) of lime, sand, stones (1-3cm), ceramics, and broken marble pieces; a second

nucleus (Th. 9.6cm) of ash, sand, lime, stones (0.1-0.5cm), broken shells, and ceramic fragments; and a *tesselatum* (Th. 1.6cm) of unspecified constituents.

Aii. Bedding and Function of Floors

The variations in bedding thickness observed in the floors from the sample require an explanation. It would be logical to assume that coarse floors which were much trodden upon, such as those in the warehouse area in Caesarea, would have required a firmer support and hence a thicker base than finer floors. There is, however, no evidence from the examples to suggest that bedding thickness varies with function. Bathouse Floor 4116 (No.11/8/45) comprised six layers totalling a thickness of 83cm. This may be compared, for example, with a floor located in the Promontory Palace Area (No.11/8/58) consisted of only two thin layers with a combined thickness of 2.6cm. In Locus 4109, Floor 4146 (No.11/8/46) comprised 4 layers with a combined bedding thickness of 25.4cm - considerably less than that of Floor 4116 which also belonged to a bathhouse.

Aiii. Topographical and Geological Factors

Topographical and geological factors provide a more satisfactory explanation for variations in bedding thickness, as is evident from the bedding of the mosaics of the Nile House at Zippori (No.9/15/1). A section of bedding 6cm thick was apparent under several fragments of mosaic flooring in the northern wing of the Basilical

Hall.[31] The original excavation by the Hebrew University of Jerusalem team in 1985 revealed far greater bedding thickness in other parts of this wing of the building, of which a large proportion consisted of soil and rubble. By contrast, the mosaics of the northern wing were supported by bedding of similar thickness to that of the section visible in the northern wing of the Basilical Hall.[32]

It is thus clear that thickness of bedding varied not in relation to the function of the floor, but according to the topography of the immediate surroundings of a particular pavement, given that a uniform floor level had to be maintained throughout a building.

Aiv. Lime for Mosaic Pavements: Marble, Timber and Costs of Transport

The purpose of mosaic floor bedding was to provide a solid, durable and level foundation on which to lay the tesselated pavement. This was achieved by a general tapering of layer thickness, paralleled by a gradual reduction in aggregate grade. Thus when bedrock was close to the surface, it performed in effect the function of the larger graded aggregate which constituted the lower layers of bedding in thicker sections. The various layers of bedding in the examples confirm this. From bottom to top, the last example, Floor 4146 (No.11/8/46), exhibits a more or less progressive reduction in layer thickness: *statumen*: 10.5cm (layer thickness), 10-120mm (aggregate grade);

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[31] It has not been possible to obtain more specific information about the constituents of this bedding other than that it appeared to be founded upon bedrock.
[32] R Talgam, pers. comm., 27th June 2000.

rudus: 6.5cm (Th.), 2-5mm, 1-10mm (Gr.); *nucleus*: 8cm (Th.), 1-3mm, 2-4mm (Gr.); and *tesselatum*: 0.4cm (Th.), 0.2-0.5mm (Gr.).

The solidity of each layer was achieved by the presence of lime mortar - a key ingredient. In Phoenicia and Northern Palestine, its ratio in bedding was generally one part of lime to three parts of aggregate. The amount of lime required to satisfy this ratio in bedding was considerable. This may be calculated relatively easily to the square metre. Let us take Floor 4116 with its combined total thickness of 83 cm. At a ratio of one part lime to three parts aggregate, we arrive at a thickness of 20.75 cm of lime mortar used in the bedding of this mosaic. To obtain the raw quantity of lime used per-hundred square metres, the following calculation should be applied:

$$20.75 \text{ (cm)} \times 100 \text{ (m}^2\text{)} = 2075 \text{ (cm}^3\text{)} = 27.5 \text{ (m}^3\text{)}$$

This equates to 27.5 cubic metres of lime per 100 square metres. To obtain the quantity of lime used per square metre:

$$27.5 \text{ (m}^3\text{)}/100 \text{ (m)} = 0.275 \text{ (m}^3\text{)}$$

This equates to 0.275 cubic metres of lime for every square metre of bedding laid. This is a considerable amount of lime and may well explain why the bedding of the mosaics in the region tended to be thin, especially since lime was an expensive commodity. This is borne out by several factors.

Let us consider the industrial process of lime slaking itself which required both material necessitating processing (lime or marble) and combustible fuel (timber). The industrial process also demanded human resources to load, fire, stoke and extract the product from the kiln. Coloured limestones were found in abundance in Palestine and Phoenicia, this ensuring a plentiful supply of raw lime for slaking. Lime and marble from earlier buildings was also plentiful in urban contexts. This would have effectively solved the problem of transporting the material, thus keeping haulage costs to a minimum. The possibility that other local raw materials were used for the production of lime should not be dismissed. Shell may have been used as the raw material component of lime on coastal sites.[33] This is certainly plausible given the high concentration of shell used in the layers of bedding at Caesarea, but chemical analysis would be necessary in order to test this hypothesis.[34]

The acquisition of timber for lime slaking may have been more problematic, for two reasons. Southern Phoenicia and Northern Palestine were heavily deforested in the Byzantine period.[35] This would have made timber a scarce and expensive commodity. The costs of transporting timber must also be considered. A.H.M. Jones's appraisal of Diocletian's Price Edict proves instructive in this respect.[36]. The following rates for land and sea transportation are quoted. The authorised charge per Roman mile for a wagon load of 1,200 lbs was 20 *denarii*; for a camel load of 600 lbs, 8 *denarii*; for a donkey load, 4 *denarii*. A *modius* of wheat priced at 100 *denarii*

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[33] M. Burgoyne, pers. comm., 1st November 1999. (M. Burgoyne was formerly an Architect specializing in the Ottoman period, based at the British School of Archaeology in Jerusalem and is now with Historic Scotland.)

[34] Shell was used (uncrushed) in the lime mixture of plaster floors as a stabilizer at Shelomi (No.7/5a-c) and Dor (No.9/37a-b): Dauphin, pers. comm., 22nd September 2000.

[35] Gophna and Ayalon, 1989, 25.

[36] For an appraisal of the cost of transportation in the Edict, Jones, 1964, 841-842.

weighed 20 lbs, so that a wagon would carry 60 *modii* and a camel 30. A wagon load of wheat, therefore, costing 6,000 *denarii*, would be doubled in price by a journey of 300 miles, a camel load by a journey of 375 miles. The charge per *modius* from Alexandria to Rome, some 1,250 miles, was 16 *denarii*, and from Alexandria to Constantinople 12. The highest rate quoted, from Syria to Lusitania, was about 26 *denarii*. Jones draws attention to the fact that it was cheaper to ship grain from one extremity of the Mediterranean to the other than to cart it 75 miles. Thus according to the Edict, maritime rates were significantly cheaper than the cost of land transportation, especially for long journeys.

This point of view has been emphasized by several scholars who have based their assumptions primarily on historical sources.[37] While conceding that land transportation would have been more expensive than transportation by sea, R. Laurence has argued that the cost of land transport has been exaggerated.[38] Laurence draws attention to the arguments of S. Spurr, who is critical of the use of the figures from the Price Edict, since they refer only to hired transport.[39] Moreover, the economics of self-sufficiency in agriculture extended to the field of transport, which allowed costs to be reduced by the use of farm animals and farm slaves, both of which would have undertaken much of the transport of goods to market.

Transporting commodities by land was nevertheless an expensive enterprise. This must have notably increased the costs of processing lime for bedding depending

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[37] Finley, 1973, 126-127; Duncan-Jones, 1974, 1; Garnsey and Saller, 1987, 44, 90; and, Yeo, 1946, 221-244.
[38] Laurence, 1998, 129-148.
[39] Spurr, 1986, 144-146.

on the distance from source to site. Consequently, the industrial process of lime slaking with the inherent costs of raw material consumed, transportation and human resources, must have represented a considerable degree of expenditure borne by the patron(s) of mosaic projects. This factor may have significantly contributed to the relatively thin layers of bedding that are a common feature of the mosaics in the Catalogue.

This factor had other ramifications which become apparent when the cost of bedding and surface technique are compared. It has been argued above that technical quality and bedding thickness related directly to expenditure. Thus a distinction should be drawn between a poor technical floor with thick bedding on the one hand, and a good technical floor with thin bedding on the other. In other words, the surfaces of each may mask the expenditure beneath. Value judgements on a mosaic purely on the criterion of surface quality are thus misleading. Whenever possible, floor mosaics should be considered as three-dimensional entities.

3. The Costs of Laying a Mosaic Pavement

The central hypothesis of the present chapter is that the mosaics of the region studied in the Byzantine period reflect a considerable degree of financial expenditure on behalf of the patron who commissioned them. It is important to note that other scholars do not share this point of view. W. Bowden,[40] for instance, has contended that the mosaics of the period are misleading in terms of large-scale expenditure of resources, since he argues that even fine floors were substitutes for more expensive

materials: 'While the significance of mosaics as narrative art should not be overlooked, luxury and opulence in Early Christian building meant marble and as much of it as the builder could afford was used for *opus sectile* pavements … and marble revetments on the walls.'

Ai. Panegyrics and Wages

Bowden bases his theory on two fundamental assumptions derived from written and epigraphic sources, notably the Byzantine *Ekphrasis* (a piece of prose in praise of a building or work of art) and Diocletian's Price Edict[41] which quotes the normal rate for mosaicists as between 50 and 60 *denarii* per day. This is comparable with the wages of ordinary masons and carpenters who received 50 *denarii*, but inferior to those of ordinary wall painters who were paid 75 *denarii* and especially of figure painters who received 150 *denarii* per day.[42] Bowden also suggested that donations recorded on Christian mosaics at Olous in Crete allow us to infer that the cost involved was relatively small (one *solidus* and a half in total).[43] To further support his arguments, Bowden cites the work of J.-P. Caillet. On the basis of the inscriptions of Olous as well as other floor inscriptions, Caillet suggested a series of figures for the prices of mosaics per square metre.[44] Bowden used Caillet's calculations to suggest that it would have cost between three and seven *solidi* to lay the floor of the Baptistery of Butrinto. This is

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[40] Bowden, 2001, 57-68.
[41] *Edict.Diocl.*, 7.6-7 (Giacchero, 1974, I, 1510-1511).
[42] Jones, 1964, 1014.
[43] Bandy, 1970, 94-95.
[44] Caillet, 1993, 409-14.

regarded as a relatively small sum compared with the annual wage of a labourer at between seven and ten *solidi* in the first half of the sixth century.[45]

Bowden's assumptions and those used to support them are flawed for several reasons. *Ekphraseis* are essentially rhetorical descriptions of artistic works. Procopius's *Buildings* has been described by C. Mango as consisting of 'a whole string of *ekphraseis*.'[46] The potential unreliability of such panegyrical works has already been emphasized in Chapter II of the present thesis. Moreover, *ekphraseis* generally described prestige buildings commissioned by patrons of the highest social standing.

Bowden's suggestion that expenditure of economic resources manifested itself purely in terms of marble within late antique buildings is an equally misleading over-simplification.[47] Although Procopius rapturously emphasized the splendour of marble in Emperor Justinian's St Sophia ('Who could recount the beauty of the columns and the marbles with which the church is adorned?' [48]), in the same paragraph, he also extolled the vault mosaics ('The entire ceiling has been overlaid with pure gold which combines beauty with ostentation').[49]

Although informative for its period, Diocletian's Edict of Prices may not be used as an indicator for the price structure of wages in subsequent centuries. Inflation

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[45] Jones, 1964, 858. For a discussion of wages and prices in Byzantine Palestine, Dauphin, 1998, I, 336; Dauphin, 1998, II, 494-495.
[46] Mango, 1986, xi.
[47] There are rare cases of marble (*opus sectile*) decoration on floors of two buildings of unknown function at Caesarea Maritima (No.11/8/47 and No.11/8/56) and the nave of the church at Horvat Kenes (No.9/6).
[48] *Buildings*, I, I, 23ff.
[49] We should bear in mind that, due to its weight, marble would have been an impractical material for decorating ceilings.

should first be taken into account. Gleaning evidence from Egyptian papyri, A.H.M. Jones has suggested that the period immediately after the Edict was one of large-scale inflation[50]. A certain number of documents reveal the exchange rate between the *denarius* and the *solidus* during the course of the fourth century. By the end of Constantine's reign (AD 306-337) a *solidus* was worth 275,000 *denarii*. In the latter part of Constantius II's reign (AD 337-379) it had reached about 4,600,000 *denarii*.

On the basis of fourth-century written sources, D. Sperber has suggested that such high figures may be misleading for Palestine, since he has argued that prices rose primarily in terms of debased silver whereas gold prices did not significantly alter during the fourth century, and this would not necessarily have affected the purchasing power of the population in general.[51]

With the support of Rabbinic sources,[52] A. Kindler has also suggested that the value of gold remained stable during the Byzantine period in Palestine, but since prices rose century by century, he contends that this would have reduced the purchasing power of a worker's income.[53]

Aii. Mosaicists as Individuals and in Teams

It is clear from Diocletian's Edict of Prices that the status and pay of mosaicists were directly comparable to that of other artisans. There were, however, two types of

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[50] Jones, 1964, 440.
[51] For a thorough treatment of prices in Palestine during the first century of Byzantine rule, Sperber, 1965, 248-271; Sperber, 1966, 182-211; Sperber 1968, 233-274; Sperber, 1970, 1-15.
[52] Notably, *Genesis Rabba*, 70:14 (Freedman, 1939, 647).
[53] Kindler, 1989, 58.

mosaicists. The *museiarius* received sixty *denarii* per day in addition to his board, whilst the *tessellarius* received only fifty. This has often been interpreted as differentiating between wall and floor mosaicists, a distinction questioned by Dunbabin.[54] She has suggested plausibly that the *museiarius* was the maker of fine decorative mosaics and the *tessellarius* the maker of plain tessellated pavements. The Edict also mentions the *pictor imaginarius* ('painter of images') who was to be paid one hundred and fifty *denarii* - the highest sum quoted. Dunbabin has rightly proposed that the *pictor imaginarius* also designed or produced cartoons for mosaics,[55] as indicated by epigraphic evidence on a late fourth-century mosaic from Carranque in Spain. One inscription states that Hirinius 'painted' the floor (*pingit Hirinius*).[56] Two particularly interesting inscriptions of the second half of the fifth or early sixth century from Sidi bou Ali near Enfidaville in Africa Proconsularis reveal fascinating details of the execution of a mosaic floor. The first inscription attests that a certain Sabinianus had both 'painted' and laid the pavement; the second, that it had been executed by his own hand, 'without a painter'(*[S]abinianus Senurianus pingit et pa<v>imentav<I>t,* and *Sabiniani e manus/sine pictore*).[57]

Further evidence of this kind is provided by a mosaic at Trikala in Greece, which depicts the myth of Lycurgus and Ambrosia. An inscription names two brothers: Titus Flavius Hermes and Bassus, sons of Hermes who both 'drew' and laid the mosaic.[58] A painter (*zographos*) is also mentioned on a mosaic depicting the

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[54] Dunbabin, 1999, 275.
[55] Dunbabin, 1999, 276, n. 39.
[56] Dunbabin, 1999, 272; Donderer, 1989, 94.
[57] Dunbabin, 1999, 272; Donderer, 1989, 104-105.
[58] Dunbabin, 1999, 276; Donderer, 1989, 129.

personification of Envy (*Phthonos*) on the Greek island of Kephallonia. The inscription states that 'the painter drew (*egrapse*) this image.'[59]

The artisans who laid a mosaic floor may have been assisted by a further artisan and two unskilled workers. Diocletian's Price Edict also mentioned that between 50 and 60 *denarii* a day were paid to the *lapidarius structor* and the *calcis coctor* respectively. These were unskilled workers who were directly involved with the preparation of the bedding layers of floor mosaics. It is usually assumed that the role of the *pictor parietarius* (also mentioned in the Edict and paid 75 *denarii* a day) was confined to the painting of wall images. M. Farnetti[60] has implausibly suggested that this artisan may also have been responsible for transferring the cartoon on a larger scale to mosaic floors. The existence of a *sinopia*, a layer of plaster on which the design was painted or incised is known from mosaic pavements at Khirbet el-Murassas[61] in Palestine, the Great Palace of the Byzantine Emperors in Constantinople,[62] North Africa,[63] Rudston and Cirencester in Britain[64] and from wall and vault mosaics in Ravenna.[65] Farnetti has postulated that 'teams' of several workers were involved with the entire process of laying floor mosaics. The *lapidarius*

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[59] Dunbabin, 1999, 277; Donderer, 1989, 126; Dunbabin and Dickie, 1983, 7-37, especially 30.
[60] Farnetti, 1993, 84.
[61] At Khirbet el-Murassas, there were traces of colours remaining on the white plaster layer in three of the sixth-century monastery floors. See Magen and Talgam, 1990, 149-150.
[62] Signs of polychrome preparatory sketches were found in the mid-sixth century Great Palace floor of Constantinople. See Talbot-Rice, 1958, 148.
[63] Preparatory monochrome sketches in red were found on Late Roman mosaic floors in North Africa. See Dunbabin, 1978, 29.
[64] In the Church of Hagios Georgios in Salonika in Greece (late third or early fourth century), the main lines of the composition were drawn on the brick wall of the dome. A similar discovery has been made in the apse of the Church of S. Apollinare in Classe at Ravenna (sixth to ninth centuries). Sketches were also detected here on the final layers of plaster. Likewise, sketches were also visible on the plaster of the fourth-century small mausoleum under St Peter's in Rome. See L'Orange and Nordhagen, 1966, 56-57.
[65] Beneath an early-fourth century mosaic from Rudston, guidelines were scored on the penultimate bedding of mortar; while beneath a fourth-century mosaic from Cirencester, red-painted guide-lines were found (Neal, 1976, 243-244).

structor and the *calcis coctor* prepared the bedding; the *pictor imaginarius* or 'mosaic painter' was the artist who drew the cartoon which was then transferred on a larger scale by the *pictor parietarius* to the wall (questionable) or the floor to be decorated. Finally, the *museiarius* was responsible for the actual execution of the mosaic.

If we accept Farnetti's suggestion, the cost of laying a floor at the time of the Edict would have been considerably greater than usually estimated. For instance, considering a team of four workers (excluding the *pictor parietarius*) involved in the floor laying process, the daily wage bill would have totalled between 310 and 325 *denarii*. The team factor was entirely overlooked by Bowden. The expense would, of course, have increased further if more artisans had been involved in the process. Indeed, available evidence does suggest that several artisans could have been working on the same mosaic simultaneously. This issue was brought to the fore by C. Dauphin in her analysis of mosaic technique during the 1970s.[66] Attention was drawn, for instance, to the First Report on the Peristyle Court of the Imperial Palace in Constantinople.[67] In the execution of the central section of the mosaic pavement, Brett identified nine groups of workmen, which he termed workshops: five on the north-east side, two on the north-west and two on the south-west. Moreover, the borders were laid by five other groups of workmen, since the dividing lines between the five groups of artisans executing the border are clearly traceable.[68] Dauphin also noted a clear difference in execution on the field of the Hammam Baisan pavement (No.12/13/4b): bunches of grapes were represented in the western and eastern parts in two different manners. In the western half of the pavement they are shaped as

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[66] Dauphin, 1974, I, 67-88; Dauphin, 1976, 155-158.
[67] Brett, 1947, 87. First Report.

elongated red and white hexagons; in the eastern part they take the form of large, round grapes.

Thus the figures quoted in the Edict were only applicable to the specific period of the Edict and represented only guidelines for the wages paid to artisans. In no way can they be taken for granted in assessing the wages of artisans in Byzantine provinces such as Phoenicia and Northern Palestine. Nonetheless, a hierarchically-organised wage scale for 'teams' of mosaicists may be conjectured.

Aiii. Donations: Real Financial Expenditure or Participation in Costs?

Bowden's endorsement of Caillet's calculations of the cost of laying mosaic floors by the square metre may also be questioned in view of the fact that Caillet's calculations are based on a misinterpretation of many of the inscriptions analyzed. Four inscriptions are discussed on the floors of the Upper Synagogue at Hammat Gader (No.10/21) in Northern Palestine: one in the northern panel (14 x 15m), two in the centre of the nave (*ca* 14 x 15m) and one in the southern panel (*ca* 8 x 8m). The value of donation stated in each inscription is respectively $4/5^{th}$ of a *solidus*, 5 *solidi* and 5 *solidi*.

The following calculations in the cost of flooring the synagogue are: for the central panel (decorated with relatively simple geometric motifs), 1/3 of a *solidus* per square metre; and for the southern panel (decorated with figurative motifs), 2/3 of a *solidus* per square metre. Caillet has reasonably suggested that the relative difference

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[68] Brett, 1947, 90-91. First Report.

per square metre between panels corresponded to the lesser or greater complexity of decoration (or to the diversity of material used and especially to the lesser or greater ability required of the mosaicist for the execution of drawing and polychroming).

As attractive as these calculations are in providing actual costings, they are predicated on a fundamental misunderstanding of the precise content of the epigraphic sources in question. Caillett based his conclusions on M. Mango's suggestion that the various inscriptions stated the precise cost of laying each panel. Accordingly, in her work *Silver from Early Byzantium*,[69] Mango evaluated the uppermost panel as costing five *solidi*. The inscription used in support of this, however, may be interpreted differently and is worth citing in full. Located on the southern panel before the *bamah*, it is enclosed in a medallion flanked by two lions and two trees:

〈ודכיר לטב〉
〈קירס הופליס וקיר〉ה
〈פרוטון וקירס סלוסטי〉ס
〈חתנה וקומס פרורוס בר〉ה
〈וקיריס פוטיס חתנה וקיר〉ס
〈חנינה ברה הננון ובניהו〉ן
〈רמיצותון תדירן בכל את〉ר
〈דהבון הכה חמישה דינרי〉ן
〈דהב מלך עלמה יתן ברכת〉ה
〈בעמלהון אמן אמן סלה〉

'And remembered be for good Kyris Hoples, and Kyra Protone, and Kyris Sallustis his son-in-law, and *Comes* Phroros his son and Kyris Photios his son-in-law, and Kyris Haninah his son - they and their children - whose acts of charity are constant everywhere and have given here five *denarii*

[69] Mango, 1986, 11.

of gold.[70] May the King of the Universe bestow the blessing upon their work. Amen. Amen. Selah.'[71]

A plausible interpretation of this Aramaic inscription is that the various donors in question, all of whom were related,[72] collectively donated five *denarii* of gold for the construction of the synagogue. Nowhere is it in fact stated that the particular floor panel in question cost five *denarii* to lay. This essential point should be borne in mind in the case of two of the other nave inscriptions. The left *tabula ansata* of the central nave panel, for instance, reads:

‹ור[כיר ל]ט›כ רב חנחום הל‹וי כ[ר חל]›יפה דהב חד טרימי-
סין ורכיר לטב מוניקה דסוסיפה (צ"ל: סוסיתה?) צ‹פוריה›
‹וק[ירס פ]›טריק ד(כ)פר עקביה ‹וי›וסה כר דוסתי דמן כפר
נחום דיהבון תלתיהון חלת גרמין מלך
‹ע[למה יח]›ן כרכתה בעמלה‹[ון]› אמן אמן סלה שלום ורכיר
לטב יודן ארדה מן בימאוס (?) דיהב חלת
‹ון[כירין לט]›כ ארבילייי דיהכו‹[ן]› מחידהון (צ"ל: מחית-
הון?) מלך עלמ(ה) יתן כרכתכ בעמלהון אמן אמן סלה

'And remembered be for good Kyris Leontios and Kyra Kalonike, who have donated...*denarii* in honour of the synagogue. May the King of the Universe bestow blessing upon his work. Amen. Amen. Selah. Peace. And remembered be for good one woman, Anatoliya, who has donated one *denarius* in honour of the synagogue. May the King of the Universe bestow blessing upon her work. Amen. Amen. Selah. Peace. And

[70] For the values of *denarii*, *scruples*, *solidi*, *semisses* and *tremisses*, Jones, 1966, 165-168.
[71] Hüttenmeister and Reeg, 1977, I, 154-155, Nr. 1; Urman, 1995, 599, No. 1.
[72] For the family links between these donors, Dauphin, 1988, II, 375.

remembered be for good the inhabitants of the town who have donated one *tremissis*.'[73]

Careful consideration of this Aramaic inscription would seem to indicate that Kyris Leontios and Kyra Kalonike donated an unknown sum of *denarii* towards the construction of the synagogue (or its furbishing), while it is specifically stated that Anatoliya donated the sum of one *denarius* towards the construction (or furbishing) of the building. There is, once again, no indication that the sums quoted refer to the actual cost of laying the floor mosaic itself.

We may detect a similar phenomenon in the right *tabula ansata* of the central nave panel:

‹ו›ד̲כ(י)ר לט̲ב קיריס ליאנטיס וקירה קלניק ב̲‹ה[כו]ן.....
לי]קרה דכנישתה›
מלך עלמה י‹חְן כ›רכתה בעמלה אמן אמ‹ן סלה› שְׁלְוֹם ‹וְדִכְירה
לטב הדה אתה›
אנטוליה ‹ד[יהכ]ה› חד דינר ליקרה דכני‹שתה› מלך ע‹למה
יתן ברכתה בעמלה›
אמן אמ‹ן [סלה]› שלום ודכירין לטב עיריא ‹דהכו]ן חד
טר(ימ)יסין›

'And remembered be for good Rab Tanhum the Levite, the son of Halif'a who has donated one *tremissis*; and remembered be for good Moniqah of Susitha the Sepphorite, and Kyris Patriqios of Kefar 'Aqabyah, and Yoseh the son of Dositheus of Kefar Nahum, who have all three donated *three* scruples. May the King of the Universe bestow

[73] Hüttenmeister and Reeg, 1977, I, 157-158, Nr. 3.

the blessing upon their work. Amen. Amen. Selah. Peace. And remembered be for good Yudan...of...who has donated three [*scruples*?]. and remembered be for good the people of Arbela who have donated of their cloths(?). May the King of the Universe bestow blessing upon their work. Amen. Amen. Selah.'[74]

Here, three groups of donors (of whom several were related) have recorded their patronage: Rab Tanhum (one *tremissis*), Moniqah, Kyris Patriqios and Yoseh (a total of three *scruples*) and Yudan (three *scruples*). The final act of patronage seems to suggest a communal offering. In fact, this Aramaic inscription merely records acts of patronage as opposed to the cost of laying the mosaic floor panel in question.

The *tabula ansata* of the northern nave panel is clearly an exception to the patterns of donation recorded in the previous three inscriptions:

[ודכיר ל]טב אדה בר תנחום
[בר מו]נִיקה דיהב חד טרימיסין ויוסה
[בר] קרוצה ומוניקה דיהב(ו) חד פלגות
דִינר לגו הדן ⟨[פסיפ]סה⟩ תהוי להון
ברכתה אמן ⟨[ן ס]לה ש⟩לום

'And remembered be (for) good Ada, the son of Tanhum, the son of Moniqah, who has contributed one *tremissis*, and Yoseh, the son of Qarosah(?) and Moniqah, who have contributed one-half *denarius*

[74] Hüttenmeister and Reeg, 1977, I, 156-157, Nr. 2.

toward this mosaic. May theirs be the blessing. Amen. Selah. Peace.'[75]

Whereas in the other dedicatory inscriptions, donations were made 'in honour of the synagogue,' in this particular case it is clear that two groups of donors contributed to the cost of laying this specific mosaic panel: Ada, the sum of one *tremissis*; and Moniqah, half a *denarius*. It would thus seem logical to infer that laying the panel would have cost at least one *tremissis* and one half a *denarius*, and indeed there is no reason why it may not have cost considerably more, funds being found from other unnamed sources.

Such contentions are further supported by several mosaic inscriptions in the Church of Karmiel (No.9/5a). Of the eight inscriptions on the central section of the nave mosaic, four state specific sums of donation:

θεό δωρος ὑποδιάκ ων γράμ μα	Theodoros Subdeacon Gramma	Βαρα χέος διά κων γράμ ματος το ἥμυσι	Baracheos Deacon Half gramma
"Αππα ς διάκ ων γρά μμα	Appas Deacon Gramma	'Επι φάνις ὑποδιάκ ων γρ άμμα	Epiphanis Subdeacon Gramma

[75] Hüttenmeister and Reeg, 1977, I, 158, Nr. 4.

Each inscription states the name of the donor, his title, and the sum donated (3.5 *gramma* in total). There is no indication that the sums of donation refer to the actual cost of laying the mosaic pavement. If we were to apply the methodology of Caillet and divide the total sum of donation by the area of the floor (in this case 6 x 3.4m = 20.4m^2), we would obtain a sum of 0.16 *gramma* per square metre. This would be wholly incorrect, since the sums mentioned purely refer to donation and not to the cost of laying the floor. Moreover, the four other inscriptions also mention the names and titles of other donors and it is likely that they, too, contributed money, although this is not stated explicitly in the inscription.

Of the ten inscriptions on the north aisle intercolumnar mosaic panels, three state specific sums of donation:

Κονο Γράμ μα	..... Kono Gramma
[Μαξ]ίμου γρά μμα	[Max]imos Gramma
Μνί νου γρά μμα	Mninos Gramma

Each inscription states the name of the donor and the sum donated (3 *gramma* in total). Once again there is no indication that the sums of donation mentioned in the inscriptions refer to the actual cost of laying the mosaic pavement. We should again take into account the factor that there are an additional seven inscriptions naming

individual donors who may also have contributed sums of donation, although this is not stated.

Caillet cited several other inscriptions on floor mosaics in order to evalauate approximately the cost of laying a mosaic floor. It would seem that his reading of these is also incorrect. In the early Christian basilica of Olous on Crete, Caillet cites evidence from three Greek inscriptions on the western panel of the nave, which mention a total sum of one and a half *solidus*. The total area of floor covered by the mosaics in question is seventy-five square metres. Thus it is calculated that the mosaics cost 1/50 of a *solidus* per square metre. Careful reading of these inscriptions would again seem to reveal a misinterpretation.[76] Inscriptions A, B and C may be read respectively as follows:

'Theodoulus gave one *semissis* for his own salvation. Christ, help thy servant, Epiphanius.'

'Antaxius gave one *semissis* for his own salvation and that of his entire household.'

'Heliodorus gave a *semissis* for his own salvation.'

Each inscription would seem to suggest that the respective donors were each recording their own specific contribution to the furbishing of the church. There is no

[76] Bandy, 1970, 94-95.

reason to assume that the sums in question referred to the cost of laying the mosaic floor itself.

Therefore, Bowden's contention that mosaics are misleading in the sense of large-scale expenditure of economic resources is in itself misleading for several reasons. The Byzantine *ekphrasis*, with its emphasis on marble, was rhetorical and thus likely to refer only to buildings funded by donors at the higher end of the social scale. Diocletian's Edict of Prices cannot be regarded as a reliable indicator of mosaic artisans' wages during the Byzantine period, since high inflation through the course of the fourth century and later rendered the figures quoted meaningless. Bowden took into account from the Edict only the wages of the *museiarius* and of the *tessellarius*, which he suggested were comparable to those of other tradesmen. It is clear that other workers and artisans could have been added to a 'team' of mosaicists (notably, the *lapidarius structor*, *calcis coctor* and *pictor imaginarius*). This would have increased considerably the expenses which the patron had to include in his budget. Moreover, it seems that Bowden's relatively low approximate calculation of the costs of laying a mosaic floor is based on a misinterpretation of epigraphic sources. The various inscriptions cited in support of his calculations mention sums donated towards the furbishing of the building or the laying of mosaic pavements rather than the actual price of laying a mosaic floor. Finally, we have demonstrated above that mosaics of a high technical quality necessitated a greater number of man-hours and thus required a greater financial outlay. This was compounded by the cost of bedding.

4. Conclusion

Thus the mosaics of Byzantine Phoenicia and Northern Palestine directly reflect the degree of expenditure borne by the patron who commissioned them. This is based principally on an evaluation of five technical criteria in the corpus: *tesserae* size, *tesserae* density, width of interstices, range of colours employed, and thickness of bedding. At the poorest end of the quality scale were floors of loosely laid large cubes (with consequent low cube densities and wide interstices) exhibiting a minimal range of colours. At the finest end of the scale, were pavements of tightly laid small cubes (with consequent high cube densities and small or no interstices) offering a broad colour spectrum. Thus *tesserae* size, density, interstice width and colour range were directly proportional to the quality of the pavement concerned, and by inference to the degree of financial outlay.

Close scrutiny of bedding, however, guards against assessing the quality of mosaic floors on surface criteria alone. Bedding, particularly the lime constituent, represented a considerable financial outlay in its own right. The quantity of lime used, and the funds necessary for the industrial process of slaking (the acquisition and transportation of fuel, the cost of raw material and the necessary manpower) support this hypothesis. Thus quality may best be judged three-dimensionally, as opposed to the conventional scholarly two-dimensional assessment of a floor.

Theories that mosaics are misleading in terms of large-scale expenditure of economic resources, are clearly misguided. Too much reliance has been placed upon

textual evidence without due regard for its bias (the panegyrical nature of the Byzantine *ekphrasis*) and unreliability (the non-applicability of Diocletian's Price Edict for later periods). Neither have such refutations of economic hypotheses taken full account of the workforce involved in the process of laying floor mosaics. It is reasonable to infer that elaborate floors of good technical quality would have required an increase in the basic number of artisans and workers. The fundamental assumption that the sums of donations inscribed on floor mosaics related to the cost *per se* of the floors is also mistaken, since these reflect levels of donation rather than actual costs. In sum, the real expenses borne by the patrons who commissioned mosaic pavements lie 'hidden' in the bedding of floors and in the wages of teams of mosaicists, the multi-coloured tessellated surface being but the visible tip of a financial pyramid. It is, however, essential to test this hypothesis more fully by emulating ancient mosaicists through modern day reconstructions of laying bedding and surface patterns of varying complexity.

CHAPTER IV

SOME SOCIO-ECONOMIC ASPECTS OF REPRESENTATIONAL AND NON-REPRESENTATIONAL DECORATION ON THE BYZANTINE MOSAIC PAVEMENTS OF PHOENICIA AND NORTHERN PALESTINE

The present chapter examines the quality and distribution of geometric and non-geometric decoration on the Byzantine mosaic pavements of Phoenicia and Northern Palestine. The purpose of this approach is a statistical attempt to establish which particular socio-economic aspects underlie the various qualities and distributions of decoration observed in the rooms and areas of the buildings in the Corpus of a specific region. Do the various decorative schemes strictly relate to function, financial expenditure, social status, or symbolism and liturgy (in the case of religious buildings)? This approach represents a conscious divergence from exegetic analyses of mosaic floor decoration. Consequently, the present chapter complements and corroborates the conclusions of the technical analysis in Chapter III.

This method entails the examination of quality and distribution of mosaic floor decoration in a comprehensive range of building types (chapels, churches, monasteries Jewish and Samaritan synagogues, *villae,* ecclesiastical farms, bath-houses, public walkways, shops, warehouses, granaries and winepresses). This approach, at the heart of which lies the codification of non-representational decoration and its grading according to four levels of complexity, is both comprehensive and novel in the study of Graeco-Roman and Byzantine mosaic pavements. In some instances, the findings by statistical means which are presented below (for instance, that room function and social status played a key role in determining the quality and distribution of mosaic

floor decoration) further support conclusions previously arrived at by less 'scientific' methods in the study of specific sites.[1]

The analysis of decorative distribution was prompted by the observation that the mosaic floor art of the Corpus is predominantly non-figurative. Indeed, the great majority of decoration consists of either geometric decoration of varying complexity or plain monochrome decoration. It necessitated a detailed examination of the distribution and complexity of geometric and non-geometric decoration within rooms of different building-types, this involving a comprehensive interrogation of the decoration codes from the Corpus.

Floor mosaics of the region (and further afield) have predominantly been interpreted thematically. This has often involved an examination of stylistic development or the diffusion of style within regions and between regions. Alternatively, themes viewed in terms of their allegorical or symbolical significance may be interpreted as an expression of cultural mentality. Another way of addressing mosaic floor art is to view it in functional terms and to relate decoration to the function of a particular room or building. Rather than aiming to overthrow such interpretations, we prefer to view them as complementary to the economic and social explanations put forward below.

Part One of the present chapter discusses different ways in which the distribution of mosaic floor decoration has been approached. Part Two provides some general considerations about mosaic floor decoration. For instance, how should we

[1] Dunbabin, 1999, 304-316.

assess 'quality'? Perhaps by complexity of geometric pattern or sophistication of representational decoration. The interrelationship of technical expertise and quality of decoration is also addressed. The method is based (for analytical purposes) on the division of geometric codes into four levels; the distribution of representational and non-representational decoration according to functional building type (relative proportions of plain, tessellated pavements, geometric decoration and figurative decoration); and the quality of decoration in different rooms and parts of rooms of various functional building types (including counts of figurative decoration and Complexity indices I-IV).

Parts Three and Four respectively evaluate the results of the regional analysis of decoration in Phoenicia and Northern Palestine. These are presented in four separate tables. Table 13 shows the distribution of decoration on the Byzantine mosaic pavements of Phoenicia; Table 14 the quality of decoration on the mosaic floors of different rooms and parts of rooms in the same region; Table 15 the distribution of decoration on the Byzantine mosaic pavements of Northern Palestine; and Table 16, the quality of decoration on the mosaic floors in different rooms and parts of rooms in the same region. The decorative traits of the mosaic of each region are also summarised.

Part Five addresses several fundamental issues: the interrelationship between mosaic border/field decoration and room function. For instance, does complexity of decoration correspond to room type? Are there any particular patterns of distribution within buildings (such as unbalanced proportions of representational and non-representational decoration)? If so, is this distribution affected by socio-economic

factors? The interrelationship between quality of mosaic floor decoration and social user is explored in secular buildings. In the Christian sphere, we will attempt to examine whether quality of decoration relates to hierarchy of liturgical participation. The correspondence between quality of decoration and social patronage is also explored: how does social level of patronage relate to complexity of decoration? Do lower social levels of patronage correspond to lower quality decoration; and inversely, do higher social levels of patronage correspond to higher quality of decoration? Is there a general corollary between lower levels of social patronage and frequently occurring decorative patterns on the one hand and higher levels of social patronage and rare decoration patterns on the other?

Part Six examines the complexity of geometric decoration in Phoenicia and Northern Palestine in the Byzantine period and attempts to gauge whether patterns became less complex, or more complex in the course of the period.

1. Methodological Considerations on the Distribution and Quality of Mosaic Floor Decoration

The distribution of mosaic floor decoration is rarely given adequate treatment in mosaic pavement studies. Scholars have tended to focus on subject matter in specific rooms instead of the decorative scheme of the building and its socio-economic ramifications. Some holistic approaches view the decorative programme as a manifestation of the religious convictions of the community itself. For instance, M. Mango has suggested that the absence of iconic decoration in Late Antique

churches could suggest Monophysite patronage.[2] This assumption has been challenged by R. Schick who drew attention to the fact that many Chalcedonian churches appear to have been devoid of figurative decoration. Consequently, the presence of figurative decoration may point (but somewhat weakly) to Chalcedonian patronage, but its absence proves nothing.[3]

Other interpretations of decorative schemes in their entirety are often limited to a descriptive account of decoration[4] or relate the decoration either to the interior architecture of the building or to the function of specific rooms. A particularly fascinating interpretation of the latter kind was provided by C. Clarke for the second-century black-and-white mosaics of Ostia.[5] The distribution of floor decoration is viewed by him specifically in terms of its interaction and influence on the movements of the beholder and of its architectural setting.

An alternative to the functional approach examines the distribution of mosaic floor decoration in socio-economic terms. K. Dunbabin[6] has drawn attention to the social and economic implications of the distribution of decorative themes on the floor mosaics of Hellenistic and Roman houses.[7] The House of the Trident in the Theatre District of Delos serves as an example to illustrate her point. Whilst the porticoes are plain, with two small figured panels placed opposite the street, the peristyle court exhibits a polychrome ornamental decoration. A third panel of simple ornament

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[2] Mundell Mango, 1977, 59-74.
[3] Schick, 1995, 10.
[4] Piccirillo, 1993.
[5] Clarke, 1979, 23-29.
[6] Dunbabin, 1999, 304-316.

decorates the wing of the portico outside of the broadroom. The broadroom is decorated with a white surround and a series of concentric polychrome bands of ornament. Part of the central area was more richly decorated with an area bearing a meander in perspective in *opus vermiculatum*; this originally framed an *emblema*. The two smaller rooms beside the broad room are paved with tessellated mosaic: one has a geometric centrepiece and the other a polychrome figurative panel. Other rooms in the house were paved either with marble chips which, Dunbabin has suggested, mark them as of less significance than the floors of tessellated mosaics. Dunbabin views the decoration within the house as essentially hierarchical: from marble chips, plain tessellation, bichrome ornamental and figured designs to fine polychromy (in the lost *emblema*). This arrangement 'is used to orientate the guests, to greet them at their entrance, and direct them to the main public and reception areas of the house which are by far the most richly decorated.'[8]

Dunbabin has also examined the distribution of decoration on Roman North African *villa* mosaics. She notes (in a somewhat contradictory statement): 'there seem to be no special rules about the distribution of mosaics ... the finer mosaics are most likely to be confined to the better parts of the house, ornamental patterns used in less important parts, and plain coarse work used in corridors, service areas, etc ... however, it is in the main reception rooms, the *triclinia* and the *exedrae* opening off the *peristyles*, that the most elaborate mosaics are found; an important part of their function is to impress visitors and clients.'[9]

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[7] It should be stressed that this recent study of the distribution and quality of mosaic floor decoration on selected sites was published after the conception of a novel and more comprehensive and detailed study of an entire region.
[8] Dunbabin, 1999, 306.
[9] Dunbabin, 1978, 26.

The recognition that patterns of distribution exist in mosaic decoration and that there may be underlying socio-economic factors complement the arguments in the present chapter. The objective is to present them in a more developed form and on a regional basis. Such observations derive from the database of decorative traits on the Byzantine mosaic pavements of Phoenicia and Northern Palestine.[10] From this it is clear that mosaic floor decoration was predominantly non-representational. Schemes comprised geometric and vegetal motifs and plain white areas of mosaic floor, whilst figurative themes accounted for a very small proportion of the overall decoration. Finding an explanation for this phenomenon may best be attempted by examining the quality of decoration and its distribution according to several criteria, notably building function, room function, social use (for private buildings) and level of participation in the liturgy (in the case of religious buildings), financial expenditure and social category of patronage.

2. Some General Considerations of the Quality of Decoration on the Byzantine Mosaic Pavements of Phoenicia and Northern Palestine

As a preliminary step, it was necessary to define which criteria may be taken to represent quality of decoration. In Chapter III the interrelationship between technical quality and decorative quality was stressed. Monochrome pavements and those exhibiting a simple geometric design showed a tendency to contain relatively large *tesserae*, low cube densities, wide inter-*tesserae* spaces, and a limited colour range. Floors exhibiting more elaborate geometric decoration or well-executed figurative

[10] Merrony, 1998.

designs, appeared to exhibit smaller *tesserae*, higher cube densities, narrower inter-*tesserae* spaces and a greater range of colours.

Quality of decoration may also be expressed in terms of the expenditure of time taken to execute one design over another, given similar technical criteria. The geometric designs of the Nile Festival House at Zippori are a case in point. The relatively simple flowerbud-and-fishscale design (Pl. 219c) of Floor 4 has a cube density of 100-169 per dm^2 and a pattern complexity of 2. Interestingly, the so-called "paisley" type pattern (Pl. 219f) of Floor 9 has a lower cube density of 144 per dm^2 and a higher complexity of 3. We may infer that it would have been more time-consuming to lay a more complex pattern than a less complex pattern, albeit with similar cube density ranges. A similar argument may be applied to figurative decoration. The Ibex Floor at Caesarea, for instance, is composed of figurative motifs in the cube density range of 64 per dm^2. This contrasts markedly with the main figurative motifs of the more beautifully rendered Nile Floor at Zippori (9/15/1) in the cube density range of 225-256 per dm^2.

An index of complexity in geometric decoration was devised by us as a means of grading the quality of non-representational decoration. This system combines the geometric codes in borders and fields in the two AIEMA *Répertoires* and those devised by Avi-Yonah, with Dauphin's codes for inhabited vegetal scroll decoration. There are four levels of complexity in all, ranging from simple (an index of I), relatively complex (II), complex (III) and very complex (IV). The complete set of codes in the Corpus, graded according to complexity, may be found in Appendix I. Complexity was judged on the criteria of ornamental sophistication. For example,

Pl. 105 is a plain white mosaic pavement with a complexity index of I. Pl. 143b which consists of a grid of bands with a square at the quartered intersections, was given an index of II. Pl. 138a, an orthogonal pattern of adjacent squares, filled so as to create the effect of a grid-pattern of pairs of alternately horizontal and vertical rectangles, was considered fit for an index of III. Pl. 153a, an orthogonal pattern of tangent crosses of interlaced shaded *scuta* (alternating with a double guilloche pattern) with concave ends forming circles, semicircles, and enclosing elaborate geometry, was given an index of IV.

It is difficult to apply an index of relative complexity to figurative decoration, since it is more easily graded by its technical criteria (*tesserae* size, cube density, interstice width and colour range). Figurative decoration does, however, tend to be much rarer than non-representational decoration. We contend that this factor is in itself an index of relative quality, although quality varies between figurative pavements. Two points, however, should be borne in mind. In general, figurative decoration tends to be at the higher end of the technical scale. Moreover, figurative decoration appears frequently enmeshed with geometric decoration of a relatively high index of complexity, as in the nave and aisles of the Church of St Christopher at Qabr Hiram in Phoenicia (No.6/1). The main geometric pattern of the north and south aisles, Pl. 235b (Var.), with an index of III, coexists with finely executed figurative iconography (the aisles have a general cube density of 115-120 per dm^2). Likewise, the main nave composition - an inhabited scroll pavement of C1xVIb with an index of III – is juxtaposed with a very beautiful array of figurative iconography (the nave has a general cube density of 200 per dm^2). Thus setting its technical quality aside, the

quality of figurative decoration may be graded on two criteria: its rarity and its interaction with more complex geometric decoration.

We contend below that several social and economic factors determined the distribution and quality of decoration on the Byzantine floors of the region. These factors are best brought to light by examining the frequency of specific decorative traits in different building types, rooms and room parts. A detailed description of representational and non-representational decoration is provided in the Catalogue (Volume II). In order to provide a clear statistical set of data for the purposes of the present chapter, it was necessary to transfer this information into a computer database. In doing so, certain abridgements were necessary. The detailed descriptions of figurative decoration in the catalogue are not reproduced in the database. When a floor part (field, border or surround) is decorated with figurative decoration it appears as under the single entry as 'Figurative'. This scheme is applied irrespectively of theme (whether mythological, arable, hunting or pastoral) or motif (personification). For the purposes of this chapter, prime importance was given to the nature of the figurative composition (its distribution and quality) and not to theme types. It has long been recognised that context specific themes are unique to certain functional building types in the region.[11] Not surprisingly, Jewish themes may be found in Jewish synagogues (depictions of the Ark of the Law, *machta*, *shofar*, *ethrog*, and so on), Samaritan themes in Samaritan synagogues (Ark and ritual paraphernalia), symbolical decoration appropriate to the Christian realm in churches (vine decoration,

[11] A thorough analysis of mosaic themes in different functional building types in Israel is provided by Ovadiah and Ovadiah, 1987. It has been argued that certain themes which are repeatedly found on the mosaic pavements of the Provinces of Byzantine Arabia and Palestine may be regarded as context-specific (Merrony, 1998, 441-482).

arable hunting and pastoral scenes), and non-religious themes in *villae* (mythological scenes and so on).

When a floor part (border, field or surround) is decorated with non-representational decoration, the geometric codes of composition are listed. In the case of borders, it is common to have identical external and internal border decoration. For example, the aisle decoration of the Church of St Christopher (working from the outer to the inner border) has the following sequence of decoration: Pl. 2j, Pl. 1j, Pl. 72e, Pl. 1j, Pl. 2j. In such cases where codes appear twice in the same floor part, they are not repeated in the database. Thus the north and south aisles of the above example are listed in the database as follows: Pl. 2j, Pl. 1j, Pl. 72e. It appeared to us pertinent to note the occurrence of specific codes for the purposes of analysis in specific floor parts rather than repeat them unnecessarily.

Many geometric patterns contain a wide range of individual motifs such as lozenges, squares, circles, triangles, rhomboi, and so on. It should be stressed that we are concerned with the overall code for the pattern of composition and not the individual motifs within a pattern. Thus a complex code such as Pl. 153a, is representative of the overall pattern of composition *per se*, and not of the complex set of geometric elements contained within it.

For the purposes of evaluation, the three sets of codes in the database were converted, whenever possible, to a single system of codification. It should be noted that the codes of Avi-Yonah and the AIEMA *Répertoire* are not as comprehensive as those devised by Balmelle *et alii*. According to the table of concordance devised by

A. Ovadiah and R. Ovadiah, a single Avi-Yonah code may cover several AIEMA codes. For example, M.P. B2 equates to No. 203, No. 194, No. 204, No. 205 or No. 206. Likewise, according to the table of concordance devised by Balmelle *et alii*, a single AIEMA code may cover several Balmelle codes. For example, No. 194 equates to Pl. 70 or Pl. 71; No. 204 covers Pl. 71 or Pl. 77; No. 205 covers No. 67 or No. 68, and so on. In such cases (to avoid confusion) it was necessary for us to ignore the AIEMA *Répertoire* and convert the Avi-Yonah codes directly to a Balmelle *et alii* equivalent. Thus M.P. B2 matches either Pl. 71e (Var.) or Pl. 77b (Var.), and is listed thus in the database. Since we graded M.P. B2 to Complexity Level II, this is also the level of complexity assigned to Pl. 71e (Var.) and Pl. 77b (Var.). A parallel method was thus adopted for all such cases.

In some cases it was only possible to apply a general code to decoration. The code Pl. 72, for instance is subdivided under the following complexities: 72a, II, 72b, II, 72c, III, 72d, III, 72e, III, 72f, III, 72g, III and 72h, III. In such instances it was necessary to make a personal judgement and assign a Complexity level of III to Pl. 72 based on the predominance of this Level of Complexity among the subtypes in question.

3. The Distribution and Quality of Representational and Non-Representational Decoration by Building Type and Room Function on the Byzantine Mosaic Pavements of Phoenicia

A. The Distribution of Representational and Non-Representational Decoration

In order to assess what factors may lie behind the choice of decoration in the region, it is appropriate to examine the distribution of decoration in different buildings. In

Phoenicia, building types may be grouped into the following categories: Christian buildings (churches, chapels and monasteries), private buildings (*villae*), public buildings (porticos and shops), and agrarian buildings or installations (ecclesiastical farms and winepresses). The totals gained are representative of the following room types (or parts): in Christian buildings (narthex, nave, aisles, chancel, *pastophorium*, baptistery, *diaconicon*, antechambers, rooms, corridors, transepts, apses, annexes, rear chambers, *atria*, *esonarthex*, chapels, corridors, halls and porticoes); in private buildings (halls, *triclinia*, rooms and ambulatories); in public buildings (baths, rooms and paved areas); in agrarian buildings or installations (rooms, courtyards and paved areas). The decorated parts of mosaic pavements comprise: surrounds (the band of decoration on the periphery of borders), borders (usually a thin strip of decoration framing the field), and field panels (the main area of mosaic floor decoration). The distribution of decoration is given below by count in Table 13. Decoration is grouped into four basic categories: figurative, plain, identifiable geometric decoration (covering the codes of Avi-Yonah, the AIEMA *Répertoire*, the *Répertoire* of Balmelle *et alii* and the inhabited scroll codes of Dauphin) and unidentifiable geometric decoration (to which no code could be assigned).

It should be borne in mind that the results presented below are based on functional building types which are themselves unequally preserved. The majority of floors in the Phoenician Corpus belonged to Christian buildings. *Villae*, on the other hand were much rarer, as were public and agrarian buildings.

Building Type	Building Quantity	Figurative Decoration	Identifiable Geometric Decoration	Unidentifiable Geometric Decoration	Plain Areas
Church	26 (53%)	67 (78%)	445 (75%)	12 (60%)	10 (34%)
Tomb	1 (2%)	0 (0%)	0 (0%)	0	1 (3.5%)
Jewish Synagogue	2 (2%)	1 (1%)	6 (1%)	1 (5%)	0 (0%)
Beth Midrash	1 (2%)	1 (1%)	12 (2%)	0 (0%)	0 (0%)
Villa	8 (16%)	16 (18%)	109 (19%)	3 (15%)	11 (38%)
Public Walkway	2 (4%)	0 (0%)	2 (1.5%)	1 (5%)	1 (3.5%)
Shop	2 (4%)	1 (1%)	6 (1%)	0 (0%)	1 (6.8%)
Winepress	2 (4%)	0 (0%)	0 (0%)	0 (0%)	2 (8%)
Unknown	5 (10%)	0 (0%)	4 (1%)	3 (10%)	3 (10%)

Table 13. Relative distribution of decoration types on the Byzantine mosaic pavements of Phoenicia expressed by number and percentage (approximate)

Table 13 makes it clear that the relative proportions of decoration type vary according to functional context. Figurative decoration, for instance, is not recorded in public walkways, tombs and winepresses, but is represented 67 times in churches (78%), once in Jewish synagogues (1%) and a beth midrash (1%) and shop respectively (1%), and 16 times in *villae* (16%). Plain tessellated pavements are minimal in all building types. The most notable characteristic is the high proportion of geometric decoration set against a low proportion of figurative decoration.[12] While identifiable and unidentifiable geometric decoration is absent from the one preserved example of a tomb and winepresses, the incidences of identifiable and unidentifiable geometric decoration are: 457 in churches (73.5%), 8 in Jewish synagogues (1.1%), 12 in a beth midrash (2%), 112 in *villae* (19%), 10 in public walkways (1.5%) and 5 in

[12] We should bear in mind that the study is confined to floor decoration, and figurative decoration may well have been a popular feature of frescoes and mosaics on walls and vaults (which remain largely unpreserved on the sites of the Corpus). For instance, figurative programmes decorate the vaults of the fourth-century Mausoleum of Constantia in Rome (Stern, 1958, 192-206; Matthiae, 1967, 3-53) and the walls of the fourth-century mausoleum of the Julii in the Vatican Necropolis under St Peter's in Rome (Toynbee and Ward Perkins, 1956, 71-2). In the Levant, we may also cite the figurative wall frescoes

shops (1%). The ratios of decoration types are affected by the differences in the number of preserved building types and the limited numbers of floors preserved in certain buildings (such as the Jewish synagogues of the Corpus). In cases where building types are high, such as churches and *villae*, the ratios of figurative to geometric decoration tend to be similar. Owing to the chronological imprecision of many of the pavements, a chronological examination of decoration type ratios would be fruitless.

What factors, then, may account for such a marked disparity? This question may best be addressed by examining the relative quality of decoration in the various rooms or room parts, in different functional building types.

B. The Distribution and Quality of Representational and Non-Representational Decoration by Building Type and Room Function

The quality of decoration on the mosaic pavements of Phoenicia is given below in Table 14 which represents the number of times each specific decoration type occurs in each category of decoration (figurative, complexity index of I, II, III, and IV). In order to assess which rooms (or room parts) are the most richly decorated, we made the following calculations. The two lowest, and most frequently occurring complexity indices, I and II, are mentioned selectively since they are too numerous to mention in full in text.[13] Thus emphasis is on figurative themes and the two rarest complexity indices (III and IV) in borders, fields and surrounds. Individual counts were thus

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of the third–century Jewish Synagogue at Dura Europos in Syria (Gutmann, 1992) and the vault mosaic belonging to the Terrace House 2 *villa* (*ca* AD 400) in Ephesos, Turkey (Jobst, 1977, 64-74).

[13] These are listed comprehensively in Vol. III, Appendix 1a-b of the present thesis.

made from figurative decoration and geometric complexity indices III and IV in order to obtain a total.

Bi. Christian Religious Buildings in Phoenicia

The simplest patterns on mosaic pavements in Christian buildings occur in surrounds (this being a characteristic trait of surrounds wherever they occur in other buildings). Figurative decoration was noted only in two instances, in a room at the church of 'Evron (No.7/21b); and in the baptistery of the Church of Jiye (No.4/2). The majority of decorated pavements have an index of I (13 counts), this comprising mainly Pl. 105 (plain tessellated flooring) and Pl. 5 (elements) (plain area decorated with a few lozenges and squares). The highest index reached is II (3 counts): a nave decorated with Pl. 83c in the Church of Ghine (No.1/1); a room decorated with No. 109 in the Church of 'Ain es-Samake (No.3/7b); and a room decorated with Pl. 219c in the *Villa* of the 'House of the Fountains' in Beirut (No.3/3).

The most sparsely decorated rooms in Christian buildings are narthexes, totalling 8 counts (figurative = 3, III = 4, IV = 1). The highest grade of complexity reached in field panels is III, exemplified by Pl. 233c in the Church of Khalde (No.3/9). More modest field decoration is represented by Pl. 219c in the Church of 'Evron (No.7/21c) and by Pl. 123c (Var.) at Nebha (No.2/1). In border decoration, there is one example of a grade IV, represented by Pl. 82c in the Church of Hanita (No.7/1). Less ornamental is a border at Zahrani (No.5/1), decorated with Pl. 71c (III) and Pl. 72b at 'Evron (No.7/21c) (II).

Slightly more ornamental are chancels with a count of 10 (figurative = 3, III = 7). The highest complexity reached in the chancels of Phoenicia is III. In field panels, for example, patterns of this level of ornamentation include Pl. 148b (Var.) in the Church of Nahariyya (No.7/19), while the Church of Zahrani (No.5/1) is decorated with Pl. 149c (Var.) and Pl. 254f (Var.). In borders, patterns with a complexity of III include AxII2b/2 in the Church of Beit Mery (No.3/6) and a Pl. 65f in the Church of Khalde (No.3/9).

Markedly more ornamental, especially in terms of figurative decoration, are intercolumnar panels totalling 23 (figurative = 11, III = 11, IV = 1). In the Church of St Christopher at Qabr Hiram (No.6/1), the North Aisle Intercolumnar Panels are decorated with a series of animals giving chase to other animals against a backdrop of either trees or plants. The borders of intercolumnar panels tend to be less ornamental than the field panel area, which is usually decorated with a relatively simple border. The North Aisle Intercolumnar Panels at Ghine (No.1/1) for instance, are framed by Pl. 48c and Pl. 83b (I); while the North Aisle Intercolumnar panels at Qabr Hiram (No.6/1) are framed by Pl. 23g (Var.) and Pl. 24d (Var.) (I and II respectively).

Naves are marginally more richly decorated, totalling 26 (figurative = 9, III = 14, IV = 3). The main field panel of the Church of Qabr Hiram is a particularly fine example of figurative decoration. The main compositional framework is vegetal pattern C1xVIb (enclosing seven rows of 31 medallions which depict arable, hunting and pastoral scenes). Figurative decoration also covers the nave field panels of the churches of 'Ain es-Samake (No.3/7a), Khalde (No.3/9), Ghine (No.1/1), Zahrani (No.5/1) and Khan Khalde (No.3/10b).

No figurative decoration is present in Phoenician nave borders. Two particularly fine geometric borders (IV) however, decorate the following naves: Pl. 75c at Qabr Hiram (No.6/1) and Pl. 75b at Nebha (No.2/1). Slightly less elaborate (III) are the nave borders of the following churches: Pl. 79c at 'Evron (No.7/21b), Pl. 69g at Hanita (No.7/1), Pl. 79b at Shavei Zion (No.7/26a) and Pl. 72e at Zahrani (No.5/1).

Next in terms of elaboration are rooms essential to the enactment of the liturgy (notably baptisteries, *diaconica* and antechambers), totalling 38 (figurative = 17, III = 20, IV = 1). The First Antechamber in the Church of Zahrani for instance, has a vegetal field pattern of C1xVIb with six rows of medallions (14 in total) enclosing a variety of figurative motifs depicting animals and inanimate objects. Border patterns tend to be less elaborate than field patterns in the ritual rooms of Christian buildings in Phoenicia. There is one example of a very complex pattern (Pl. 76b) with an index of IV in the Chapel of the Church of Shavei Zion (No.7/26b). Slightly less elaborate, and more common, are patterns of grade III: Pl. 101b and Pl. 71c in the South and North Sacristies respectively of the Church of Khalde (No.3/9), and Pl. 125d in the Chapel of the Church of Shavei Zion (No.7/26b).

The most richly decorated areas are aisles, totalling 56 (figurative = 19, III = 34, IV = 6). The Church of Khalde (No.3/9) is unique in its richness of aisle decoration. The North Aisle includes two separate field panels of IV, both of type Pl. 153a (Var.). The South Aisle is also decorated with geometric patterns of the highest sophistication: Pl. 153a in a field panel and Pl. 75 (Var.) a border. Slightly

less ornate (III) are field panel patterns C1xIVb in the South Aisles of Khan Khalde (No.3/10b), Pl. 149 (Var.) in the Church of Nebha (No.2/1), Pl. 147a in the Church of Zahrani (No.5/1); and border patterns Pl. 73c in the Church of Nebha (No.2/1), Pl. 71c in the Church of Jiye (No.4/2) and Pl. 72e in the Church of Qabr Hiram (No.6/1).

Aisles also tend to be well decorated with an array of figurative decoration, for instance in the fields of the aisles of the Church of Khalde (No.3/9); in the fields of the Churches of Khan Khalde (No.3/10b), Zahrani (No.5/1), Jiye (No.4/2) and Qabr Hiram (No.6/1). Likewise, in aisle borders, figurative decoration is present at Khalde (No.3/9), Khan Khalde (No.3/10b), Nahariyya (No.7/19) and Qabr Hiram (No.6/1).

Bii. Tombs in Phoenicia

The one preserved tomb in Phoenicia at Khirbet Muslih (No.7/23) exhibits a fragmentary plain tessellated pavement of Pl. 105 (I).

Biii. Jewish Buildings in Phoenicia

Three Jewish buildings are preserved in the region, the Synagogue and Beth Midrash of Khirbet Marus (8/4a-b). On the floor decoration of the nave of the synagogue, the highest complexity reached is in a border of Pl. 71b (III). Figurative decoration appears once only on a field panel. On the floor decoration of the hall of the Beth Midrash (field panels), the highest geometric complexity reached is III, represented by a single example of Pl. 125c (Var.) and figurative decoration.

Biv. Villae *in Phoenicia*

In general, mosaic floor decoration in the private buildings of Phoenicia tends to fall into two categories: more richly ornamented pavements in reception rooms (halls and *triclinia*), and less richly ornamented pavements in rooms which we assume had a less prestigious function (bedrooms, corridors, and so on). Due to the fragmentary nature of some of the sites, it is not always entirely clear from excavation reports and published plans which rooms had a function of prestige, and which had not. In such cases, we may assume that the relative quality of the decoration concerned allows us to make some general assumptions. It is often the case that good quality figurative and geometric decoration on field panels is closely associated with good quality border decoration in the same room.

The Central Apsed Hall in the *Villa* of Souedie (No.2/2) may be assumed to have been the main reception room of this *villa*. The field panels depict scenes from the life of the young Alexander. The border decoration includes Pl. 6c, Pl. 60d and Pl. 161f (Var.) (II, II and III respectively) and Pl. 75a (IV).

The Mosaic of Leontius in Room D of the *Villa* of Awzai (No.2/3a) includes a geometric field composition of Pl. 149c (III) filled with marine creatures, flowers, stylised flowers, fruit, birds, inanimate objects and four large square panels. The field is framed by a border of Pl. 75d (IV) and a strip of vine tendril Ax? (III).

The mosaic of the Seasons, located in what is assumed to have been the main reception room in the House II *Villa* of Awzai (No.2/3b), is decorated with a figurative panel of five squares containing depictions of animals including, a bull, a tiger, a lion, a panther, and a bust of one of the Four Seasons (in all likelihood Summer). Here, the main field area is framed by Pl. 194c (IV), while the outer border comprises Pl. 71c (III).

Room I of the *Villa* of Jenah (No.3/8) exhibits a geometric composition comprising Pl. 254 (Var.) (Complexity Level III) filled with figurative elements that include a lark, a shellfish, a fish and two pigeons. The main panel is framed by Pl. 75b (IV), whilst the border combines Pl. 101b and Pl. 75b. Room B has a relatively sparsely decorated field panel of M.P. F (II), but its border elements include Pl. 75b (IV). The field of Room D is also modestly decorated with M.P. F, but its inner border includes a band of Pl. 75b (IV).

In the 'House of Fountains' (No.3/3), a modestly-sized floor (Mosaics 12820) consisting of Pl. 148h (Var.) (III) filled with stylised fruit, is framed by Pl. 75b (IV). The *Triclinium* of Domus, Eastern Area 3 (Mosaic 3046) (No.3/5) also has a geometric field pattern of Pl. 148h framed by Pl. 75b. The Peristyle Floor of the same *villa* (Mosaic 3523) has a main field pattern of Pl. 219f (III) framed by a border of Pl. 75c (IV).

The one preserved 'agrarian' building of the Corpus in Phoenicia is the ecclesiastical farm of Shelomi which underwent three building phases (No.7/5a-c). Given its 'agrarian' function, the ornamentation of decoration is surprisingly high.

Although it belonged to a monastery, hence its ecclesiastical dimension, this was fundamentally an agricultural estate (the Byzantine equivalent of a *Villa Rustica*) and therefore has to be included in the category of *villa.* The only preserved area of Phase A (No.7/5a) exhibiting tessellation is a plain white floor belonging to a courtyard (Pl. 105a) (Complexity Level I). Three preserved instances of Pl. 105a in the area of the courtyard belong to Phase B (No.7/5c). Room 1 is decorated with a border of Pl. 38b (Var.) (II), Pl. 71c (II) and Pl. 82c (IV). The field panels comprise two examples of Pl. 244f (Var.) and Pl. 199c (Var.) (all of Complexity Level II), one of No. 536 and two of Pl. 175 (Var.) (all of III). Room 2 is decorated with a border of Pl. 5 (element) (I) and Pl. 72 (Complexity Level of III) enclosing Pl. 92g (III). Phase C (No.7/5b) is characterized by a paved area with Pl. 105a.

From the above, we may infer that in the private houses of Phoenicia, field panels bearing less elaborate field and border decoration belonged to less prestigious rooms. One such example may be found on the Ambulatory mosaics of the Domus, Eastern Area 3 (Mosaic 3046) (No.3/5). These pavements are decorated with border patterns Pl. 1j, Pl. 10 and Pl. 4d (I, II and II respectively) and field patterns Pl. 163c and Pl. 238 (Var.) (all of Complexity Level II). In some cases, simpler decoration may characterize the entire building, as in the 'House of Jealousy' (No.3/4). Out of the 20 occurrences of decoration on the pavements of this site, 12 have a Complexity Level of I (Pl. 28 (Var.), Pl. 105, No. 107, No. 323 (Var.), Pl. 28 (Var.), Pl. 24i (Var.), Pl. 1j); six are of Complexity Level II (Pl. 238 (Var.), Pl. 124 (Var.), Pl. 124f, Pl. 219c); and Complexity Level III occurs only twice (Pl. 125d, Pl.254f [Var.]).

Bv. Public Walkways in Phoenicia

Mosaic pavements in public buildings are scant in Byzantine Phoenicia, although this picture is likely to change in the light of current excavation programmes. The only site in Beirut containing paved mosaic in a public building (belonging to two separate phases) bears modest decoration. The paved area of the Lower Portico in BEY 006 (No.3/1a) has a plain white floor of Pl. 105 (I). Less sparsely decorated is the paved area of the Upper Portico of BEY 006 (3/1b); the field panels of this site exhibit one unidentifiable geometric decoration, combining Pl. 163 (Var.) (I) and Pl. 124 (Var.) (II). The most complex decoration is Pl. 232d (Var.). Borders offer examples of Pl. 64d (Var.), Pl. 64d (II) and a Pl. 235a (III). No figurative decoration has yet been found in the Portico area.

Bvi. Shops in Phoenicia

As in the case of public buildings, commercial buildings are scant in the Corpus. One preserved example of a shop (two separate phases) in BEY 006 exhibits marginally more elaborate ornamentation than the buildings of the public sphere, and there is one example of figurative decoration. The field panels of Shop BEY 006 lower phase (No.3/2a) are decorated with Pl. 201 (Var.) (II), Pl. 232d (elements) and Pl. 232d (Var.) (all of III). The border elements comprise Pl. 1j (I) and Pl. 71c (III). The field

panel of Shop BEY 006 upper phase (3/2b) is decorated with figurative motifs. The border of Pl. 71c (III) is framed by a plain white surround of Pl. 105 (I).

Bvii. Winepresses in Phoenicia

The two preserved winepresses in Phoenicia, Khirbet esh Shubeika (No.7/18) and Metulla (No.8/1) both exhibit plain tessellated pavements of Pl. 105 (Complexity Level of I).

Building Type	Building Part	Mosaic Part	Fig Dec	I	II	III	IV
Church	Aisle	Surround	0	3	0	0	0
Church	Aisle	Border	2	9	17	12	1
Church	Aisle	Field	19	18	11	22	5
Church	Nave	Surround	0	3	1	0	0
Church	Nave	Border	0	9	7	5	3
Church	Nave	Field	9	13	17	9	0
Church	Chancel	Surround	0	3	0	0	0
Church	Chancel	Border	2	11	10	3	0
Church	Chancel	Field	1	3	5	4	0
Church	Rooms	Surround	2	3	2	0	0
Church	Rooms	Border	1	20	23	3	1
Church	Rooms	Field	14	31	21	17	0
Church	Intercols	Border	0	5	2	0	0
Church	Intercols	Field	11	34	16	11	1
Church	Narthex	Surround	0	1	0	0	0
Church	Narthex	Border	0	3	6	2	1
Church	Narthex	Field	3	3	7	2	0
Jewish	Nave	Border	0	7	3	0	0
Jewish	Nave	Field	2	0	1	1	0
Villa	Rooms	Surround	0	2	1	1	0
Villa	Rooms	Border	4	16	17	13	9
Villa	Rooms	Field	12	13	25	16	1
Villa	Rooms	Border	0	0	0	0	0
Villa	Rooms	Field	0	0	0	0	0
Shop	Rooms	Surround	0	1	0	0	0
Shop	Rooms	Border	0	1	0	2	0
Shop	Rooms	Field	1	0	1	2	0
Winepress	Floor	Floor	0	2	0	0	0
Tomb	Floor	Floor	0	1	0	0	0
Public	Border	Floor	0	0	4	1	0
Public	Field	Floor	0	2	1	3	0
Unknown	?	B/F/S	0	5	2	0	0

Table 14. Relative quality of decoration on the Byzantine mosaic pavements of Phoenicia

Key

Fig Dec = Figurative Decoration
I = Complexity Index I
II = Complexity Index II
III = Complexity Index III
IV = Complexity Index IV

C. Discussion

In the secular sphere of Byzantine Phoenicia, floors of the highest quality were those of reception rooms and guestrooms of high prestige, which tended to associate complex geometric decoration with programmes of figurative iconography. Lower quality floors tended to be either lower prestige guestrooms, corridors and service areas, decorated with lower grade geometric patterns and plain tessellated pavements (such as the Domus of Beirut, No.3/5 and the Villa of Jenah, No.3/8). In Christian buildings (such as the Church at Zahrani, No.5/1 and the Chapel of the Church of Shavei Zion, No.7/26b), rooms and room parts of the highest quality such as naves, aisles and rooms essential to the enactment of the liturgy, also tended to be decorated with complex geometric patterns associated with figurative iconography. Rooms decorated with lower quality ornamentation, such as chancels and narthexes, tended to comprise lower grade patterns of geometric complexity, plain tessellated pavements and rarely featured figurative decoration.

The sole example of a public space, porticoes (No.3/1a-b), exhibited either plain or modest geometric decoration but never any figurative decoration.

In the Jewish sphere, the Synagogue and Beth Midrash at Khirbet Marus (No.8/4a-b), exhibited relatively high levels of geometric decoration in their hall areas and modest incidences of figurative decoration.

Several related factors may have determined decorative quality and its distribution in the different rooms and parts of rooms of functional building types in

Byzantine Phoenicia (including function, social category of usage in private buildings, liturgical level of participation in religious buildings, social status of patron(s), symbolism and financial expenditure *per se*). These aspects will be assessed in detail below (Section 5).

4. The Distribution and Quality of Representational and Non-Representational Decoration according to Building Type and Room Function on the Byzantine Mosaic Pavements of Northern Palestine

A. The Distribution of Representational and Non-Representational Decoration

As in Phoenicia, the results presented below derive from functional building types which are unequally preserved, distorting somewhat the picture obtained. The highest number of floors in the Corpus belong to Christian buildings. Several functional building types, of which the Phoenician Corpus is devoid, were present in Northern Palestine: winepresses, granaries, warehouses, a shrine, a bath-house, a "palace", an odeon, an official building and Samaritan synagogues.

Decoration types vary according to functional context (see Table 15). In secular buildings, figurative decoration occurs four times in public spaces and four times in bath-houses. The most frequently occurring building type with figurative decoration is the private house - with 9 examples. Figurative decoration is absent from commercial buildings, shops, official and agrarian buildings. Christian and Jewish buildings are well represented, by respectively 37 and 23 examples of figurative decoration. There are only two instances of figurative decoration in Samaritan synagogues.

Plain tessellated pavements are in low numbers in Christian private and public buildings or edifices, but are especially popular in agrarian (notably winepresses), commercial and official buildings. As in Phoenicia, there is a markedly higher proportion of geometric decoration in Northern Palestine than figurative decoration.

Incidences of identifiable and unidentifiable geometric decoration types are as follows: 86 in chapels (11.5%), 206 in churches (28%), 94 in monasteries (13%), 3 in shrines (0.5%), 130 in Jewish synagogues (17.5%), 42 in Samaritan synagogues (5.5%), 59 in *villae* (8%), 11 in public spaces (odeon, public walkways: 1.5%), 30 in bath-houses (4%), 4 in shops and in an official administrative building (0.5%), 2 in warehouses (0.25%) and 1 in winepresses (0.125%). Identifiable and unidentifiable geometric decoration are absent from granary floors.

As in Phoenicia, the ratios of decoration types in Northern Palestine are affected by the differences in the number of preserved building types and the limited numbers of floors preserved in certain buildings (such as shops, bath-houses, one odeon, and so on). In the case of certain building types which are well-represented, such as chapels, churches, monasteries, Jewish synagogues and *villae*, the ratios of figurative to geometric decoration tend to be similar.

In the quest to understand what factors may underlie such distributions, it is again necessary to examine the relative quality of decoration in the various rooms or room parts of functional building types.

Building Type	Building Quantity	Figurative Decoration	Identifiable Geometric Decoration	Unidentifiable Geometric Decoration	Plain Areas
Chapel	10 (6.5%)	2 (2%)	82 (12%)	4 (4%)	3 (4.5%)
Church	35 (22.5%)	29 (38%)	177 (27%)	29 (31%)	8 (11.5%)
Monastery	9 (5.5%)	6 (7%)	91 (14%)	3 (3%)	3 (4.5%)
Shrine	1 (0.5%)	1 (1%)	3 (0.75%)	0 (0%)	0 (0%)
Tomb	2 (1%)	2 (2%)	16 (2.5%)	0 (0%)	1 (1.5%)
Jewish Synagogue	13 (8%)	17 (22%)	122 (19%)	8 (8.5%)	6 (9%)
Samaritan Synagogue	4 (2%)	2 (2%)	36 (5.5%)	6 (6.5%)	2 (3%)
Villa	6 (3%)	11 (13%)	53 (8%)	6 (6.5%)	2 (3%)
Odeon	1 (0.5%)	1 (1%)	2 (0.5%)	0 (0%)	0 (0%)
Public Walkway	6 (3%)	3 (3%)	9 (1.5%)	0 (0%)	0 (0%)
Bath-house	2 (1%)	4 (5%)	28 (4.5%)	2 (2.5%)	0 (0%)
Shop	2 (1%)	0 (0%)	3 (0.5%)	1 (1%)	0 (0%)
Official	1 (0.5%)	0 (0%)	4 (1%)	0 (0%)	6 (9%)
Granary	4 (2%)	0 (0%)	0 (0%)	0 (0%)	4 (10.5%)
Warehouse	2 (1%)	0 (0%)	2 (0.5%)	0 (0%)	0 (0%)
Winepress	11 (7%)	0 (0%)	0 (0%)	1 (1%)	11 (16%)
Unknown	57 (36.5%)	0 (0%)	7 (1%)	33 (35.5%)	22 (32%)

Table 15. Relative distribution of decoration types on the Byzantine mosaic pavements of Northern Palestine expressed by number and percentage (approximate)

B. The Distribution and Quality of Representational and Non-Representational Decoration by Building Type and Room Function

Bi. Christian Buildings in Northern Palestine

As in the Phoenician Corpus, the most simply decorated parts of mosaics in the Christian buildings (and other functional building types) of Northern Palestine are mosaic surrounds. There are no examples of figurative decoration. Conversely, plain white tessellated pavements (Pl. 105) abound as well as plain zones sparsely decorated with lozenges and squares and Pl. 5 (elements), both of Complexity Level I (23 examples from naves, aisles, chancels and rooms associated with the liturgy). The highest complexity index reached is III (three examples), Ax in a room in Phase II of

the Church of Khirbet el-Karak (No.10/19/2b), in a room in the Monastery of Lady Mary at Beth Shean (No.12/13/1) and in a room in the Church of Kafr Kama (No.10/16/1).

The most sparsely decorated rooms in the Christian buildings of Northern Palestine are narthexes. The highest grade of complexity reached (in both borders and fields), is III (five examples). In borders, these include Pl. 81b in the Church of Khirbet el-Karak (No.10/19/2a) and Pl. 71c in the Church of the Martyr at Beth Shean (No.12/13/2). In field panels, these are Pl. 235a (Var.) in the Church of El-Kursi (No.10/7/1), Pl. 161e (Var.) in Phase I of the 'Church of Andreas' at Beth Shean (No.12/13/3a) and Pl. 138c (Var.) in Phase I of the Church of Khirbet el-Karak (No.10/19/2a).

The next most richly decorated areas are aisles (eight instances of Complexity Level III). In borders, these include Pl. 71c in the Church at Karmiel (No.9/5a), Pl. 71c in both aisles of the Church of the Martyr at Beth Shean (No.13/13/2) and two separate instances of Pl. 70j in the North Aisle of the Church of the Multiplication of the Loaves and the Fishes at Et Tabgha (No.10/4). In field panels, these include Pl. 148a (Var.) in each aisle of the Church at Khirbet el-Karak (No.10/19/1) and Pl. 125c in the South Aisle of the Church of Khisfin (No.10/5/2). There is one instance of figurative decoration in a field panel in the South Aisle of the Church of El-Kursi (No.10/7/1).

With the exception of one additional example of figurative decoration in the Church of Et Tabgha (No.10/4), the chancels of Northern Palestine exhibit a degree of

ornamentation similar to that in aisles. The highest grade of complexity reached is also III (eight examples). In surrounds, this includes Ax in the Church of Khirbet el-Karak (No.10/19/2b); in borders, Pl. 92g and Pl. 71e (Var.) in the Apse of the Chapel of Kafr Kama (No.10/16/2), Pl. 71c in Phases I and II respectively of the Church of Khirbet el-Karak (No.10/19/2a-b), and two examples of Pl. 70j in the Church of the Multiplication of the Loaves and the Fishes (No.10/4); and, in field panels, Pl. 92g in the Apse of the Chapel of the Kafr Kama (No.10/16/1).

Naves were more richly decorated with 16 examples of higher quality decoration. In borders, a Complexity Level of IV is reached in border decoration represented by Pl. 82 in the Church of Karmiel, Phase I (No.9/5a); and six examples of Complexity Level III: Ao in the Church of El-Kursi (No.10/7/1). One example of Pl. 71c in the Church of Karmiel (Phase I), several instances of Pl. 71e (Var.) in the Chapels of Kafr Kama (No.10/16/1-2), and the Monastery of Lady Mary at Beth Shean (No.12/13/1), as well as a single example of Pl. 92g in the Chapel of Kafr Kama (No.10/16/2). In field panels there are single occurrences of the following patterns: Pl. 208 (Var.) in the Church of the Martyr at Beth Shean (No.12/13/2), Pl. 178d in the Monastery of Lady Mary also at Beth Shean (No.12/13/1), Pl. 165b in the Church of Karmiel, Phase I (No.9/5a), Pl. 148g in the Chapel of Kafr Kama (No.10/16/1), Pl. 148 (Var.) in the Chapel of El-Kursi (No.10/7/2), Pl. 147a (Var.) in the Church of Karmiel, Phase I, and Pl. 125d in the Chapel of Kafr Kama (No.10/16/2). Two instances of figurative decoration are to be found respectively in the border of the Chapel of Kafr Kama (No.10/16/2) and in the Monastery of Lady Mary (No.12/13/1).

Intercolumnar panels match naves in Northern Palestine with 16 instances of higher quality decoration (the difference being that they were are all figurative). These include the six North and South Aisle Intercolumniations in the Church of the Martyr at Beth Shean (No.12/13/2) and the five North and South Aisle Intercolumniations in the Church of El-Kursi (No.10/7/1).

The most richly decorated areas in Christian buildings of Northern Palestine are rooms connected with particular aspects of the liturgy (baptisteries, *diaconica*, sacristries, *pastophoria*). In all, there are 45 instances of higher quality decoration (11 figurative, 28 of III and 6 of IV). At Complexity Level III, in borders, Pl. 71c occurs twice at the "Imhoff" Monastery at Beth Shean (No.12/13/12), there is one instance of Pl. 148g in the Chapel of Sede Nahum (No.12/6), one of Ao in the Monasteries of El-Makr (No.9/1), Shiqmona (No.9/9/1) and Tell Basul (No.12/11), and one of Pl. 92g in the Chapel of Shiqmona (No.9/9/1). Pl. 71e (Var.) occurs in the Monastery and Church of Shiqmona (respectively No.9/9/1 and No.9/9/3), twice at Kafr Kama (No.10/16/1) and once in the Monastery of Lady Mary at Beth Shean (No.12/13/1). At Complexity Level IV: Pl. 75b at the latter site and in the Church of El-Kursi (No.10/7/1), Pl. 76d in the Monastery of Lady Mary, and Pl. 82e (Var.) in the Church of the Martyr, both at Beth Shean, two instances of Pl. 91e in the Monastery and Church of Shiqmona (No.9/9/1 and No.9/9/3) and in the Monastery of El-Makr (No.9/1). Complexity Level III is represented by CA/CBX at Sede Nahum (No.12/6), M.P. I3 in "Imhoff" (No.12/13/12) and Shiqmona (No.9/9/3), Pl. 125c (Var.) at El-Kursi (No.10/7/1) and C2xIVb in the Monastery of Lady Mary (No.12/13/1) at Beth Shean; Pl. 125d (Var.) in the Monasteries of Nazareth (No.9/23/3a), Tell Basul (No.12/12) and "Imhoff", Beth Shean (No.12/13/12), Pl. 168d at the latter site and

Pl. 225d (Var.) at Shiqmona (No.9/9/1), Pl. 235a and Pl. 235a (Var.) at Beth Shean (No.12/13/1) and Kafr Kama (No.10/1/2) respectively and Pl. 125d in two areas of Shiqmona (No.9/9/2 and No.9/9/3). The following codes are depicted in surrounds at Complexity Level III: M.P. I6 at Beth Shean (No.12/13/1) and Kafr Kama (No.10/16/1).

Figurative decoration was used once in borders in the Monastery of El-Makr (No.9/1) and in the field panels at El-Kursi (No.10/7/1) and Shiqmona (No.9/9/1 and (No.9/9/3), twice at Kefr Nahum (No.10/2), twice in Beth Shean (No.12/13/1) and once at Et Tabgha (No.10/4). Room L at the Monastery of Lady Mary at Beth Shean is lavishly decorated with a vegetal composition, C2xIVb divided into three rows of four medallions containing arable, hunting and pastoral scenes, and a donkey turning his head to look behind it. Interspersed between the medallions are birds, animals (fox, ibex, hare, leopard and snake) and bunches of grapes. At Et Tabgha, particularly fine Nilotic scenes decorate the North Transept.

Bii. Tombs in Northern Palestine

The only preserved example of a tomb in the Corpus is the El-Hammam Tomb Chamber at Beth Shean (No.13/13a-b). Phase I is more sparsely decorated than Phase II, the highest complexity reached being in the border decoration represented by Pl. 71c (III). Phase II, however, is much more elaborate with one count of figurative decoration in a border and one in a field panel. The following single counts of higher quality geometric and vegetal decoration are encountered in borders: Pl. 65f, Pl. 66b, Pl. 101b and AoIII1a; and in fields, vegetal pattern C2xIVc (all of III).

Biii. Jewish Buildings in Northern Palestine

In general, the Jewish Synagogues of Northern Palestine exhibited more modest geometric decoration than Christian and private buildings. By contrast, the relatively high proportion of figurative decoration was usually confined to the central hall or "nave".

The most sparsely decorated areas were narthexes with three instances of Complexity Level II. Courtyards fared slightly better with a single occurrence of Pl. 170 (III) at Beth Alfa (No.12/7)[14], as did rooms of synagogues with a single instance of Pl. 73c in a border (III); and chancels, represented by M.P. I6 at Hammath Gader (No.10/22). The next most richly decorated floor areas were intercolumniations, represented by a single instance of Pl. 82f in an East Aisle Intercolumnar Panel at Hammath Tiberias (IV). Aisles were marginally more elaborate with a single occurrence of Pl. 70h (III) in a border at Beth Alfa (No.12/7) and a single occurrence of figurative decoration in a surround at Rehov (No.12/20b).

Naves were by far the most richly decorated floor areas in Jewish synagogues. Three particularly fine examples in Northern Palestine merit a brief analysis (the decoration is described from nave entrance to apse). In the Synagogue of Beth Alpha (No.12/7), in the field panels were depicted the Sacrifice of Isaac, the Zodiac and the Seasons, and a Torah Shrine flanked by two seven-branched *menorot* (surrounded by other Jewish symbols). In the Synagogue of Hammath Tiberias (No.10/11), the field panels enclosed two heraldic lions, the Zodiac and the Seasons, and a Torah Shrine

flanked by two seven-branched *menorot* (with other Jewish symbols). The nave panels of the Synagogue at Zippori (No.8/15/4) contained the following decoration: the Angel's Visit to Abraham and Sarah, the Binding of Isaac, the Zodiac and Seasons, the Shewbread Table and the Basket of Fruits, the Consecration of Aaron to the Service of the Tabernacle and the Daily Offering, the Torah Shrine flanked by two seven-branched *menorot* (accompanied by other Jewish symbols), and a wreath flanked by two lions.

In all, there are 29 examples of higher quality decoration in the Jewish synagogues of the region (Figurative = 17, III = 9, IV = 3). In borders, at Complexity Level III, these include single instances of Pl. 73f (Hammath Gader, No.10/22), Pl. 73 (Hammath Tiberias, No.10/11), Pl. 70f (Hammath Gader, No.10/22), and Bx (Beth Alfa, No.12/7); at Complexity Level IV, Pl. 75b (Ma 'oz Hayim, No.12/15); and one instance of figurative decoration at Beth Alfa (No.12/7).

In field panels, at Complexity Level III, these include single occurrences of Pl. 70h (Beth Alfa, No.12/7), Pl. 235a (Var.) (Ma 'oz Hayim, No.12/16), Pl. 125c (Var.) (Hammath Gader, No.10/22); at Complexity Level IV M.P. I8 (Hammath Tiberias, No.10/11); and 15 instances of figurative decoration, 1 at 'Isfiya (No.9/22), 1 at Beth Alfa (No.12/7), 1 at Hammath Gader, 2 at Hammath Tiberias and 10 at Zippori (No.9/15/4).

[14] Courtyards are grouped with Narthexes in Table 14.

Biv. Samaritan Synagogues in Northern Palestine

The mosaic pavements of four Samaritan synagogues are described in the Corpus, of which two sites feature geometric decoration of particularly elaborate quality: the Samaritan Synagogue of Beth Shean (No.12/13/13) and that of Khirbet Samara (No.11/25/1). Occurrences of figurative decoration are scant. Similarly to Jewish synagogues, more complex decoration of Samaritan synagogues seems to be concentrated in the nave (hall). The Synagogue of Khirbet Samara illustrates this well.

In the Hall, the main border (surrounding both panels) comprised Pl. 10h, M.P. A1 (Complexity Level I), Pl. 71c (Complexity Level III) and Ao (III) filled with animal, vegetal and inanimate motifs, and M.P. A1 (I). The Western Panel is framed by M.P. A1 (I), Pl. 10h, M.P. A1 (I). This encloses a field with the Holy Ark depicted as a temple façade, with four columns surmounted by Ionic capitals, and a gable; behind the columns are squares representing the walls of the building; a *parokhet* curtain hangs between the two inner columns; to the north of the ark: Pl. 181a (Var.) (IV). The Eastern Panel comprises a border of M.P. A1 (I) enclosing a field of Pl. 248d (Var.) (Complexity Level IV) which, in turn, encloses a central medallion.

In all, there are 17 occurrences of higher quality decoration in the Samaritan synagogues of the region (Figurative = 2, III = 7, IV = 8). This is mostly limited to the nave areas of the synagogues of Khirbet Samara (No.11/25/1), Beth Shean (No.12/13/13) and El-Khirbe (No.11/26). In border decoration at Beth Shean, the following patterns are depicted: South Aisle, Pl. 71e (Var.) (III); Apse, Pl. 82c (IV);

Room, Pl. 92g (III), Pl. 125d (Var.) (field panel). Pl. 125c (III), the Narthex decoration of the Samaritan Synagogue of Khirbet Samara represents border decoration at its most elaborate.

Bv. Villae *in Northern Palestine*

As for Phoenicia, we may draw a distinction in mosaic floor decoration in the private buildings of Northern Palestine, between on the one hand, more richly ornamented pavements in reception rooms, and on the other, less richly ornamented pavements in rooms of less prestigious function. The House of the Nile Festival (No.9/15/1) provides an excellent example. A large room, which we may assume was the main reception room of this building, is decorated with splendid scenes celebrating the Nile Festival. The border comprises one instance of Pl. 10g (Complexity Level I) and of Pl. 71c (III)

Adjacent to this room, the Centaur Mosaic (Floor 2) depicts a centaur leaping on his hind legs whilst holding an object containing a Greek inscription. The last room to the east of the wing, The Mosaic of the Dancing Amazons (Floor 13), is a figurative floor in fragmentary condition depicting four amazons and horses, framed by a wide border of interlooped shaded bands forming squares enclosing a pomegranate and lozenges. The modest size of the room, coupled with its fine figurative decoration has led us to assume that it was a bedroom for guests of prestige. The other rooms in this wing of the building are paved with geometric mosaics of

varying elaboration. The Long Corridor Mosaic (Floor 3) is decorated with Pl. 124b (II) framed by a border of Pl. 75b (IV); Floor 4, is decorated with Pl. 219c (Var.) (II) framed by a border of an interlaced band with alternating circles and squares; Floor 5 is decorated with Pl. 161f (Var.) (III) framed by a border of Pl. 75c (IV); Floor 6 comprises two fragments decorated with Pl. 156e (III) framed by a border of Pl. 39e (Var.) (II); Floor 9 is decorated with Pl. 219f (III) framed by a border of Pl. 70f (III); Floor 10 is decorated with Pl. 244f (II) framed by a border of Pl. 40 (Var.) (II); Floor 11 is decorated with Pl. 219c (Var.) (II) framed by a border of Pl. 72e (III); and, Floor 12, with Pl. 156e (III) enclosed by a border of Pl. 33e (I).

To the south, a separate wing, known as the Basilical Hall, comprises the following decoration. Floor 7 (strip adjacent to long corridor of the north wing) is decorated with Pl. 163c (Var.) (II) framed by a border of Pl. 75b (IV); and, Floor 8, The Mosaic of the Amazons, includes two figurative panels framed by borders of Pl. 72d (III), Pl. 72f (III) and a strip of Pl. 219f (III). The first panel, partly destroyed, depicts two almost naked hunters with a boar at their feet. On the second panel, two amazons, mounted on horses and accompanied by a dog, participate in a leopard hunt. In a manner akin to the figurative decoration of this building, it may be inferred that the complexity of the geometric decoration determines the prestige of the room, or more particularly, the prestige of the guests it was intended for. It is interesting to note that the Nile Festival floor - the main showpiece of the wing - has both fine figurative floor decoration and higher quality border decoration (with the exception of the thin zigzags of Pl. 10g decoration). The Long Corridor Mosaic which may be regarded as the lowest prestige room in the building, presents a different combination. The field panel is decorated with a modest decoration (II), but its border is of the

highest quality (IV). This decoration provides the patron with an effective economic solution. It allows the larger proportion of a low prestige space to be paved with minimal expenditure and the smaller proportion of the space to be paved with maximum expenditure. Thus the elaborate border which effectively flanked the beholder, served to distract and usher the guest away from the plain, narrow space underfoot. This factor is further supported by the orientation of the Centaur in Floor 3, which lies at the eastern end of this corridor. The modestly decorated field area of the corridor was also well suited to the considerable wear encountered on a floor designed principally for human transit.

There is one example of an ecclesiastical farm in the region represented by Beth Ha-Shitta (No.12/5/1).[15] The decoration is of low quality in borders and fields (Complexity Level I), represented by Pl. 17 in the border of a room and two occurrences of unidentifiable geometric decoration in a border and field.

In all, there are 32 instances of higher quality decoration in the *villae* of Northern Palestine (Figurative = 11, III = 16, IV = 5). The only other occurrence of decoration of the highest quality is encountered in a field panel (Pl. 194c [Var.]) enclosing figurative decoration from the so-called "Governor's Palace" at Caesarea Maritima (No.11/8/23). Rooms of this site also include a C1xVIc vegetal field panel composition enclosing figurative decoration and a border of Pl. 70j.

[15] Interpreted by C. Dauphin (pers. comm., 2002 May 13th) as a *metochion* (small monastery).

Bvi. Public Spaces and Walkways in Northern Palestine

The preserved 'public spaces' of Northern Palestine tend to exhibit two general groupings of decoration: richly decorated areas which may be considered as public 'receptacles', and sparsely decorated areas for public 'transit'. To the former category belong the Odeon[16] of Beth Shean, decorated with a personification of *Tyche* (No.13/13/7), framed by a geometric border of Pl. 82f (Var.) (IV), and the Beth Shean Portico with three examples of figurative decoration (No.13/13/8). To the second category belong the main street areas: Palladius Street of Beth Shean (No.13/13/8), with a border of Pl. 64d (Var.) and Pl. 38c framing the main paved area comprising Pl. 219c (Var.); Zippori, the West and East *Cardo* (No.9/15/2-3), decorated with Pl. 105 (Complexity Level I); and the Byzantine Esplanade at Caesarea Maritima (No.11/8/2) decorated with Pl. 169 (Var.) (also I).

Bvii. Public Buildings in Northern Palestine

Of the three examples of public buildings in the Corpus, two are of bath-houses and one of a *palaestra* associated with a bath-house. Only one example of geometric decoration is preserved in the Bath-house (No.11/8/42) of Caesarea Maritima represented by Pl. 219c (II) which covers a field panel. In the *Palaestra* of Caesarea Maritima (No.11/8/47), *opus sectile* decorates only one room. The Baths of Tiberias (No.10/12/2) are better preserved and consequently have yielded more decoration, much of it of high quality. In borders (Rooms), decoration reaching Complexity Level III is represented by single instances of Ao, and Ao with Pl. 71e. At Complexity

Level IV, there is a single instance of Pl. 82c. In field panels, Cx (III) occurs once. In borders (Hall), there is a single example of Ao (III) and of figurative decoration; and in field panels, of Cx and of Pl. 71e (Var.) (both of Complexity Level III) as well as two examples of figurative decoration.

Bviii. Shops in Northern Palestine

In the region, two preserved mosaic pavements in shops offered very simple decoration. At Beth Shean for instance, Shop No.13/13/9a had a surround of Pl. 105 (Complexity Level I), a border of Pl. 10h (also I) and a field pattern of simple, unidentifiable geometric decoration; whilst Shop No.12/13/9b was paved with a field panel comprising Pl. 124f (Var.).

Bix. Official Buildings in Northern Palestine

The one preserved official building in the Corpus is the so-called 'Archives Building' of Caesarea Maritima (No.11/8/17) (discussed in detail in Chapter III). The various preserved areas of pavement in this building exhibit very modest decoration. This includes a single instance of unidentifiable geometric decoration, various instances of Pl. 105 (I) and 4 examples of Pl. 123 [Var.] (I).

[16] Interpreted by C. Dauphin (pers. comm., 2002 May 13th) as a brothel.

Bx. Buildings of 'Heavy Commerce' in Northern Palestine

The preserved commercial buildings in the Corpus paved with mosaics were all located at Caesarea Maritima and all decorated modestly. Four rooms identified as granaries (Nos11/8/35-8) exhibit plain tessellated floors of type Pl. 105 (I). A warehouse (No.11/8/39) also has a pavement of Pl. 105, whereas another (No.11/8/40) has a border of Pl. 64d (Var.) and a field pattern of Pl. 219c (II).

Bxi. Agrarian Buildings and Installations in Northern Palestine

The remaining examples of agrarian function in the region are winepresses at the following sites: Kefar Ya'bes (No.11/29), Shuni (No.11/4/2a-b), 'Ein Choma (No.12/14), Khirbet Fahas (No.11/32), Site Reference 1919.2178 (No.12/3), Beth Ha-Shitta (No.12/5/2), Tel Hefer (No.11/17), Khirbet esh Sandahawi (No.11/7), Khirbet Husha (No.9/12/2), Metulla (No.8/1) and Site reference 146.2102 (No.11/10). All exhibit plain tessellated paving of type Pl. 105.

Quality of decoration on the mosaic pavements of Northern Palestine is provided below in Table 16. The information given below may be interpreted in the same way for Table 14 (figurative and complexity index I-IV by counted instance).

Building Type	Building Part	Mosaic Part	Fig Dec	I	II	III	IV
Christian	Aisle	Border	0	7	3	5	3
Christian	Aisle	Field	1	2	8	3	0
Christian	Aisle	Surround	0	6	0	0	0
Christian	Nave	Border	1	10	7	6	1
Christian	Nave	Field	1	2	2	7	0
Christian	Nave	Surround	0	6	0	0	0
Christian	Chancel	Border	0	13	8	6	0
Christian	Chancel	Field	2	5	12	1	0
Christian	Chancel	Surround	0	6	0	1	0
Christian	Rooms	Border	1	44	29	13	6
Christian	Rooms	Field	10	19	27	15	0
Christian	Rooms	Surround	0	5	3	3	0
Christian	Intercols	Field	16	0	4	0	0
Christian	Narthex	Border	0	6	0	2	0
Christian	Narthex	Field	0	5	2	3	0
Jewish	Aisle	Border	0	8	2	1	0
Jewish	Aisle	Field	0	6	10	0	0
Jewish	Aisle	Surround	1	5	1	0	0
Jewish	Nave	Border	1	4	21	4	1
Jewish	Nave	Field	15	1	4	3	1
Jewish	Narthex	Border	0	1	0	0	0
Jewish	Narthex	Field	0	3	3	1	0
Jewish	Narthex	Surround	0	1	0	0	0
Jewish	Intercols	Border	0	10	0	0	0
Jewish	Intercols	Field	0	7	6	0	1
Jewish	Room	Border	0	2	0	0	0
Jewish	Room	Surround	0	1	0	0	0
Samaritan	Aisle	Border	0	0	0	1	0
Samaritan	Aisle	Field	0	0	0	0	0
Samaritan	Nave	Border	1	7	2	3	2
Samaritan	Nave	Field	1	1	2	1	4
Samaritan	Narthex	Border	0	1	0	0	0
Samaritan	Narthex	Field	0	2	0	0	1
Samaritan	Room	Border	0	1	2	1	0
Samaritan	Room	Field	0	0	0	1	0
Samaritan	Room	Surround	0	1	1	0	0
Samaritan	Apse	Border	0	1	0	0	0
Samaritan	Apse	Field	0	0	0	0	1
Villa	Room	Border	0	15	5	9	4
Villa	Room	Field	10	0	8	7	1
Villa	Room	Surround	1	5	0	0	0
Public Area	Pavement	B/F/S	4	7	4	1	1
Shops	Room	B/F/S	0	2	1	0	0
Tomb	Room	B/F/S	2	9	2	6	0
Agrarian	Pavement	B/F/S	0	11	0	0	0
Bath-House	Room	Border	1	7	7	6	0
Bath-House	Room	Field	3	0	4	3	1
Commercial	Pavement	B/F/S	0	5	2	0	0
Official	Pavement	B/F/S	0	10	0	0	0
Unknown	?	B/F/S	0	42	20	6	22

Table 16. Relative quality of decoration on the Byzantine mosaic pavements of Northern Palestine

Key

Fig Dec = Figurative Decoration
I = Complexity Index I
II = Complexity Index II
III = Complexity Index III
IV = Complexity Index V
B/F/S = Border-Field-Surround (collectively)

5. The Quality and Distribution of Decoration on the Byzantine Mosaic Pavements of Phoenicia and Northern Palestine: General Considerations

A. Function

It was suggested in Chapter III that function played a major role in determining the technical quality of mosaic pavements. Since a general interrelationship between technical quality and quality of decoration was established by us, we should also expect function to be a major determining factor in the quality and distribution of mosaic floor decoration. From the regional study which we have conducted above, function does indeed appear to be a major determining factor. In the category of agrarian installations, winepresses serve as a good example. The main areas tessellated with plain white cubes are usually the pressing/treading parts of the installations. Here, tessellated paving played a purely pragmatic role, and there was clearly no need for decoration. The same may be said of warehouses (Nos11/8/39-40) and granaries (Nos11/8/35-8), where decoration is either non-existent, or at best sparse. Likewise, the long *cardo* walkways of Zippori (Nos9/15/2-3), Caesarea Maritima (No.11/8/2) and Beth Shean (Nos13/13/10-11), exhibit little or no decoration, this we assume, being dictated by function.

By contrast, Christian buildings frequently exhibited a rich variety of geometric and figurative decoration. This may partly be explained by their function which also appears to have dictated the subject matter of the floor mosaics, this in turn requiring the fine technique observable on these floors. Evaluation of technique in Chapter III, however, highlighted the fact that repeated use would have exacted considerable wear and tear on the finer examples.

A parallel explanation may be true for mosaic floor decoration in Jewish and Samaritan synagogues of Phoenicia and Northern Palestine. The iconographic programmes of such buildings make it clear that the decoration was largely context specific, since Jewish and Samaritan ritual material culture was frequently depicted. We may, however, consider that there was a considerable degree of wear and tear on such floors from constant ritual use. We made it clear in Chapter III that the best explanation for technical quality may be provided perhaps by a social and financial categorization of patronage. We contend that a similar explanation may be postulated for decorative quality.

This study makes it apparent that there is a clear hierarchy in the distribution of decoration in religious buildings. This may also be partly explained in functional terms. Narthexes served as a holding area in Christian buildings for liturgical participants and pilgrims prior to the ritual to be conducted within the main sacred area of the building. Evaluation of decorative quality made it clear that high quality decoration of narthex floors is rare. By contrast, decoration of the sacred area (nave and aisle decoration and rooms connected with particular aspects of the liturgy) tended toward the higher end of decorative quality. However, the hierarchy of sacred rooms,

or room parts, was not always fixed. For example, in the Church of St Christopher at Qabr Hiram (No.6/1), the technique and decoration of the nave is superior to that of the aisles. The reverse is true for the Church of Khalde (No.3/9). While no technical information is available for these floors, the quality of decoration in the aisles tended to be superior to the quality of decoration in the nave in terms of geometric complexity. Thus function does not provide a total explanation for the quality of decoration on floor mosaics of religious buildings in Phoenicia and Northern Palestine.

Moreover, quality of decoration tended to vary regionally in Christian buildings. For instance, in Phoenicia taken as a whole, rooms and room parts of Christian buildings exhibit the following hierarchy of decorative quality: narthexes, chancels, intercolumniations, naves, rooms central to the enactment of the liturgy, aisles. By contrast, in Northern Palestine, rooms and parts of rooms exhibited the following decorative hierarchy: narthexes, aisles, chancels, naves, intercolumniations, and rooms of liturgical importance.

Function is also an incomplete explanation for the decoration of private buildings, although it would seem to be a key factor. This is clear in the dichotomy between more richly decorated reception rooms of higher prestige and less richly decorated rooms of lower prestige. The House of the Nile Festival (No.9/15/1) is one such example. As was demonstrated for technical quality in Chapter III, so too, the quality of decoration in private houses tended to vary from site to site. This is clear in Phoenicia. In Beirut for instance, the floors of the 'House of Fountains' (No.3/3) were more ornate than those of the House of Jealousy (No.3/4). Likewise in Northern

Palestine, the floors of the House of the Nile Festival (No.9/15/1) were more elaborate than those of the 'Ibex House' at Caesarea (No.11/8/33). We may then postulate that for secular as well as for religious buildings a complementary explanation to function may lie in the social and financial categorization of patronage.

B. Social and Liturgical Aspects of the Distribution and Quality of Floor Decoration on the Mosaic Pavements of Byzantine Phoenicia and Northern Palestine

We have inferred above that in the 'guest rooms' and 'bedrooms' of the Nile Festival House a correspondence may have existed between the social status of the guest(s) or inhabitant(s) and the quality of decoration. Similar observations were made by Dunbabin concerning the mosaic pavements of North Africa. Dunbabin has suggested that finer mosaics were most likely to be located in the better parts of houses, ornamental patterns used in less important parts, and plain coarse work used in corridors and service areas. Since service areas were the domain of the lower *échelons* of Roman households (servants/slaves), we may assume that, although this is not explicitly stated, Dunbabin implied a correspondence between social hierarchy and decoration in Romano-African *villae*. Where preservation has allowed us to draw inferences, a similar pattern was also noted in several private houses of the Corpus in Phoenicia, notably in the *Villa* of Souedie (No.2/2), the 'House of Fountains' (No.3/3), the Domus, Eastern Area 3 (No.3/5), the *Villa* of Jenah (No.3/8) and the *Villa* of Awzai (No.2/3a-b).[17] In all these examples, mosaic floor decoration split into two categories: more richly ornamented pavements in reception rooms of high prestige (halls and *triclinia*), and less richly ornamented pavements in rooms of lesser prestige

[17] A similar phenomenon was noted during a technical survey of the third-century Roman *Villa* of Zippori during the autumn of 2000.

(bedrooms, corridors, and service areas). Quite clearly, this hierarchy of decoration may be equated with the social status of the guests and inhabitants.

One may logically assume a similar phenomenon for religious buildings. In the case of religious ritual of the Byzantine period, however, it would be a mistake to attempt to draw a correspondence between social status of user and quality of decoration, since a different hierarchy was applicable to the religious sphere; this involved ritual level of participation. Christian historical sources indicate three separate levels of liturgical participation. At the lowest level were the unbaptized catechumens, at the middle level were the laity, and at the highest level of participation were the clergy.[18] Notwithstanding the circulation of movement around churches - a characteristic of the Byzantine liturgy - it is generally accepted from historical sources that catechumens and women occupied the aisles and galleries (to which women were confined); the baptized lay members of the Church stood in the nave, and the clergy officiated in the chancel area and in the apses.

Thus in churches, we may expect correspondence between liturgical level of participation and hierarchy of ornamentation on the mosaic floors of the region. This is not however, necessarily the case. The better-preserved pavements of the region (those of Phoenicia) are likely to prove most informative. Differences in level of ornamentation were noted in different rooms and room parts as regards mosaic pavements. Taking the Christian buildings of Phoenicia as a whole, the following hierarchy (lower to upper level) of decorative quality was noted: narthexes, chancels,

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[18] A concise account of the Christian liturgy of the Byzantine period is provided by Wilkinson, 1993, 17-22.

intercolumniations, naves, rooms central to the liturgy, aisles. If liturgical level of participation overshadowed decorative quality we should expect the hierarchy to run from aisles at the lower end through naves to chancels at the upper end. The hierarchy, though, is in fact the reverse: chancels-naves-aisles – inversely proportional to liturgical level of participation and not proportional as one should perhaps expect.

Two factors should, however, be borne in mind. Firstly, the statistical pattern that emerges from the Corpus tends toward the general and not the specific. As we have noted above, the Church of St Christopher of Qabr Hiram (No.6/1) offered more ornate decoration in the nave than in the aisles. In the Church of Khalde (No.3/9), however, the reverse is true, since the aisle decoration is the most sophisticated of the entire Corpus. In both cases, however, chancel decoration tended to be of a low complexity even in abstract patterns. In fact, modest chancel decoration appears to have been a characteristic trait of all churches throughout the region. Secondly, chancel decoration was more symbolically charged than aisle and nave decoration, since it was the most sacred area of churches.[19] We may therefore expect a decoration more fitting with religious purity and religious symbolism than ostentation. At Et-Tabgha (No.10/4), loaves and fishes commemorate the Miracle of the Multiplication and recall the Eucharist under the very altar, but this is relatively simple figurative decoration and confined to a small area.

It is important to bear in mind the regional variability in the distribution and quality of mosaic floor decoration in the churches highlighted above. It is notable that

[19] The symbolical and functional aspect of church rooms and room parts is also examined by Wilkinson, 1993.

chancels of Northern Palestine tended to be more richly decorated than those of Phoenicia. Such regional variation in the quality of decoration may best be explained by different liturgies in each sub-region. The liturgy observed in Phoenician churches was that of the Antioch patriarchate, while that observed in Northern Palestine was of the Jerusalem patriarchate. This is reflected in the architecture of churches in each sub-region. In Phoenician churches, the chancel frequently exhibits a central, western protrusion and tends to encroach towards the centre of the long axis of the building, thus somewhat shortening the nave.[20] In the churches of Palestine the chancel does not extend so far and naves tend to be longer.[21]

The Antiochene liturgy bore many similar characteristics to the Jerusalem Liturgy,[22] although the ritual formulas varied somewhat between each sub-region[23] and the architectural plan and decoration were adapted accordingly.[24] In Phoenician churches the clergy conducted their own liturgy within the chancel area during the main liturgical service separate from the lay members of the community.[25] Chancel areas were enlarged to accommodate this practice and decoration was accordingly more simplistic. Liturgical differences explain the observed variation in the quality and distribution of decoration in each sub-region (although we should allow for a considerable variability between sites within each sub-region). We may for instance, contrast the church of St Christopher at Qabr Hiram in Phoenicia (No.6/1) with the

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[20] For the regional characteristics of churches in Phoenicia, Donceel-Voûte, 1987, 492-500.
[21] Compare, for instance, the plan of the Church of Khalde (No.3/9, fig. 13) in Phoenicia with that of the Church of Horvat Kenes (No.9/6, fig. 32) in Northern Palestine. For the liturgical organisation of Byzantine churches in Palestine, Sodini, 1995, 304-311.
[22] Di Berardino, 1992, 496.
[23] For a definitive study of the development of the Byzantine liturgy, Dix, 2001, especially 196-207. An excellent account of the Jerusalem liturgy is given by the pilgrim Egeria in the mid-fourth century AD (see its translation by Wilkinson, 1999, 144-146).

Church of the Multiplying of the Loaves and the Fishes at Et Tabgha (No.10/4) in Northern Palestine (Complexity Levels are given above). The first example has long aisles, a short nave, and a long chancel. The aisles are decorated with complex field and border geometry, and fine figurative decoration. The north and south intercolumnar panels are also decorated with fine figurative work. The geometric and figurative decoration is even more splendid in the nave, but the decoration in the chancel area is sparse. At Et Tabgha, the aisles and chancel are much shorter and the chancel is flanked by transepts. The intercolumnar panels are likewise decorated by fine figurative work, but the surviving decoration of the aisles and nave is far less elaborate. The best decoration may be found in the figurative panels of the transepts. The chancel area has more elaborate geometric decoration than at Qabr Hiram and includes figurative decoration.

The synagogues of the region certainly appear to have exhibited a distinction between ornately decorated naves on the one hand, and sparsely decorated aisles on the other. Here, perhaps, the correspondence between level of liturgical participation and quality of decoration was more clear-cut. The decoration of Samaritan synagogues conformed to similar distributions of quality in Jewish synagogues, this allowing us to postulate a direct correlation between liturgical level of participation and decorative quality. However, we should also take into account the fact that like churches, synagogues included areas of varying symbolism, and this would have played a fundamental role in determining the ostentation of different parts of the building (see below).

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[24] See Taft, 1984, 473-75 for the architectural differences in the layout of rooms between each of the sub-regions.

In Jewish synagogues the spoken part of the liturgy was somewhat variable (and we may assume the same was true for the Samaritan liturgy). Shinan,[26] for instance, has noted: 'During late antiquity the Palestinian liturgy was fixed and unvarying only in regard to its general outline. This outline included the number of blessings said in this or that context, the subjects these blessings addressed, and certain key phrases (such as opening and closing formulae). The final wording, which was left open, was shaped according to the understanding and needs of each worshipper or prayer leader.' Despite the 'unfixed' nature of the Jewish liturgy, the physical aspect of the liturgy was non-processual (unlike the Christian liturgy) and participants remained seated in the aisles.[27] Moreover, the positioning of the Torah Shrine was strictly adhered to and the Zodiac and 'Jewish' themes fell into a repetitive pattern.[28] The naves of Zippori (No.9/43/4), Hammath Tiberias (No.10/11) and Beth Alfa (No.12/7) exemplify this pattern (described in detail above). This may suggest a clear association between decoration and liturgical practice.

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[25] Claudine Dauphin, pers. comm., 2001 November 19th.
[26] Shinan, 1996, 143.
[27] Claudine Dauphin and Julian Raby, pers. comm., 2001 November 28th.
[28] See Hachlili, 1998, II, 347-369.

C. Economic Aspects of the Distribution and Quality of Mosaic Floor Decoration on the Byzantine Mosaic Pavements of Phoenicia and Northern Palestine

It was argued above that more elaborate geometric decoration was more time-consuming to lay than less elaborate geometric decoration, and, as a consequence, required a greater financial expenditure on behalf of the patron.[29] Likewise, figurative decoration, although in some cases not as ornate as the more complex geometric patterns, was more time-consuming to execute than less elaborate geometric patterns, for two reasons. The first reason concerns fine detail. In Chapter III, we noted that figurative images were often executed with minute *tesserae*, especially in faces. There can be little doubt that the execution of such detail required a considerable expenditure of time and skill. Secondly, a fundamental characteristic of geometric decoration is that it may (within reason) be replicated to extend a floor space in any given direction.[30] The same is not true for figurative programmes of iconography, which have to be carefully tailored to suit the plan shape of the room concerned. If both of these factors are taken into account, we may infer that the laying of figurative mosaic floor decoration was more time consuming to execute than geometric decoration – except in the case of particularly complex patterns.

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[29] It should be stressed that these calculations are relative. Moreover, R.R.R. Smith (pers. comm., 2002, May 14th) has suggested that workshops with a tradition of laying complex geometric patterns may have been capable of laying them swiftly.

[30] We should temper this assumption with a note of caution, since it runs contrary to the observations of E.H. Gombrich (1980, 67): 'In the textile crafts the flexibility of the material is essential to the creation of both the support and the pattern. It is where the elements of construction are rigid that the craftsman is bound to become aware of the constraints imposed on his choice by the laws of geometry ... As soon as the craftsman begins to use the elementary tools of geometry – the ruler and the compass – he learns about the limits within which he must work, if he aims at the composition of a continuous structure'.

We should also consider again the individual role of artisans in the process of laying mosaic pavements. In Chapter III we considered mosaicists as individuals and as members of teams in some detail, and inferred from Diocletian's Edict of Prices and epigraphic evidence that a team of mosaicists could comprise the following members and daily rates of pay.

The *lapidarius structor* and the *calcis coctor* (involved with the preparation of the bedding layers of floor mosaics) each received between 50 and 60 *denarii* per day; the *museiarius* (the maker of fine mosaics) sixty *denarii* per day; the *tessellarius* (the maker of plain tessellated pavements) fifty *denarii* per day; and the *pictor imaginarius* (the designer and producer of cartoons and the painter of images) one hundred and fifty *denarii* per day.

We do not suggest that such rates of pay were applicable to Byzantine Phoenicia and Northern Palestine, but we may infer that the differentiation of wages between workers may have been relative. Thus in theory, to lay a plain tessellated pavement, only three workers would have been necessary, the *lapidarius structor, calcis coctor* and the *tessellarius*. To lay a geometric floor, the *museiarius* would have been added to the team. A figurative floor, however, would have required the possible addition of two extra specialists, the *pictor imaginarius* and the *pictor parietarius*. Thus in the first instance, a plain tessellated pavement would have cost between 100-110 *denarii* per day to lay; in the second instance, a geometric floor would have cost between 160-170 *denarii* per day; and in the third instance, a figurative floor would have cost between 385-395 *denarii* per day. Clearly then, cost increased substantially when a figurative floor was conceived.

We believe that this factor principally governed the quality and distribution of mosaic floor decoration in Byzantine Phoenicia and Palestine. Thus in re-examining Tables 13 and 15, the following decoration counts are explicable in terms of expenditure of economic resources: in Phoenicia, there are 86 instances of figurative decoration, 607 examples of geometric decoration and 29 occurrences of plainly tessellated areas. In Northern Palestine, figurative decoration was depicted 76 times, geometric decoration 728 times, and plainly tessellated areas 68 times.

We also contend that economic factors dictated the rarity of the most complex geometric patterns. In Phoenicia for example, the relative frequency of geometric complexity is expressed in Table 17.

Level of Complexity	Incidences
I	251
II	204
III	141
IV	21

Table 17. The relative frequency of geometric complexity on the mosaic pavements of Byzantine Phoenicia

In Northern Palestine, the relative importance of geometric complexity is expressed in Table 18.

Level of Complexity	Incidences
I	337
II	228
III	145
IV	31

Table 18. The relative frequency of geometric complexity on the mosaic pavements of Byzantine Northern Palestine

Likewise, it would seem logical to assume that economic factors dictated the rarity of figurative decoration. In Phoenicia for instance, there are only 79 instances of figurative decoration, while in Northern Palestine there are 84. In sum, it would thus seem that the rarity of figurative decoration and complex geometric decoration on the mosaic pavements of Byzantine Phoenicia and Northern Palestine was directly proportional to the level of financial expenditure invested by the patrons concerned.

A fuller consideration of patronage, and of the information provided by the inscriptions on the mosaics of the Corpus, is given in Chapter V. It is however appropriate to briefly address patronage at this stage of the present chapter. We should perhaps expect a correspondence between decoration of the highest quality and rarity, and the status of the benefactor, but this is not always the case. We should also bear in mind that patterns of benefaction somewhat differed in Christian and Jewish buildings, and that higher levels of ornamentation may have reflected in some cases communal benefaction, as well as donations made by wealthy members of the landed élite. Nonetheless, the inscriptions on the mosaics of the region make it clear that families and officials of high social status provided benefactions to buildings that exhibited floor decoration of the highest quality. The Church of St Christopher of Qabr Hiram is one such example (No.6/1). It is worth quoting the Greek inscription on the chancel mosaic in full:

1 Γέγονην τὸ πᾶν ἔργον τῆς ψεφόσεως τοῦ ἐνδόξου
καὶ πανσέπτου μάρτυρος ἁγίου Χριστοφόρου,
ἐπὶ τοῦ
θεοφιλεστ(άτου) Γεωργίου ἀρχιδ(ιακόνου) (καὶ)
χορεπισκ(όπου) (καὶ) ἐπὶ τοῦ θεοφιλεστ(άτου)
Κύρου διακ(όνου) καὶ ἐπιτρ(όπου) ὑπὲρ σωτηρ-
(ίας) τῶν δύω κτημάτ(ων) οἰκονό-
5 μων (καὶ) γεοργῶν (καὶ) τῶν τέκνων αὐτῶν (καὶ)
τῆς κλήρου (καὶ) τῶν καρ-
ποφορούντ(ων) ἐν χρόνοις τοῦ θεοσεβεστ(άτου)
Ζαχχαρία πρεσ-
βυτέρου ἐλαχίστου ἐν μηνὶ Δεσίου τοῦ $\overline{\Psi A}$ ἔτους
ἰνδ(ικτιῶνος) Θ.

'All the mosaic work of the church of the illustrious and of the very venerable martyr St Christopher was executed under the archdeacon and the country bishop Georgius, God's great friend, for the salvation of the *economoi* and of the workers of the two estates and for that of their children, and of the clergy and of the donors, at the time of the very pious Zaccharias, very humble priest, in the month of Daisius, in the year 701, ninth indiction [AD 575].'

In her 1978 paper ("Symbolic or Decorative? The Inhabited Scroll as a Means of Studying some Early Byzantine Mentalities"), Claudine Dauphin identified the benefactors mentioned in this inscription as wealthy landowners of two rural estates. It is, perhaps, no coincidence that the nave decoration of this church is among the finest of all of the figurative decoration of the Corpus. The framing border, too, is of the highest complexity (Pl. 75c). Where inscriptions are not present to provide us with more specific information of patronage, we may infer high levels of patronage in other ways.

Large private houses exhibit several instances of the highest quality, both of geometric decoration (IV) and figurative decoration (such as the *Villa* of Jenah [No.3/8] and the House of the Nile Festival [9/15/1]). There can be little doubt in such cases that the patrons concerned were wealthy members of the landed aristocracy. However, the appraisal of technical quality in Chapter III demonstrated that in certain cases, the floors of private houses were of modest quality. The technical analysis of Field CV Floor 11020 (No.11/8/23) in the 'Governor's Palace' testifies to this. Here, cube densities reach a maximum of 64-81 per dm^2 in the field and 54 per dm^2 in the border. Likewise, the decoration did not reach the highest quality, since both border and field decoration were graded at Complexity Level III. The modest quality of decoration on the floors of the House of Jealousy (No.3/4) and the 'Ibex House' of Caesarea (No.11/8/33) has already been outlined. It is thus more fitting to suggest that quality of decoration (coupled of course with technical quality) directly represented level of financial expenditure, rather than level of patronage.

6. The Chronological Pattern of Complexity in Geometric Decoration on the Byzantine Mosaic Pavements of Phoenicia and Northern Palestine

Space and time are two fundamental factors against which mosaic pavements may be gauged. Spatial analysis – the geographical distribution of pavements and of regional stylistic traits – would ultimately lead us to detect 'workshops' and 'schools' of mosaicists in the course of a lengthy and comprehensive study which would reach far beyond the formal constraints of the present thesis. Thus the intention is to focus on this particular aspect of mosaic pavements in future research.

The relation of mosaic pavements and time, however, is directly relevant to the evaluation of pavements according to their technical and decorative qualities. Thus whether the complexity of geometric patterns increased or decreased during the Byzantine period in Phoenicia and Northern Palestine is of direct and immediate relevance. In Chapter III we noted that the density of *tesserae* in Levantine inhabited scroll pavements tended to fall during the Byzantine period. Since a general correspondence between technical quality and decorative quality was also established, we should perhaps expect the level of complexity to diminish accordingly.

Above we devised Complexity Levels I-IV in geometric mosaic patterns. Many patterns occur frequently throughout the Byzantine period in the region (such as Pl. 1j and Pl. 219c). Thus a sensible approach is to examine the complexity of only the rarest patterns of the Corpus (Complexity Level IV). Many of the floors evaluated are loosely dated and overlap century boundaries. In such cases, we have used the methodology of dating by Counting Method devised by Dr Goldrei (applied in Chapter II). Two examples in Table 18 are too loosely dated to be of any value in the analysis and have been omitted: the Church of Shiqmona (No.9/9/3) and the Church of Beit Lehem (No.9/18).

In the Byzantine mosaic pavements of Phoenicia there are 22 incidences of Complexity Level IV patterns (Table 19 below). The chronological incidences of high complexity decoration are presented below (Charts 12-15).

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	Code Type	Date
2	Baalbek	1	Nebha	Church	Nave	Border	Pl. 75b	557-646
2	Baalbek	2	Soueidie	*Villa*	Hall	Border	Pl. 75a	375-400
2	Baalbek	3a	Awzai	*Villa*	Hall	Border	Pl. 75d	450-525
2	Baalbek	3b	Awzai	*Villa*	Room	Field	Pl. 194c	450-525
3	Beirut	3	BEY 006 'House of Fountains'	*Villa*	Room	Border	Pl. 75b	450-550
3	Beirut	5	BEY 006 Domus	*Villa*	Peristyle	Border	Pl. 75c	450-550
3	Beirut	5	BEY 006 Domus	*Villa*	Triclinium	Border	Pl. 75b	450-550
3	Beirut	6	Beit Mery	Church	Nave	Border	Pl. 82c (Var.)	550-575
3	Beirut	8	Jenah	*Villa*	Room	Border	Pl. 75b	475-500
3	Beirut	8	Jenah	*Villa*	Room	Border	Pl. 75b	475-500
3	Beirut	8	Jenah	*Villa*	Room	Border	Pl. 75b	500-535
3	Beirut	9	Khalde	Church	N Aisle	Field	Pl. 153a (Var.)	500-600
3	Beirut	9	Khalde	Church	N Aisle	Field	Pl. 153a (Var.)	500-600
3	Beirut	9	Khalde	Church	S Aisle Intercols	Field	Pl. 82b	500-600
3	Beirut	9	Khalde	Church	S Aisle	Field	Pl. 153a (Var.)	500-600
3	Beirut	9	Khalde	Church	S Aisle	Field	Pl. 194c (Var.)	500-600
3	Beirut	10b	Khan Khalde	Church	S Aisle	Border	Pl. 75 (Var.)	503-506
3	Beirut	10b	Khan Khalde	Church	S Aisle	Field	Pl. 153a	503-506
6	Bennt Jbail	1	Qabr Hiram	Church	Nave	Border	Pl. 75c	575
7	Nahariyya	1	Hanita	Church	Narthex	Border	Pl. 82c	500-550
7	Nahariyya	5b	Shelomi	Monastic Farm	Room	Border	Pl. 82c	610
7	Nahariyya	26b	Shavei Zion	Church	Chapel	Border	Pl. 76d	486

Table 19. The mosaic pavements of Byzantine Phoenicia decorated with Complexity Level IV patterns

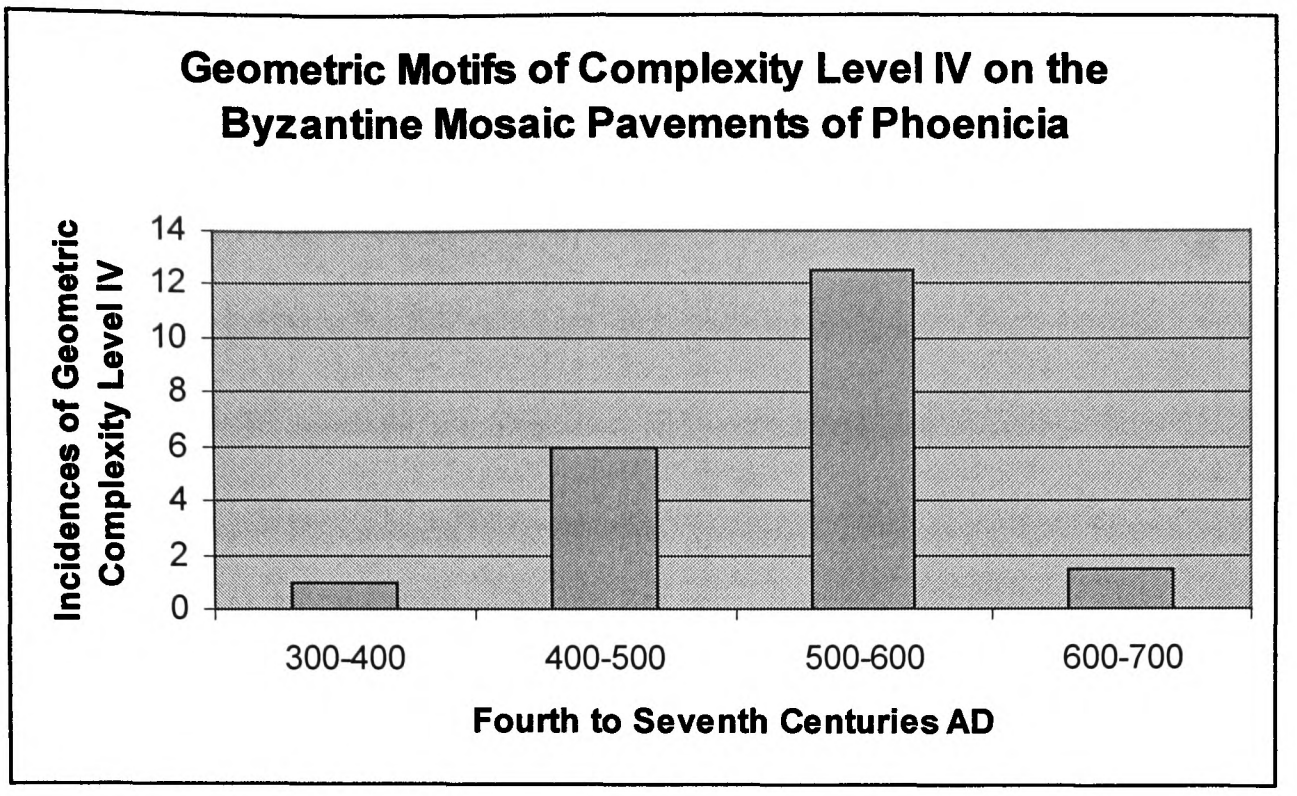

Chart 12. Incidences of Complexity Level IV on the Byzantine mosaic pavements of Phoenicia

The chronological pattern presented in Chart 12 exhibits a marked increase in the incidences of Complexity Level IV in the fifth century in comparison with the fourth-century, an acceleration of that increase in the sixth, and a fall off in the seventh century. For this reason the incidences of Complexity Level IV motifs are expressed below as a percentage of the total number of pavements per century in Chart 13. The observed pattern is similar but more subtle: fourth century: 13.5%, fifth century: 36.5%, sixth century: 39%, seventh century: 25%. The observed pattern mirrors the chronological pattern of floor laying observed in Chapter II, which increased markedly in the fifth century, developed further in the sixth, and tailed off in the seventh century. Thus the observed increase in complexity of geometric pattern on floor mosaics in Phoenicia, may be a logical corollary to the increase in the number of floors laid during the 'Golden Era' of the Byzantine period.

Decoration of the highest level of complexity appears to have occurred repeatedly on floors of the same site in the sixth century. For example, there are three instances of Complexity Level IV decoration in the *Villa* at Jenah (No.3/8) and five in the Church of Khalde (No.3/9). The balance is slightly redressed by single site groupings of the fifth century, for instance in the *Villa* of Awzai (No. 2/3a-b).

Taking both of these factors into account, the Byzantine mosaics of the Phoenician Corpus do exhibit a tendency toward greater complexity in the period, but at a more subtle rate than Chart 12 indicates (see Chart 13 below). The reasons which may have determined the observed pattern are discussed below.

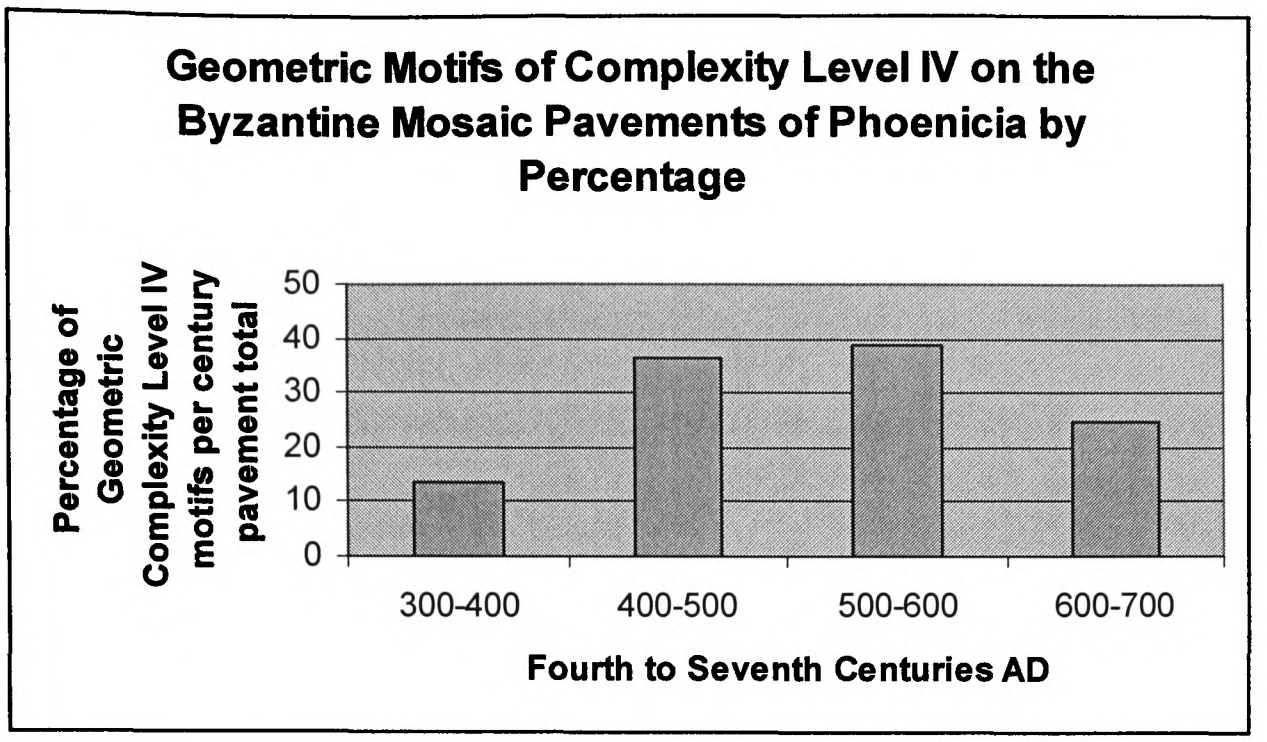

Chart 13. Incidences of Complexity Level IV expressed as a percentage of the total number of pavements per century

In the Byzantine mosaic pavements of Northern Palestine there are 31 incidences of Complexity Level IV patterns (Table 20 below). The chronological incidences of high complexity decoration are presented below in a bar graph (Chart 14).

Zone No	Zone Name	Site No	Site Name	Building Type	Building Part	Mosaic Part	Code Type	Date
9	Haifa	5a	Karmiel	Church	Nave	Border	Pl. 82	475-500
9	Haifa	9/1	Shiqmona	Monastery	Room	Border	Pl. 91e	400-500
9	Haifa	9/3	Shiqmona	Church	Room	Border	Pl. 91e	324-640
9	Haifa	18	Beit Lehem	Church	S Aisle	Border	Pl. 75c	400-600
9	Haifa	15/1	Zippori	*Villa*	Room	Border	Pl. 75b	500-600
9	Haifa	15/1	Zippori	*Villa*	Room	Border	Pl. 75c	500-600
9	Haifa	15/1	Zippori	*Villa*	Room	Border	Pl. 75b	500-600
10	Teverya	3b	Mt of Beatitudes	Chapel	Unknown	Border	Pl. 80e (Var.)	500-600
10	Teverya	5/2	Khisfin	Church	S Aisle	Border	Pl. 75b	400-500
10	Teverya	7/1	El-Kursi	Church	N Pastop	Border	Pl. 75b	582-587
10	Teverya	11	Hammath Tiberias	Jew Synagogue	Nave	Field	M.P. I8	300-400
10	Teverya	11	Hammath Tiberias	Jew Synagogue	E Aisle Intercols	Field	Pl. 82f	300-400
10	Teverya	12/2	Tiberias	Bath-House	Room	Field	Pl. 82c	500-600
11	Netanya	8/12	Caesarea Maritima	Palace	Room	Field	Pl. 194c (Var.)	500-600

11	Netanya	25/1	Khirbet Samara	Sam Synagogue	Nave	Field	Pl.181a (Var.)	400-500
11	Netanya	25/1	Khirbet Samara	Sam Synagogue	Nave	Field	Pl. 248d (Var.)	400-500
11	Netanya	26	El-Khirbe	Sam Synagogue	Nave	Border	Pl. 75a	300-500
11	Netanya	26	El-Khirbe	Sam Synagogue	Nave	Field	Pl. 248d (Var.)	300-500
11	Netanya	28/3	Shomron	Monastery	S Aisle	Border	Pl. 75b	500-625
12	Beth Shean	15b	Ma'oz Hayim	Jew Synagogue	Nave	Border	Pl. 75b	525-614
12	Beth Shean	25	Ez Zababide	Church	Unknown	Border	Pl. 75b	500-600
12	Beth Shean	25	Ez Zababide	Church	Unknown	Border	Pl. 75b	500-600
12	Beth Shean	25	Ez Zababide	Church	Unknown	Field	Pl. 149d (Var.)	500-600
12	Beth Shean	13/1	Beth Shean	Monastery	Room	Border	Pl. 76d	553-569
12	Beth Shean	13/1	Beth Shean	Monastery	Room	Border	Pl. 75b	553-569
12	Beth Shean	13/2	Beth Shean	Church	Chapel	Border	Pl. 82e (Var.)	500-600
12	Beth Shean	13/7	Beth Shean	Odeon	Paved Area	Border	Pl. 82f (V)	500-600
12	Beth Shean	13/13	Beth Shean	Sam Synagogue	Apse	Field	Pl. 82c	375-425
12	Beth Shean	13/13	Beth Shean	Sam Synagogue	Nave	Field	M.P. I8	375-425
12	Beth Shean	13/13	Beth Shean	Sam Synagogue	Nave	Border	Pl. 82c	375-425
12	Beth Shean	13/19	Beth Shean	*Villa*	Room	Border	Pl. 82c	300-500

Table 20. The mosaic pavements of Byzantine Northern Palestine decorated with Complexity Level IV patterns

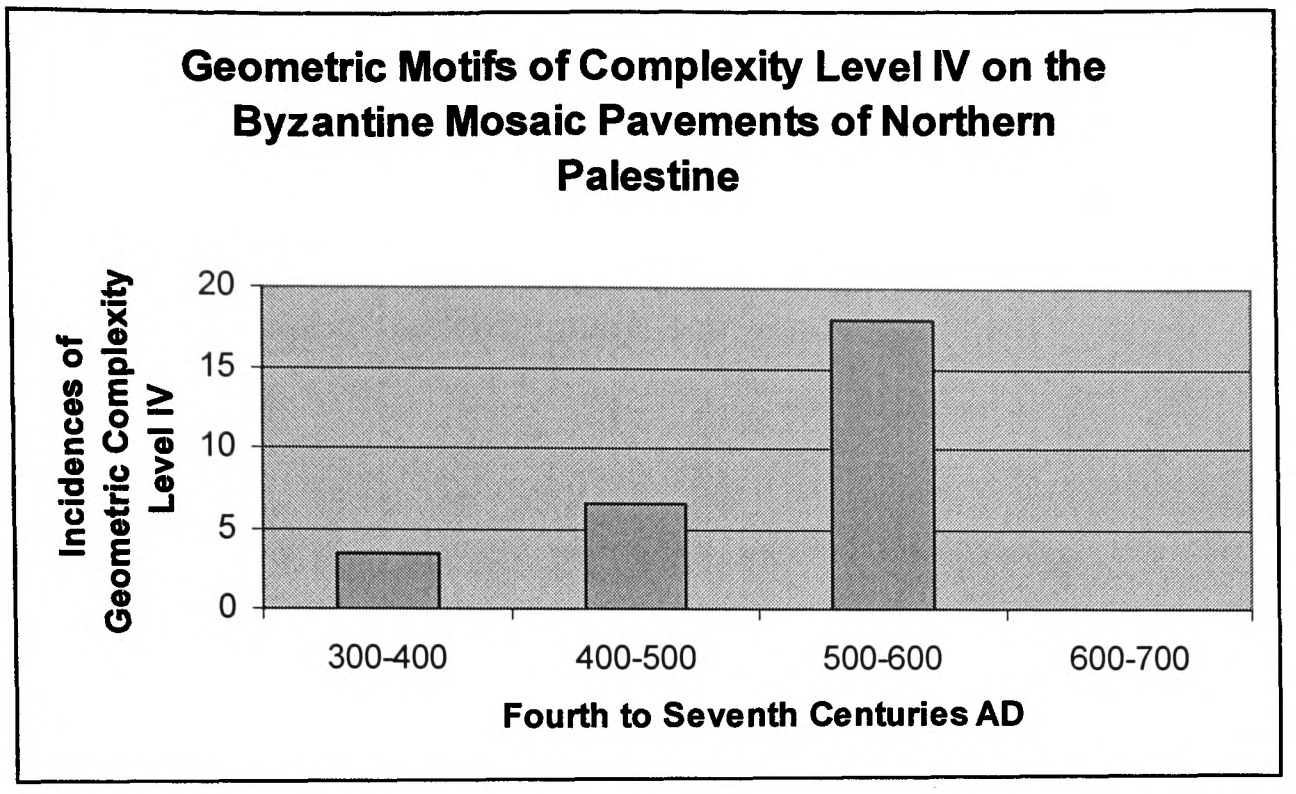

Chart 14. Incidences of Complexity Level IV on the Byzantine mosaic pavements of Northern Palestine

The chronological pattern presented in Chart 14 for Northern Palestine mirrors that of Phoenicia (Chart 12), although no example of Complexity Level IV decoration occurred in seventh-century Northern Palestine. The observable pattern exhibits a marked increase of complex geometry in the fifth century, compared with the fourth century, and an acceleration of that increase in the sixth century.

As for Phoenicia, the observed pattern is somewhat misleading. The increase in geometric complexity tended to be proportional to the number of floors laid during the Byzantine period in Northern Palestine. For this reason the incidences of Complexity Level IV motifs are again expressed below as a percentage of the total number of pavements per century in Chart 15. The observed pattern is again similar but more subtle than that expressed in Chart 14 (although there is a small dip in the fifth century): fourth century: 23%, fifth century: 22%, sixth century: 36%. Complexity Level IV patterns also frequently occurred several times on floors of the

same site in the fifth century (the Synagogue of Khirbet Samara [No.11/25/1]) and in the sixth century (such as the House of the Nile Festival at Zippori [No.9/15/1]). This factor is redressed by a small degree by two incidences of Complexity Level IV decoration in the Synagogue of Hammath Tiberias (No.10/11).

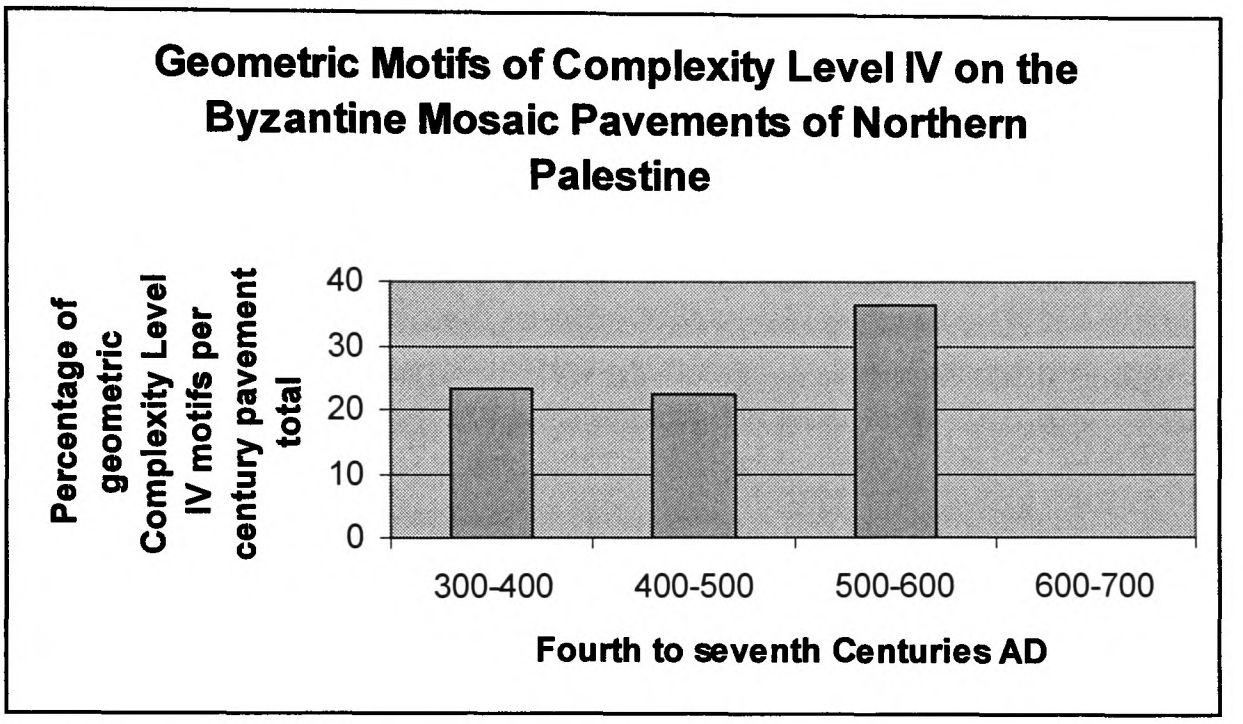

Chart 15. Incidences of Complexity Level IV on the Byzantine mosaic pavements of Northern Palestine expressed as a percentage of the total number of pavements per century

Taking both factors into account (as for the examples of the Phoenician Corpus), it is clear that a marked tendency towards a greater complexity of geometric decoration characterized the mosaic pavements of Northern Palestine in the fifth, and especially the sixth century by contrast with the fourth century - albeit more subtly than Chart 6 indicates.

The emergence of more complex geometric forms may perhaps best be explained by the marked increase in mosaic pavement laying during the fifth, and particularly the sixth century. The elaboration of geometric motifs may have been a

natural consequence of the media reaching an unprecedented popularity: the craft was practised by more artisans and there was more choice.

The increasing complexity of geometric patterns in the period appears inversely proportionate to the decrease in *tesserae* densities mentioned above for inhabited scroll pavements. We should stress, however, that the available densities of the Corpus occasionally exhibit relatively high cube densities per dm^2. This is particularly the case in mosaics of high prestige buildings such as the House of the Nile Festival (No.9/15/1), whose figurative and geometric densities reach a maximum of 225-256 and 100-169 per dm^2 respectively.[31] Likewise, the densities of the nave of in the Church of St Christopher at Qabr Hiram reach 200 per dm^2.[32]

The general lowering of cube densities and increasing complexity of geometric patterns, may well be connected with the increasing popularity of the media in the fifth and sixth centuries. Mass production and the advent of larger cubes threatened aesthetic presentation in the media, but this was effectively masked by the artisan in a more complex arrangement of geometric patterns.

7. Conclusion

In seeking an explanation for the predominance of geometric over figurative decoration on the mosaic pavements of Byzantine Phoenicia and Northern Palestine,

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[31] These figures are greater than one of the third century floors of Shabha in Syria mentioned in Chapter II (156 per dm^2).
[32] A figure equal to the fourth century Church of the Nativity in Bethlehem.

we devised four grades of geometric complexity. This provided a basis with which to analyze the data on the mosaic pavements of different rooms and room parts in different functional building types. Many of the results obtained were of no great surprise. In private buildings, it emerged that floors of the highest quality were those of reception rooms and guestrooms of high prestige; these often comprised complex geometric decoration coupled with programmes of figurative iconography. Lower quality floors tended to be either lower prestige guestrooms, corridors and service areas, decorated with lower grade geometric patterns and plain tessellated pavements. In public spaces, too, we drew a distinction between areas of high quality geometric and figurative decoration on the one hand, such as public walkways; and low quality decoration on paved walkways. In Christian buildings, rooms and room parts of the highest quality such as naves, aisles and rooms connected with the liturgy, also tended to be decorated with complex geometric patterns associated with figurative iconography. Rooms decorated with lower quality ornamentation, such as chancels and narthexes, comprised lower grade patterns of geometric complexity, plain tessellated pavements and rarely featured figurative decoration. In Jewish and Samaritan synagogues we also highlighted a decorative hierarchy between naves on the one hand, with complex geometric patterns coupled with high counts of figurative decoration and areas of lower quality, such as narthexes and aisles.

In an attempt to find an explanation for such patterns of distribution and quality on the mosaic floor decoration of the region, it was contended that functional considerations may have played a key role. This was most obvious in buildings of a commercial and agrarian function, such as warehouses, granaries and winepresses which would have required a plain floor surface. A functional explanation seems

equally appropriate for the sparsely decorated walkways. We suggested that function may have also been an important factor in determining the quality and distribution of decoration on pavements of religious buildings. This is clear thematically (notably regarding Jewish and Christian symbolism) in view of the context-specific nature of the decoration concerned. However, function was rejected as an explanation for the floors of religious buildings, attention being drawn to the factor of wear and tear. We also demonstrated that a 'functionalist explanation' was not entirely appropriate for the quality and distribution of mosaic pavements in private buildings, since quality of decoration tended to vary from site to site.

In private buildings we may infer that a correspondence existed between quality of floor decoration and social use. The highest quality decoration (complex geometric and figurative) was exclusive to reception rooms and guestrooms/bedrooms of important guests or occupants. Lower quality decoration (less complex geometric decoration) was confined to guestrooms/bedrooms of less important guests or occupants. The lowest quality decoration (simple or plain tessellated flooring) covered the floors of service rooms or of those used by the least important members of the household. In religious buildings, correspondence between quality of decoration and liturgical level of participation could often be inversely proportional, and could vary between buildings. We concluded that different rooms and room parts carried varying degrees of religious symbolism, and this most likely played a major role in determining the degree of ornamentation in different parts of the building.

The economic aspects of laying mosaic pavements were also considered. We noted that more elaborate geometric and figurative decoration was more time

consuming to lay than less elaborate geometric decoration and plain tessellated paving, and required a greater financial expenditure on behalf of the patron. This notion gains support from the analysis of the individual wage scales of the workers and artisans of the mosaic teams of the period. This hypothesis was strengthened further by the observation of the relative proportions of decoration in the region, low-grade geometric decoration being the most popular, and high-grade geometric as well as figurative decoration appearing least frequently. Thus financial expenditure was a principal factor in determining the quality and distribution of mosaic floor decoration in Byzantine Phoenicia and Northern Palestine. We also suggested that quality of decoration often corresponded to social level of patronage, since high-grade geometric and figurative decoration often appeared in monumental buildings, and high levels of social patronage were frequently attested by the inscriptions on the mosaic pavements of the region. However, social category of patronage was rejected as the sole explanation for decorative quality, since donations were frequently communal or collective.

In sum then, several factors apparently determined decorative quality and its distribution in the different rooms and parts of rooms of functional building types in Byzantine Phoenicia and Northern Palestine. These factors include function, social category of usage (in private buildings), liturgy and liturgical level of participation (in religious buildings), as well as the social status of the patron(s). Various symbolical aspects of different parts of churches and synagogues also seem to have played their part. The overriding factor, however, is economic expenditure. Analysis makes it clear that the distribution of decoration and its quality in the region represents a direct index of financial expenditure.

In private buildings, this resource was directed towards reception rooms – areas of the greatest prestige, in order to impress guests and bolster self-status. The advent of the Byzantine period saw the transmission of mosaic pavements to the Christian sphere. This effectively provided the wealthy landowners with the opportunity to extend their self-glorification in decorative terms. Thus high status flooring shifted to rooms of 'receptacle' rather than 'reception': naves, aisles and rooms closely associated with the enactment of the liturgy having become the reception rooms of the public sphere, were decorated with the greatest ostentation. The purity of the sacred apse where the Holy Mysteries were enacted was on the contrary expressed by the simplicity of symbolical decorative schemes.

In terms of chronological distribution, geometric patterns exhibited a trend towards greater complexity in the fifth and sixth centuries. This pattern mirrors the general expansion in the number of floors laid in the region during the same period and as such may best be viewed as more of a subtle rather than a radical trend. The noted increase in complex geometric patterns may best be explained by a media unparalleled in popularity in Roman and Byzantine Phoenicia and Palestine, which in turn opened up a greater choice of designs. The paradox of falling cube densities and increasing complexities in geometric floors in the region during the Byzantine period, may be a consequence of the desire of artisans to mask the use of larger cubes by devising more complex patterns.

CHAPTER V

THE INSCRIPTIONS OF THE BYZANTINE MOSAIC PAVEMENTS OF PHOENICIA AND NORTHERN PALESTINE: SOME ASPECTS OF PATRONAGE

The present chapter examines the secular and religious inscriptions on the mosaic pavements of Phoenicia and Northern Palestine in the context of patronage. The study of mosaic inscriptions in the region has tended, at one extreme, to deal with face value appraisals of a large corpus. The mosaic catalogues of Avi-Yonah[1] and of the Ovadiahs[2] exemplify this kind of approach. The three authors published a comprehensive range of inscriptions in their original language (Greek, Aramaic, Georgian, Hebrew, Samaritan or Syriac), together with an English translation and a superficial interpretation of the inscriptions of the whole corpus concerned. The other extreme is characterized by a more analytical interpretation of a small number of inscriptions from a specific site, typified by K. Holum's[3] study. By tying the Greek inscriptions uncovered in a large edifice in Byzantine Caesarea to a small number of offices (*chartularoi*, *magistrianos*), Holum succeeded in plausibly identifying the Imperial Revenue Office of the capital of *Palaestina Prima*.

By applying an analytical approach to a broader range of sites containing mosaics in Late Antique Arabia, L.-A. Hunt[4] identified wealthy male and female family members of the local community as prominent benefactors: 'In these mosaics the personal and the

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[1] Avi-Yonah, 1933, 136-181; 1934, 26-47, 49-73; 1935, 187-193.
[2] Ovadiah and Ovadiah, 1987.
[3] Holum, 1995, 333-345.
[4] Hunt, 1994, 119-123.

communal can be seen to intersect, with the family as the influential economic and social cornerstone, and the participation of women as donors … a notable factor.'

A more analytical approach was provided by Saller and Bagatti's excellent study of the mosaic inscriptions from several sixth-century churches on Mount Nebo (Khirbet el-Mekhayyat),[5] which pinpointed members of the clergy and lay men and women as benefactors. A further merit of their work was the distinction made between named donors on the one hand, and eponyms on the other, whose names appeared merely for chronological purposes: 'The analysis of the 14 inscriptions in the four churches at Mekhayyat has brought us into contact with at least 36 persons of the first half of the sixth century of the era. Seven or eight of these people belong to the clergy, the rest to the laity. The clergy is represented by two bishops, an archdeacon, three or four priests and a monk … The two bishops, John and Elias, are probably mentioned only for chronological reasons.' Of the laity, Saller and Bagatti state: 'of whom 18 are men and 10 are women, may be divided into five groups. In the first group we place the consul Flavius, who was mentioned only for the sake of fixing the date … Amos and Closis, the benefactors of the church named after them, form a third group …'[6]

The distinction between donors and eponyms is fundamental, but has not always been observed by more recent scholars of epigraphy and Byzantine history and archaeology. As such, this issue will form a key aspect of the present chapter (Part One). Thus while being confined to a specific medium of epigraphy – mosaic inscriptions – the

[5] Saller and Bagatti, 1949, 138-203.
[6] Saller and Bagatti, 1949, 202-203.

present chapter also aims to contribute in a critical manner to the field of epigraphical studies in general.

The mechanisms of patronage (whether public, civil, military, ecclesiastical or private) in Phoenicia (Part Two) and Northern Palestine (Part Three) as a whole are then presented in Tables 21 and 23. Part Four deals with the Jewish and Samaritan inscriptions of Northern Palestine. The inscriptions of the Corpus provide specific information concerning donorship and benefactors, notably their names as individuals, as well as their status and family ties. Distinct patterns of donation emerge, the individuals concerned being members of wealthy landowning families, church officials, ordinary members of the local community acting on their personal initiative, or on behalf of a communal or ecclesiastical institution as a whole.

In Part Five, the historical aspect of patronage in the Eastern Roman Empire is examined, in particular the decline of the *curiale* class and the rise of the clergy, especially the bishops, and of landowners, against the background of a general overview of the structures of patronage.

It should be stressed that it is not the intention to offer a definitive reinterpretation of patronage in the region during the Byzantine period. Rather, the objective is to bring to light some of the more specific patterns of social munificence on the basis of the evidence supplied by inscriptions on floor mosaics.

1. The Inscriptions on the Byzantine Mosaic Pavements of Phoenicia and Northern Palestine: Donors and Eponyms

Principally, the objective may be regarded as a contribution towards understanding the general mechanism of social patronage in the region during the Byzantine period. We hope thus to address the following questions. Did the patterns of patronage highlighted above apply equally to Phoenicia and Northern Palestine, and spread across the imperial, civic, ecclesiastical and private spheres? Were building projects predominantly local initiatives? Or are these distinctions more blurred? Was patronage more evenly distributed across the social classes, and in particular did the lower classes, for example, play any financial role?

The large number of inscriptions on the mosaic pavements of the region enables us to reconstruct a reasonably complete picture of patronage (Tables 17-20). For the purposes of this analysis, the table may be divided into two levels of importance. Firstly, and of lesser importance: statistical information such as the zone number and name; site number and name; date by century or specific year (if known); building and building part. Secondly, the information gleaned from the inscriptions, including donors names, family ties and status (or occupation); name, status (or occupation) of eponyms; and, occasionally information relating to the craftsmen responsible for the execution of the mosaics themselves (name, status, family tie). Finally, the type of donation is categorised (salvation, donation, thanksgiving or wish) and the sum of the donation stated (where this occurs).

A. Donors and Eponyms

In the inscriptions on many of the mosaics of the Corpus it is important to make a clear distinction between, on the one hand, named donors who contributed (in part or whole) to a building project, and, on the other, eponyms whose names appear in inscriptions specifically for chronological purposes.

L. Di Segni,[7] for instance, identified in a mosaic floor inscription from Beersheba,[8] two members of the military administration (*subscribandarii*, low-grade clerks attached to the office of the *dux*) as benefactors of a building of unknown character:

> Ἐπὶ Φλλ Πέτρου καὶ Ἀναστασίου λαμπροτάτων βοηθ(ῶν) σκριβανδαρίων ἀνενε(ώ)θ(η).
>
> **"Under Fl. Petrus and Fl. Anastasius, *clarissimi subscribandarii,* (this building) was renovated."**

This interpretation is problematic, because the use of the Greek *epi* followed by the genitive 'under' or 'in the time of' in Byzantine inscriptions indicated that the named individuals were merely eponyms and not necessarily benefactors. Dating by eponym(s) in the Byzantine period perpetuated an Assyrian and Neo-Assyrian habit whereby a functionary (the *limu*) gave his name to his year of office.[9] Thus the formula, 'under' or

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[7] Di Segni, 1995, 327.
[8] Figueras, 1986, 273-276.
[9] Grumel, 1958, 227-228. For the *limu*, see *The Chicago Assyrian Dictionary*, vol. 9, 1973, 194-196.

'in the time of' merely referred to the tenure of the named officiant and not to a benefaction by this person, unless his donation was also clearly mentioned.

This has considerable side-effects across the range of epigraphic media, since eponyms are frequently considered to be benefactors. Di Segni[10] erroneously states that a fourth-century inscription[11] from the vicinity of Beth Govrin (Eleutheropolis) in Palestine commemorates the erection of a hostelry by the *dux* Fl. Quintianus:

Ἐπὶ φλ(αουίου) Κυντιανοῦ τοῦ λαμπρ(οτάτου) κόμ(ητος) καὶ δουκὸς τὸ ἀπαντητήρι(ο)ν ἐκ θεμελίων ἐκτίσθη.

"Under Flavius Quintianus, the *clarissimus* count and *dux*, the hostelry was built from the foundations."

In her analysis of patronage in the diocese of *Oriens*,[12] Marlia Mango also made the incorrect assumption that when the formula 'under' appeared in inscriptions of various media, this suggested benefaction on behalf of the named individual, when in fact the formula used is merely a chronological indicator. Two examples from the Corpus serve to illustrate the point: the first, the mosaic pavement of Room P in the Monastery of Lady Mary at Beth Shean (No.12/30/1); the second, an inscription in the north aisle in the Church of St Rhodonos at 'Ain es-Samake in Phoenicia (No.3/7b):

Ἐτελ(ειώ)θη τὸ πᾶν ἔργ(ο)ν τῆς ψ(η)-
φ(ώ)σεως ἐπὶ τοῦ πρεσβυτέρου Γε(ω)-
ργίου κ(αὶ) (ἡ)γουμένου κ(αὶ) δευτεραρίου Κομιτᾶ

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[10] Di Segni, 1995, 321.
[11] *SEG*, XXXII, no. 1496; XXXV, no. 1537.
[12] Mango, 1984, I, 75-94; 1984, II, 445-452.

'The whole work of laying the mosaic was completed in the time of the priest and hegumen George and of the *deutarius* Comitas.'

Ἐπὶ τοῦ εὐλα-
β(εστάτου) Νουμενί-
ου διακ(όνου) ἐψεφ
όθε ἔτους ΑΞΧ
ἰνδικ(τιῶνος) ΕΙ.

'Under the very pious deacon Numenus, the pavement was laid in the year 661, 15th indiction [of the era of Beirut, thus 1st October 580 or 30th September AD 581].'

The first inscription literally states that the mosaic was laid in the time of the priest and hegumen George and the *deutarius* Comitas; the second, that the pavement was laid under the deacon Numenus (during his tenure as deacon). Thus in both cases the inscriptions make a specific chronological reference to offices of the officials concerned. In no way is benefaction referred to implicitly or explicitly. This may be contrasted by the next example of the inscription on the lower pavement of the baptistery of the South Chapel at Kafr Kama in Northern Palestine (No.10/16/2):

+ Προσφορὰ Φλ(αβίου) Κόνωνος (καὶ) Θεοδώρου
διακ(όνου) Νοννοῦ ταπ(ε)ινοῦ (ivy leaf)
+ Συ(γ)χώρησον τᾶς ἁμαρτίας ⟨τοῦ⟩ Εὐσταθίου [π]ρε(σβυτέρου)
τοῦ ταπ(ε)ινοῦ Κ(ύρι)ε καὶ τέκνων Ἀμήν

'+The offering of Flavius Conon and of Theodorus Nonnus, the humble deacon (ivy-leaf).

+Lord, forgive the sins of the humble presbyter Eustathius and of his children. Amen.'

Here, the benefaction of Flavius Conon and Theodorus Nonnus the deacon is abundantly clear.

2. Named Donors and Eponyms on the Mosaic Inscriptions of the Byzantine Provinces of Phoenicia Maritima and Phoenicia Libanensis

In order to unravel the different categories of patronage latent in the inscriptions of the Corpus, these were sorted by title (or occupation) of the named individual or implied donor (eponyms being dealt with separately below). Table 21 below lists the titles or occupations of named donors on the Byzantine mosaic inscriptions of Phoenicia and the number of times they appear.

Status/occupation of named donors	Occurrences
Deacon	8
Economos	3
Priest	1
Sub-Deacon	1
Shipowners	1

Table 21. The status and occupation of named donors in the inscriptions on the Byzantine mosaic pavements of Phoenicia

Ai. Church Officials

With the exception of a 'shipowner', all the named donors are ecclesiastics. The highest-ranking official is a priest[13] (mentioned once), Dideus, in an inscription on the pavement of the southern aisle of the Upper Church of Khan Khalde (No.3/10/b). Priests belonged to the middle category of the three major orders of the clergy. Priests were subordinate to bishops, but superior to deacons. A priest was assigned by the bishop to a parish under the latter's jurisdiction. Priests were able to celebrate the liturgy or administer baptism only in churches (*katholikai ekklesiai*), immediately dependent on the bishop, rather than in private chapels (*eukteria*). Priests received their salary directly from their bishop or from the properties of the Episcopal district to which they had been assigned.

Next mentioned (eight times) is the deacon.[14] Deacons Kosteus, Basianus and Joseph appear as donors in the nave inscription of the Church of Nebha (No.2/1), Rhodonus in the south aisle inscription of the Church of Khan Khalde (No.3/10b), and Demetrius (mentioned four times) in the inscriptions of the nave, chancel, south apse and

[13] Kazhdan, *et alii*, 1991, 1718.
[14] Kazhdan, *et alii*, 1991, 592.

south apse entrance in the Church of Horvat Hesheq (No.7/32). Mention is also made of a sub-deacon named Baracheus in the narthex inscription in the Church of Zahrani (No.5/1). Deacons were the lowest of the three major orders of the clergy. Their role was ministerial, assisting at baptism, serving at the celebration and distributing the Eucharist. In addition, deacons supervised the charities dispensed by the church, managed the property and finance of the diocese and acted as the bishop's secretary.

An *economos*[15] is mentioned once in the singular and once in the plural (*economoi*). Aeiannus the *economos* is named as a donor in the nave inscription of the Church of Beit Mery (No.3/6), whilst Tsaiab is referred to as *economoi* in the nave inscription of the Church of Nebha (No.2/1). Resulting from a grammatical error, *economoi* should in fact read *economos*, since only one person is named. The *economos* was a cleric, usually a priest, responsible for the management of the property, income and expenditure of an Episcopal see or religious foundation. In AD 451, the Council of Chalcedon decreed that every bishop should appoint an *economos* from his clergy and not administer the affairs of his see in person (canon 26). This ruling was reiterated and elaborated by the Second Council of Nicaea in AD 787, which extended this requirement to monasteries (canon 11). The *economos* or steward of a monastery was a senior monk responsible for the management of its properties, especially agricultural estates and the maintenance of monastic buildings. The *economos* was often ranked second in the hierarchy of a monastery and frequently ultimately became its abbot (*higoumenos*).[16]

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[15] Kazhdan, *et alii*, 1991, 1517.
[16] See below for a definition and discussion of this title.

Aii. Private Donors

The one anomaly amongst the named status or occupation of donors in the Phoenician inscriptions occurs in the inscription in the northern aisle in the Church of Zahrani (No.5/1). Although not specifically mentioned as such, these donors (whose names have not been preserved), were probably lay members of the local community. It is certainly plausible that the shipowners in question may have been 'middle class' merchants of the kind identified as donors in the Kaper Koraon Treasure by M. Mango.

Aiii. Family Ties of donors

Family ties between named donors are mentioned in several instances in the inscriptions of Phoenicia. The first is in the nave inscription of Beth Mery (No.3/6): 'for the salvation of Aeiannus, the *economos* and of his children.' The second family tie is disclosed by the narthex inscription of the Zahrani church (No.5/1): 'for the salvation of Baracheus, the sub-deacon, and of Neestarius and of Baracheus his sons, the *ambulatorium* of the holy church was paved with mosaics ...' Another case is the *diaconicon* inscription of the same church: 'Generosa, daughter of Severas, Sabaris, son of Eulalios.' Finally, at Horvat Hesheq four separate inscriptions refer to family ties: in the nave, 'for the salvation of Demetrius the deacon and of Georgius (his) son and of all their household ...'; in the chancel, '... remember for good Thy servant Demetrius the deacon who built this holy building, and Georgius (his) son and all their household.'; in the south apse, 'for the salvation of Demetrius the deacon and of Georgius (his) son, and for the rest of

Somas (his) father and of Demetrius and Theodora (his) children'; lastly, at the entrance to the south apse, 'O Lord God of Saint Sergios, have pity on Thy servant Demetrios the deacon and Georgius (his) son and of all their household.' Three generations were thus involved: Grandfather Somas, his son Demetrius and daughter Theodora, and lastly Georgius, the son of Demetrius.

Aiv. Eponyms

Table 22 below lists the titles or occupations of eponyms on the Byzantine mosaic inscriptions of Phoenicia and the number of times they appear. As in the case of the named donors of Phoenicia, eponyms in this region were mainly ecclesiastics.

Status/occupation of eponyms	Occurrences
Archbishop	1
Bishop	4
Country bishop	4
Higoumenos	1
Deacon	2
Sacristan	2
Priest	4
Arch deacon	1
Economoi	1
Abbot	1

Table 22. The status and occupation of eponyms in the inscriptions on the Byzantine mosaic pavements of Phoenicia

The highest-ranking official mentioned as an eponym is archbishop Longinus in the fragmentary inscription from the Church of Khirbet Karkara (No.7/7). Other eponyms are Bishop Michael in the nave inscription of the Church of Nebha (No.2/1), Bishop Sergius mentioned twice in another inscription in the nave of the same church,

and a bishop whose name is not preserved in the inscription at the entrance to the nave in the Church of Zahrani (No.5/7). Bishop Photinus is named in the exonarthex inscription in the Church of Shavei Zion (No.7/26b). Mention is also made of country bishops: Sergius in the nave inscription of the Church of Nebha (No.2/1), Georgius in the chancel inscription of the Church of St Christopher (No.6/1) at Qabr Hiram, Polychronius in a fragmentary inscription from the Church of Khirbet Karkara (No.7/7), as well as unnamed country bishops in the esonarthex inscription of the Church of Shavei Zion (No.7/26b).

The archbishop or metropolite was the highest-ranking member of the Byzantine clergy. The bishop (who was next in rank) was in charge of the administration of the bishopric (*episkope*).[17] All ecclesiastical properties, charitable institutions and hospitals of the bishopric were under the bishop's jurisdiction (although these were managed and administered by various officials such as the *economos*). The revenues of the bishop's see were derived from property, voluntary offerings, and donations. This revenue was used for the upkeep of the bishop and his clergy, for the sick, poor, redemption of war prisoners and church maintenance.

Priests are referred to as eponyms in three instances: Sergius, also named as a country bishop in the nave inscription of Nebha; Abylas, mentioned in the southern aisle inscription in the Church of Zahrani (No.6/1); Sallus, mentioned in the inscription of the *diaconicon* (Phase I) in the same church; and Zaccharias in the chancel inscription of the Church of Zahrani (No.7/1).

[17] Kazhdan, *et alii*, 1991, 291-292.

An unnamed archdeacon is used as an eponym in the chancel inscription of the Church of St Christopher (No.6/1) at Qabr Hiram, and deacon Numenus is mentioned in the inscription of the northern aisle in the Church of 'Ain es-Samake (No.3/7b).

Sacristans Stephanus and Aeianus acted as eponyms in the baptistery inscription of the Church of Jiye (No.4/2). The Sacristan was the member of the clergy or laity who was in charge of the moveable property of a church, notably the sacred vessels and vestments used in Divine worship.

Unnamed *economoi* are mentioned as eponyms in the chancel inscription of the Church of St Christopher at Qabr Hiram (No.6/1). Other ecclesiastics referred to as eponyms include a *higoumenos* named Sergius, who was both a priest and bishop, in the nave inscription of the Church of Nebha (No.2/1). A *hegoumenos* was the abbot of a monastery, responsible for the administration, economic management, and spiritual leadership of a monastic community.[18] An abbot, named Thomas, also acted as eponym in the inscription of Room 2 in the ecclesiastical farm of Shelomi (No.7/5b).

[18] Kazhdan, *et alii*, 1991, 907-908.

Av. Private Donors

Names of donors devoid of a specific status or title were but few. These included a certain Abba[19] Sabatius, Petrus and Khabber in the Church of Nebi Younes (No.4/3). Two individuals (whose names are not preserved) are mentioned alongside a certain Damianus in the inscription at the nave entrance in the Church of Zahrani (No.5/7). In the fragmentary inscription of the Church of Khirbet Karkara, three individuals are named - Gaeianus, Dorotheus and Bassus – but without title or occupation.

B. Discussion

It is clear from the inscriptions of the Phoenician Corpus that named donors and eponyms were predominantly ecclesiastics. For reasons already stated it is imperative to distinguish between donors on the one hand, and, on the other, eponyms who are named for chronological purposes and are not benefactors. Where donors are concerned it is not clear whether the individuals were private benefactors or conducted their patronage on behalf of the Church. A more careful scrutiny of selective inscriptions is therefore necessary. The example below, from the nave of the Church of Nebha (No.2/1) seems to indicate institutionalised patronage (the floors were paid for by the Church).

[19] The title Abba is synonymous with Father monk.

1 Ἐν χρόνοις τοῦ ὁσιω(τάτου) π(ατ)ρό-
ς ἡμῶ(ν) καὶ ἐπισκ(όπου) Μιχάηλ ἐ-
ψηφόθη ἡ μέση τῆς ἁγ(ίας)
ἐκλησίας μ[ετὰ] καὶ τῶν
5 δύω ἐμβό[λων] κ(αὶ) τοῦ νά-
ρθικος σπο[υδῆ] Κοστέου
διακ(όνου) ⟨καὶ⟩ Βασιάνου (καὶ) Ἰῶσιφ δ-
[ι]ακ(όνου) ⟨καὶ⟩ Τζαΐαβ οἰκονόμ-
ων ἐν μ(ηνὶ) Δεκενβ⟨ρ⟩ίου
10 ἰν(δικ)τι(ῶνος) Ε΄ τοῦ ΗΝΜ ἔτους †[8]

'At the time of our very holy father and bishop Michael, the central nave of the holy church was paved with mosaics at the same time as the two porticoes and the narthex by the care of Kosteus the deacon, of Basianus and of Joseph the deacon (and of) Tsaiab the *economoi*, in the month of December, in the year 5 of the indiction, 958 [of the era of Seleucids, thus AD 646].'

We should consider three points in particular. It is noteworthy that the first reference is to Bishop Michael as an eponym who, however, may also have sanctioned the expensive project of paving the church with floor mosaics.[20] Reference to three deacons, Kosteus, Basianus and Joseph, and to an *economos*, Tsaiab, is also significant. Above it was noted that in addition to the deacon's ministerial capacity his role was to supervise the charities dispensed by the church, manage the property and finances of the diocese and act as the bishop's secretary. Similarly, the *economos* was responsible for the management of the property, income and expenditure of the bishop's see or of a monastic foundation. It is thus likely that the project of paving the church with mosaics

[20] See the arguments relating to the cost of laying floor mosaics in Chapters III and IV.

was granted by the bishop and then devolved to the deacons concerned in their secretarial role who then oversaw the financing of the project along with the *economos*.

A well-attested example of institutionalized patronage may be found in the chancel inscription of the Church of St Christopher at Qabr Hiram (No.6/1).[21] This has been interpreted by Claudine Dauphin who, following Renan, offered the plausible suggestion that it implied an ecclesiastical hold over rural property: the country-bishop was assisted by an *epitropos* or bailiff, who through the stewards ruled over the peasants of the two estates concerned.

The family ties of named individuals in ecclesiastical inscriptions may allow us to discriminate between private and institutionalised patronage. The inscription at the entrance to the nave in the Church of Zahrani (No.5/1) exemplifies this:

1 Ὑπὲρ
σωτηρίας Βα-
ραχέου ὑποδιακ(όνου)
(καὶ) Νεεστάρου (καὶ) Βαρα-
5 χέου υἱῶν αὐτοῦ ἐψε-
φώθη τὸ ἀμβλατού-
ριον τῆς ἁγίας ἐκλη-
σίας μη(νὸς) Ἰουνίου Ā ἰν-
δικ(τιῶνος) Δ̄ τοῦ $\overline{\text{A⟨N⟩X}}$
10 ἔτους

[21] Mentioned above several times, the inscription appears in full in Chapter IV.

'For the salvation of Baracheus, the sub-deacon, and of Neestarus and of Baracheus his sons, the *ambulatorium* of the holy church was paved with mosaics, on the 1st June in the year 651, 4th indiction [of the era of Sidon, thus AD 541].'

This suggests that the donation was private and not made by institutions. The dedication seeking salvation for Baracheus, the subdeacon, and for his two sons Neestarus and Baracheus, indicates a family-oriented donation, with the implication that the named sons of the subdeacon may also have been benefactors.

Likewise for the five inscriptions in the Church of Horvat Hesheq (No.7/32). One example, from the chancel of this building, serves to illustrate this point:

+Κ(ύρι)ε ὁ Θ(εὸ)ς τοῦ ἁγίου καὶ ἐνδόξου μάρ-
τυρος Γεοργίου μνήσθητι εἰς ἀγαθὸν τοῦ δού-
λου σοῦ Δημητρίου διακ(όνου) τοῦ κτίσαντος
τὼν ἅγιον οἶκον τοῦτον καὶ Γεοργίου υἱοῦ καὶ
παν (τὸς) τοῦ οἴκου αὐτῶν. +

'+ O Lord God of the holy and glorious martyr Georgius, remember for good Thy servant Demetrius the deacon who built this holy building, and Georgius (his) son and all their household.'

Addressed to the martyr Georgius, this inscription suggests that Demetrius the deacon was the benefactor. Since 'household' is the Byzantine equivalent of the Roman term '*gens*', 'their household' refers to other family members who were included in the

blessing. Thus we may draw the conclusion that Demetrius was a wealthy individual, and that this donation was almost certainly private.

Another certain instance of private donation may be found in the *diaconicon* (Phase 1) of the Church of Zahrani (No.5/1). Here, the names of the donors and their family links are given although without any title:

1 Γενάρωσα
Σηβέρας
Σαβάρις
Εὐλαλίου

'Generosa, daughter of Severas; Sabaris, son of Eulalios.'

In this case, the benefactors appear to have been a married couple, although their matrimonial tie is not explicitly stated. The fact that their names appear without a title suggests that they were lay members of a wealthy local family. Another instance of private patronage may be found in the northern aisle of the same church:

1 † Κύ[ριε ... οι]
Ναύκληροι εὐξάμενοι
τὴν σταυὰν ἐψήφωσαν †

'+ Lord ... The shipowners, following the prayer/vow which they made, paved this portico with mosaic.'+

It was suggested above that these donors may have been wealthy 'middle class' merchants. It is interesting that the names of the benefactors remain anonymous. Perhaps because they made their offering as a corporation.

Anonymous donations feature prominently in the inscriptions of the region. The baptistery mosaic (Phase 2) of the same church of Zahrani provides another example:

1 Ἠπὶ τ[οῦ
ἡμῶν πρ[εσβυτέρου
Σάλλως [οἱ καρ-
ποφορέ[σαντες
5 τὴν ψέφ[ωσιν

'Under our … priest Sallus, those who have made the offering of the mosaic.'

In this example, the benefactors who are mentioned in the plural, are not named. This factor is perhaps explicable in terms of 'inverted snobbery', the donors wishing to remain anonymous. Alternatively, there may have been several donors, and they were not mentioned by name since none gave a proportionally larger amount. In any case, the social status of the benefactors cannot be identified in this inscription.

In sum, the social categories of patronage gleaned from the inscriptions on the Byzantine mosaic pavements of Phoenicia, are various: one the one hand, institutionalized ecclesiastical patronage, on the other, private benefactions by local wealthy individuals. The notion that patronage was largely institutionalized is supported

by the high number of officials who appear as donors and eponyms and whose roles included the financial administration of the Church. To these we may add bishops, priests, deacons, *economoi* and *higoumenoi*. It is also clear that private benefactors were, in a number of cases, high-ranking church officials. The identity of private donors is indicated by their family ties and, in certain cases, by their lack of title and anonymity. It may be assumed that many of these individuals were members of the lay community. Both categories, in many cases, are attested in the inscriptions themselves. We may also make a distinction between explicit patronage, donations by named (or unnamed) donors; and eponymous references to named individuals, figures of authority who merely serve as chronological markers and whose role in benefaction cannot be proven.

Table 23. The mosaic inscriptions of Phoenicia: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
2	Baalbek	1	Nebha	1	646	Kosteus			Deacon	Michael	Bishop
						Basianus			Deacon		
						Joseph			Deacon		
						Tsaiab			*Economoi*		
2	Baalbek	1	Nebha	2	632-633					Sergius	Bishop
											Higoumenos
										Sergius	Country Bishop
										Sergius	Priest
2	Baalbek	1	Nebha	3	600-700						
3	Baalbek	2	Souedie	1	300-400	Patrikios					
3	Beirut	6	Beit Mery	1	500-600	Aeiannus		Father-Children	*Economos*		
3	Beirut	7b	'Ain es-Samake	1	581						
3	Beirut	7b	'Ain es-Samake	2	605						
3	Beirut	10b	Khan Khalde	1	607-608						
3	Beirut	10b	Khan Khalde	2	621-622	Dideus			Priest		
									Deacon		
									Economoi		
3	Beirut	10b	Khan Khalde	3	503-506						
4	Sidon	2	Jiye	1						Stephanus	Sacristan
										Aeianus	Sacristan
4	Sidon	2	Jiye	2	573-4						

Table 23. The mosaic inscriptions of Phoenicia: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ Occ	Eponyms Name	Eponyms Status
4	Sidon	3	Nebi Younes		585					Abba Sabatius	
										Petrus	
										Khabber	
5	Tyre	1	Zahrani	1	541	Baracheus		Father of Neestarius	Sub-Deacon		
						Neestarius		Son of Barachius			
						Barachius					
5	Tyre	1	Zahrani	2							Bishop
5	Tyre	1	Zahrani	3					Shipowners		
5	Tyre	1	Zahrani	4	500-600					Abylas	Priest
5	Tyre	1	Zahrani	5	500-600						
5	Tyre	1	Zahrani	6	500-600						
5	Tyre	1	Zahrani	7	500-600		Unnamed Several			Sallus	Priest
5	Tyre	1	Zahrani	8	500-600	Generusa		Wife of Sabaris			
						Sabaris		Husband of Generusa			

Table 23. The mosaic inscriptions of Phoenicia: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
5	Tyre	1	Zahrani	9	535	Gottheias		Father of Sabarius			
						Sabarius		Son of Gottheias			
						Sousias		Father of Leontius			
						Leontius		Son of Sousias			
1	Bennt Jbail	1	Qabr Hiram	1	575						Arch Deacon
										Georgius	Country Bishop
											Economoi
										Zaccharias	Priest
7	Nahariyya	5b	Shelomi	1	610					Thomas	Abbot

Table 23. The mosaic inscriptions of Phoenicia: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
7	Nahariyya	7	Khirbet Karkara	1	477					Longinus	Arch Bishop
										Polychronius	Country Bishop
										Gaeianus	
										Dorotheus	
										Bassus	
7	Nahariyya	26b	Shavei Zion	1	500-600						Country Bishops
7	Nahariyya	26b	Shavei Zion	2	486					Photinus	Bishop
7	Nahariyya	32	Horvat Hesheq	1	519	Demetrius		Father of Georgius	Deacon	Demetrius	Deacon
						Georgius		Son of Demetrius			
							Unnamed Several				
7	Nahariyya	32	Horvat Hesheq	2	500-600	Demetrius		Father of Georgius	Deacon		
						Georgius		Son of Demetrius			
							Unnamed Several				
8	Zefat	4a	Khirbet Marus	1	*ca* 450	Yudan					

Table 24. The mosaic inscriptions of Phoenicia: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Name	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
2	Baalbek	1	Nebha	1	646			Church	Nave	Donation	
2	Baalbek	1	Nebha	1	632-633			Church	Nave	Donation	
2	Baalbek	1	Nebha	1	600-700			Church	S Intercols	Wish	
3	Baalbek	2	Souedie	1	300-400			Villa	Hall		
3	Beirut	6	Beit Mery		500-600			Church	Nave	Salvation	
3	Beirut	7b	'Ain es-Samake	1	581			Church	North Aisle	Donation	
3	Beirut	7b	'Ain es-Samake	2	605			Church	Portico	Donation	
3	Beirut	10b	Khan Khalde	1	607-608			Church	Atrium		
3	Beirut	10b	Khan Khalde	2	621-622			Church	Portico	Donation	
3	Beirut	10b	Khan Khalde	3	503-506			Church	Antecham-ber	Donation	
4	Sidon	2	Jiye	1	500-600	Theodorus		Church	Baptistery	Salvation	
4	Sidon	2	Jiye	2	573-4			Church	Baptistery		
4	Sidon	3	Nebi Younes		585			Chapel	Chapel	Donation	
5	Tyre	1	Zahrani	1	541			Church	Narthex	Donation	
5	Tyre	1	Zahrani	2	541			Church	Narthex	Salvation	
5	Tyre	1	Zahrani	3	500-600			Church	Nave		

Table 24. The mosaic inscriptions of Phoenicia: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Name	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
5	Tyre	1	Zahrani	4	500-600			Church	N Aisle	Wish	
5	Tyre	1	Zahrani	5	500-600	Kesarius		Church	S Aisle		
5	Tyre	1	Zahrani	6	500-600			Church	Vestibules		
5	Tyre	1	Zahrani	7	500-600			Church	*Diakonikon*		
5	Tyre	1	Zahrani	8	500-600			Church	Baptistery	Donation	
5	Tyre	1	Zahrani	9	535			Church	*Diakonikon*	Salvation	
1	Bennt Jbail	1	Qabr Hiram	1	575			Church	Chancel	Salvation	
1	Bennt Jbail	1	Qabr Hiram	2	575			Church	N Aisle	Wish	

Table 24. The mosaic inscriptions of Phoenicia: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Named	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
7	Nahariyya	5b	Shelomi		610			Eccles. Farm	Room	Donation	
7	Nahariyya	7	Khirbet Karkara		477			Church	?	Donation	
7	Nahariyya	26b	Shavei Zion		486			Church	Exo Narthex	Donation	
7	Nahariyya	32	Horvat Hesheq	1	519			Church	Nave	Salvation	
7	Nahariyya	32	Horvat Hesheq	2	500-600			Church	Chancel	Thanksgiving	
7	Nahariyya	32	Horvat Hesheq	3	500-600			Church	S Apse	Salvation	
7	Nahariyya	32	Horvat Hesheq	4	500-600			Church	S Entrance	Wish	
8	Zefat	4a	Khirbet Marus		*ca* 450			Jewish Synagogue	Nave	Dedication	

3. Named Donors and Eponyms on the Mosaic Inscriptions of Byzantine Northern Palestine

Table 25 below lists the titles or occupations of named donors on the Byzantine mosaic inscriptions of Northern Palestine and the number of times they appear. Unlike the inscriptions of Phoenicia, those of Northern Palestine provide a wider range of donors who include civic and military officials. Patronage in Northern Palestine (as opposed to that in Phoenicia) also included Jewish and Samaritan donors.

Status/occupation of named donors	Occurrences
Priest	6
Villagers	2
Disciple	5
Deacon	2
Sub deacon	2
Archdeacon	1
Economos	1
Reader	1
Abbot	1
Bishop	1
Commander	1
Presbyter	2
Magister	1
Comes	1
Head	1
Administrator	1
Chartularios	1
Chartularoi	1
Numerios	2
Count	2
Ex-prefect	2
Illustrius	1
City Father	1

Table 25. The status and occupation of named donors in the inscriptions on the Byzantine mosaic pavements of Northern Palestine

The most senior member of the ecclesiastical establishment referred to (albeit only once) in the category of named donors in the Northern Palestinian Corpus of mosaic inscriptions is Bishop Euphrasius in the Chapel of Kafr Kama (No.16/2). There are several references to priests in the sub-region. In the Church of Karmiel (No.9/5a), the priests Maximos and Procopios are mentioned in separate nave inscriptions. In the Monastery of Shiqmona (No.9/9/1), the courtyard inscription includes several unnamed priests; and in the Church of Khisfin (No.10/5/1), the inscription of the upper pavement cites the priest Thomas. There are also several references to deacons. The nave inscriptions of the Church of Karmiel (No.9/5a) mention an archdeacon (of whose name only two letters are preserved), the deacons Baracheos and Appas, and the sub-deacon Epiphanos. In the Chapel of the Angel at Nazareth, an 'offering of Conon, Deacon of Jerusalem' was made in the Chapel room, while in the Chapel of Kafr Kama (No.10/16/2), the deacon Thodoros Nonnos is mentioned in the hall inscription and the deacon Arianus the inscription of Room 2.

In the inscriptions of the sub-region, other ecclesiastics acting as donors include an *economos* in the nave inscription of the Church of Karmiel (No.9/5a). Amongst other officials are several unnamed presbyters in the *atrium* inscription of the Lower Church of Khirbet el-Karak (No.10/19/2a) and the presbyters Elijah and Basil in the hall inscription of the Upper Church of Khirbet el-Karak (No.10/19/2b). The title presbyter is synonymous with that of priest, presbyters thus belonging to the middle order of clergy. Other references include one to a reader (whose name is not preserved), in the nave inscription of the Church of Karmiel (No.9/5a). A reader was a member of the clergy or

a lay member of the church responsible for reading out extracts of the sermon during the liturgy and translating Greek and Latin into the vernacular Christo-Palestinian form of Western Aramaic.

Ai. Private Donors

The stated family ties of donors may enable us to identify private donors. A multitude of untitled and many unnamed donors people the ecclesiastical inscriptions of Northern Palestine. As in the Phoenician examples, these were most probably members of wealthy local families. One such example in the northern aisle of the Church of Qal'at el Hisn (No.10/10), which mentions Procopius, his son Petros and a second son (whose name is not preserved). Additionally, an inscription in Room 2 of the Chapel of Kafr Kama (No.10/16/2) mentions the family of an individual named Anastasius. Another example on a warehouse floor at Caesarea Maritima (No.11/8/40) wishes 'good luck to Stephanus with his wife and children.' Two additional examples of specific family ties among named donors occur in the Monastery of Lady Mary (No.12/13/1). The first, in Room D, links Lady Mary to her son Maximos; the second, Elias to his late sister, Georgia.

Aii. Civil, Civic and Military Officials

In addition to the named ecclesiastical donors and private individuals, there were municipal officials. In the *diaconicon* inscription of the Church of Khirbet el-Karak (No.10/19/2a), a *magister* Theodore is named next to Theophilus and Basil, whose

occupation remains unknown. The title *magister* (which refers to a high-ranking public official) also appears in an inscription on Floor IV of the 'Archives Building' at Caesarea Maritima (No.11/8/17) alongside two untitled individuals Ampelios and Musonios. A single reference to Marianus, cited as both chief physician and the father of the city (*pater tes poleos*), is recorded in an inscription on the East *Cardo* pavement at Zippori (No.9/15/3).

Other civic officials are recorded in Floor VIII of the 'Archives Building', including Ampelios the *chartularios*, Musoinios the *numerarios* and several unnamed *chartularoi*. In a building located nearby, probably also with an official function, a *numerarios* Eusebios is named (No.11/8/33). The titles, *chartularios* and *numerarios* identify public officials whose task included the collection of provincial revenues.[22]

Patronage by State officials is suggested in the inscription of Hall A in the Monastery of Lady Mary (No.12/13/1), since it refers both to an *illustrius*, Zosimus, and to John, an ex-prefect. The title 'illustrious' was bestowed on State officials of high rank, notably the *praetorian prefect*, urban prefect, *magister militum*, consuls and *patrikioi* at the end of their service.[23] It is hard to identify the precise role of John the ex-prefect, since the term covered a range of official duties in the period from the highest (*praetorian prefect*, urban prefect), to local governor (for example, prefect of Egypt), fiscal officials (prefect of the *anonna*), police officers (prefect of the night watch or *nykteparchos*), and

[22] See Holum, 1995, 333-345.
[23] Kazhdan, *et alii*, 1991, 986-987.

certain roles pertaining to military command (*praefectus militum*).[24] Since, however, the inscription names him as 'John, the most glorious ex-prefect' we may assume him to have been a very high-ranking state official. Possible military sponsorship is suggested in the Room 2 inscription in the Chapel of Kafr Kama (No.10/16/2), since the inscription links 'the salvation of the most holy bishop Euphrasius' with the 'most illustrius Commander Theodorus'. In the inscription in Hall A in the Monastery of Lady Mary (No.12/13/1), mention is made of the 'Christ-loving counts' Peter and Anastasius. It is difficult to ascertain the precise office of the individuals concerned, since the title of count (*comes*) could be applied to a range of Byzantine officials.[25] We may, however, assume that the individuals concerned were high-ranking officials of either the civic or military sphere.

Aiii. Eponyms

Table 26 below lists the titles or occupations of eponyms on the Byzantine mosaic inscriptions of Northern Palestine and the number of times they appear.

[24] Kazhdan, *et alii*, 1991, 1713-1714.
[25] Jones, 1964, 104-106.

Status/occupation of eponyms	Occurrences
Bishop	2
Priest	3
Abbot	1
Emperor	1
Governor	1
Comes	3
Consul	3
Archon	1
Higoumenos	1
Deutarius	1

Table 26. The status and occupation of eponyms in the inscriptions on the Byzantine mosaic pavements of Northern Palestine

Aiv. Church Officials

The most senior title among ecclesiastical eponyms was that of bishop: Stephanos in the narthex inscription of the Church of Karmiel (No.9/5b) and Eutropius (cited in the inscription as Episcopus) in the East *Cardo* inscription at Zippori (No.9/15/3). Priests as eponyms include, Stephanos (also named as abbot) in the baptistery of the Church of El-Kursi (No.10/7/1); Eumonios in the nave inscription of the Church of Khirbet Jabaris (No.12/26); Elias in the Room L inscription of the Monastery of Lady Mary (No.12/13/1); and George (also named as *higoumenos*) in the Room P inscription of the same site.

Av. Civil and Civic Officials

Individuals with a public or civic function appear as eponyms in the following cases. Comitas the *deutarius* in Room P of the Monastery of Lady Mary (No.12/13/1); the *comes* Leon in the West Portico inscription of Beth Shean (No.12/13/5a); the *comes*

Flavius Theodorus and the *comes* Flavius Leon in the *exedra* (No.12/13/5b) and Hall (No.12/13/6) inscriptions of the same city. Two unnamed consuls appear as eponyms in each of the above inscriptions; and there is a single reference to a governor named Palladius Porphyrius in a shop (No.12/13/9). An *archon* is mentioned once only and without a name in the West Portico inscription (No.12/13/5a).

Avi. Imperial Donations

There is only one example of an imperial eponym (Maurice AD 582-602) in the baptistery inscription of the Church of El-Kursi (No.10/7/1).

4. Jewish and Samaritan Patronage on the Mosaic Inscriptions of Byzantine Northern Palestine

A. Jewish Patronage

Jewish patronage was a markedly different phenomenon to that of Christian civil and civic administrators, ecclesiastics and private donors. The changes undergone by Jewish patronage in Palestine from the Second Temple to the Byzantine period have been excellently analyzed by C. Dauphin.[26] The evidence provided by the inscriptions on the mosaic pavements of the synagogues of the specific geographical zone under scrutiny fit in well with the pattern which she has observed in the whole of Palestine.

[26] Dauphin I, 1998, 332-336.

Using donations for the construction renovation and embellishment of synagogues as an index of prosperity, Avi-Yonah concluded that the wealth of the Jews of Byzantine Palestine decreased in relation to that of their Second Temple ancestors.[27] The representative of the most brilliant Jewish patronage of the first century AD in Palestine was without doubt Theodotos, priest and *archisynagogos*, descendant in a long line of *archisynagogoi* as he is described in a Greek inscription,[28] who founded a synagogue and hostel in Jerusalem. At Er Rama in Galilee, a carved inscription of the third-fourth century AD in Aramaic states that Rabbi Eliezer and his sons joined in founding a hostel for pilgrims.[29] This type of patronage disappeared and was replaced by more modest donations which often put to common use financial contributions in the name of the entire community of a rural settlement or of a village.

Second Temple patronage was associated with property ownership itself linked to the priestly cast and focused on the national cult in the Temple of Jerusalem. The destruction of that particular socio-economic system in AD 70 brought about necessarily a different division of wealth that gave birth to a rural society of small landowners. Their participation in the Jewish cult was henceforth more localized. At the same time the synagogue became truly an assembly house, both religious and communal. The synagogue and its annex – the talmudic school – the ritual bath and the hostel belonged to the community and as a result of common agreement the community could decide on the building of a synagogue or the buying of a scroll. According to the importance of individual gifts, a socio-economic hierarchy is clear inside each community. The

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[27] Avi-Yonah, 1984, 239-240.
[28] Lifshitz, 1967, 70-71, No.79.
[29] Hüttenmeister and Reeg, 1977, I, 368-369.

wealthiest members represented only 10 per cent of donors and these covered the expense of the building and decoration of only one part of a new synagogue.[30] Thus in the fourth century AD, a donor of whom only the patronym 'son of Tanhum' is mentioned, covered the expense of flooring with mosaics and roofing the synagogue of Horvat 'Ammudim (No.10/9).

[ ]נח[ ]
]דהטבלה[ ]
]סהואגרה[ ]
]ולכתה[ ]

'May he be remembered .... Son of Tanhum who made this mosaic pavement and the roof. May he be blessed. Amen. Selah.'

At Caesarea the *archisynagogos* Beryllos had the *triclinium* of the sixth-century synagogue (No.11/8/1) paved at his own expense:

Βήρ[υ]λλος ἀρχισυ(ναγωγός)
καὶ φροντιστής
υ(ἱ)ὸς Ἰού(σ)του ἐποί-
ησε τὴν ψηφ(ω)-
δεσίαν τοῦ τρι-
κλίνου τῷ ἰδίῳ

'Beryllos the head of the synagogue and the administrator, the son of Iu(s)tus, made the mosaic work of the *triclinium* from his own means.'

[30] Kindler, 1989, 5.

Donations were generally made either to accomplish a wish for the salvation of a relative or in fulfillment of a vow. At Beth Shean, a marble lintel found in the courtyard of the complex which included the little synagogue (No.12/13/15) and the house of Kyrios Leontis (No.12/13/14) bore the following dedication engraved in Greek 'gift of Nonnos of Cyzicus for his salvation and the salvation of his family'.[31] The family was closely involved in the act of donation in the case of Yose, an innkeeper of Beth Shean, and of his children who together paid for the mosaics of the Samaritan synagogue of Beth Shean (No.12/1/15) adjacent to the house of Kyrios Leontis (No.12/13/14).

Contributions to the laying of a mosaic pavement were evaluated in 'feet'. In the fifth-sixth century synagogue mosaic of Caesarea one Julius had a certain number of feet of mosaic paved in fulfilment of a vow. The Greek inscription being damaged, the exact number is not known.[32]

Eight people, each in fulfillment of a personal vow, got together to pay for the paving of the synagogue of Hammat Tiberias (No.10/11), their Greek names commemorated in squares flanked by two lions in the area of the Zodiac cycle:

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[31] Lifshitz, 1967, 69, No.77c.
[32] Lifshitz 1967, 51, No. 65.

1. Μάξιμος εὐχόμε- νος ἐποί- ησεν ζήσῃ	2. Ἀβουδέ- μος εὐχό- μενος ἐπ- οίησεν	3. Ζωΐλος εὐχόμε- νος ἐποίη- σεν ζήσῃ
4. Ιοῦλλος προνούμ- ενος πάντ- α ἐτελ(ε)ίωσε	5. Καλ(λ)ίνικο- ς εὐχόμε- νος ἐποίη- σεν ζήσῃ	6. Εἰορτάσις εὐχόμενο- ς ἐποίησεν σῶς ἔστω
7. Σευῆ[ρος] θρεπτὸς τῶν λα- μπροτάτων	8. Πατριαρχ- ῶν ἐποίησ- εν εὐλογία αὐτῷ ἀμήν	9. [ὁ δεῖνα εὐχόμ-] ενος ἐποίη- σεν ζήσῃ

'Maximos in fulfilment of a vow made, long may he live

Aboudemos in fulfilment of a vow made

Zoïlos in fulfilment of a vow made, long may he live

Ioullos, the supervisor (of the synagogue), completed all (the work)

Callinicos in fulfilment of a vow made, long may he live

Heiortasi(o)s in fulfilment of a vow made, may he be saved

Severos, disciple (*threptos*) of the most illustrious Patriarchs, made: blessed be he, amen

[So-and-so in fulfilment] of a vow made, long may he live'

Occasionally, the exact sum of the donation was specified, the greatest being 5 gold *denarii* that the *Comes* Phoros and several members of his family collected to offer to the synagogue of Hammath Gader (No.10/22):

'And remembered be for good Kyris Hoples, and Kyra Protone, and Kyris Sallustis his son-in-law, and *Comes* Phroros his son and Kyris Photios his son-in-law, and Kyris Haninah his son - they and their children - whose acts of charity are constant everywhere and have given here five *denarii* of gold. May the King of the Universe bestow the blessing upon their work. Amen. Amen. Selah.'

‹ו]כיר ל]ט›כ רב חנחום הל‹וי כ[ר חל]›יפה והכ חר טרימי-
סין ודכיר לטכ מוניקה דסוסיפה (צ"ל: סוסיתה?) צ‹פוריה›
‹וק[ירס פ]›טריק ר(כ)פר עקביה ‹וי›וסה בר דוסתי דמן כפר
נחום דיהבון תלתיהון חלת גרמין מלך
‹ע[למה יח]›ן ברכתה בעמלה‹[ון]› אמן אמן סלה שלום ודכיר
לטכ יודן ארדה מן בימאוס (?) דיהב חלת
‹וד[כירין לט]›כ ארכיליי דיהבו‹[ן]› מחידהון (צ"ל: מחית-
הון?) מלך עלמ(ה) יתן ברכהכ בעמלהון אמן אמן סלה

Anatolia (Inscription 3) contributed 1 *dinar* to the same synagogue and a couple, Yose [bar] Qarosa and Moniqah, gave a half *dinar* or *semissis* (Inscription 4). A gold *tremissis* is the sum most frequently cited for the gift of one individual or of several or even of an entire community. Rabbi Tanhum Levite son of Halifa gave a *tremissis* to the synagogue of Hammath Gader, as did Ada bar Tanhum bar Moniqah as well as the members of the community of this spa (Inscription 1).

Gifts in nature were also evaluated in coinage by the synagogue treasurer. Thus the community of Beth Alfa gave 100 *se'ahs* of wheat towards the mosaic pavement of its synagogue (No.12/7).[33]

The participation of numerous donors to expenses is only known from the mention of their names, as for the synagogue of Hammath Gader. Some donors remained anonymous but called upon themselves divine blessing, as in the synagogue at Hammath Tiberias (No.10/11): 'may peace be on all of those who have given for charity and will give for charity to this holy place in Hammath Tiberias.' Or in the small synagogue of Beth Shean (No.12/13/15):

Πρ(οσφορὰ) ὧν Κ(ύριο)ς γ
ιν(ώ)σκ(ε)ι τὰ
ὀνόματ-
α, αὐτός
φυλάξ(ε)ι ἐν
χρό(νοις)

'The gift of those of whom the Lord knows the names, He shall guard them, in times…'

In this case, the pious reference to only the Lord knows their names, suggests they wished to remain anonymous.

[33] Hüttenmeister and Reeg, 1977, I, 49-50, Nr.3.

Beside the obligatory tax (*pesiqa*) levied by the community from its members, for instance to build a synagogue, there was also a voluntary tax. The community is mentioned as participating financially and communally in building and decorating its synagogue in numerous towns and villages in Byzantine Northern Palestine (and indeed in the whole of Palestine): 'all the people of the town of Beth Alfa (No.12/7)', 'all the members of the holy community of Beth Shean who renovated the small synagogue' (No.12/13/15).

Some communities even made donations to synagogues in their district which for reasons of fame or location attracted many visitors. Thus the Jewish community of Arbela made an offering of cloth at Hammath Gader (No.10/22: Inscription 1). Likewise, gifts were made by individuals to synagogues other than that which they habitually frequented, in thanksgiving for the fulfillment of a vow or for healing. Such must have been the reason behind the donations made by some Jews and Jewesses of Susitah, Zippori, Kefar Nahum and Kfar 'Akabyah to the synagogue of the thermal and healing centre of Hammath Gader.

B. Samaritan Patronage

Two Samaritan synagogues provide inscriptions in the Corpus (all in Greek): El-Khirbe (No.11/26) and Khirbet Majdal (No.11/27). At El-Khirbe the inscriptions expressed the wishes of individuals who most likely contributed to the construction of the synagogue and were probably from wealthy local families. The north exedra entrance inscription

(Inscription 1) states: "Only God, help Sophronius (son) of Frotinus;" that of the main hall (Inscription 2): "Only God, help Ath (emos);" (Inscription 3): "Prosper, Marinus, with your children;" (Inscription 4): "Be exalted Alexas the of … this place;" (Inscription 5): "Be exalted the great soul of Alaphion;" (Inscription 6): "Only God, help … Sintiacus (?) the son) of Mares."

The one preserved inscription in the courtyard of the synagogue at Khirbet Majdal (No.11/27) may indicate a communal donation: "And shall be remembered for good the sons of the village Antesion Theotiokos Julus …"

C. Discussion

As in the Phoenician inscriptions, a large number of named donors and eponyms in the Byzantine inscriptions of Northern Palestine were predominantly ecclesiastics. A careful distinction between private benefaction and institutionalised patronage therefore needs to be made. The Church of Karmiel (No.9/5a) serves as a good example. The first and last nave inscriptions suggest private donations, since the names of the individuals concerned are untitled. The two inscriptions also differ from the other nave inscriptions in that the sum donated is not stated.

Μνησ θῶσιν Ζώσυσ Καί Εἴ μεριȣ	Be remembered Zosys and Imeris

Μνήσθ ῶσιν Λεόν τις κέ Γλυκέρι ς κέ φιρμῖνος κέ Σευῆ ρος	Be remembered Leontis and Glykeris and Firminos and Seviros

The other donors mentioned (with the exception of the reader) are members of the three orders of clergy. Since, it was established above that the bishop, priest and deacons often acted as treasurers of their institution, it is likely that there names appear representationally, and that the donations were raised from the local community:

Κ(ύρι)ε μνήστη θι Μαξίμου τοῦ πρεσβ υτέρου	Lord Remember Maximos the Priest	θεό δωρος ὑποδιάκ ων γράμ μα	Theodoros Subdeacon Gramma

Κ(ύρι)ε μνήστη θι τοῦ δούλ ου σου Προκ οπίου τοῦ π(ρεσβυτέρου)	Lord Remember Your servant Procopios The Priest	Βαρα χέος διά κων γράμ ματος το ήμυσι	Baracheos Deacon Half gramma

''Αππα ς διάκ ων γρά μμα	Appas Deacon Gramma	'Επι φάνις ὑποδιάκ ων γρ άμμα	Epiphanis Subdeacon Gramma

This assumption is further supported by the mention of an *economos* (whose name is not preserved), and whose function was primarily to control ecclesiastical finances.

[Οἰ]
κονό
ομος τῆ
ς ἐκκλη
σίας

'*Economos* of the Church'

It is possible that the officials mentioned in two inscriptions in the 'Archive Building' at Caesarea Maritima (No.8/17) were private benefactors, since the formula, 'Christ help', probably indicates that they were looking for a return on their benefaction in the eyes of God. The fact that Ampelios and Musonios remain untitled, also supports this assumption.

Χ(ριστ)ὲ Βοή-
θι Μαρίνῳ
μαγ(ίστερι) *vel* μαγ(ιστριανῷ) κ(αὶ) 'Αμπε-
λίῳ κ(αὶ) Μου-
σωνίῳ

'Christ help Marinos the *magistrianos* (or *magister*) and Ampelios and Musonios.'

(cross) Χ(ριστ)ὲ Βοήθι Ἀμπελίῳ χαρτ(ουλαρίῳ)
καὶ Μουσωνίῳ νουμερ(αρίῳ)
καὶ λοιποῖς Χαρτουλαρ(ίοις)
τοῦ αὐτοῦ σκρινίου

'Christ help Ampelios the *chartularios* and Musonios the *numerarios* and the rest of the *chartularoi* of the same *skrinion.*'

A certain example of private benefaction is provided by the inscription of Room D in the Monastery of Lady Mary:

Χ(ριστ)ὲ ὁ Θ(εὸ)ς Σωτὴρ τοῦ κόσμου ἐλέησον
τὴν φιλ(ό)χ(ριστο)ν κυρ(ί)αν Μαρίαν κ(αὶ) τὸν
ταύτης υἱὸν Μάξ(ι)μον κ(αὶ) ἀνα-
παῦσον τοὺς αὐτῶν γ(ο)νεῖς
εὐχαῖς πάντων τῶν Ἁγίων Ἀμ(ή)ν

'O Christ, God, Saviour of the world, have mercy upon the Christ-loving Lady Mary and her son Maximus, and grant rest to their forefathers, through the prayers of all the Saints. Amen.'

Since the donors concerned do not share ecclesiastical titles, but exhibit a family tie, it is most likely that they were members of a wealthy local family. The presence of family relations in the inscriptions of Northern Palestine is perhaps the most revealing characteristic of private patronage. The following example in the northern aisle inscription of the Church of Qal 'at el Hisn (No.10/10) further exemplifies this:

1	ΠΡΟΚΟ	Προκό[πιος...δοῦ]	Procopius ... (the servant)
2	ΛΟΧΥΨΗ	λο(ς)Χ(ριστο)ῦ ψή [φωσεν..]	of Christ (made the mosaic pavement
3	ΤΟCΤΟΝΕ	τος τόν ε.....[ὐ]	....)
4	ΠΕΡΜΝ	πέρ μν[ήμης καί ἀναπαύ]	for the (memory and repose)
5	CΕΩCΠΕΤΡΟΥΚ	σέως Πέτρου καί.....	of Petros and .....
6	ΝΑCΤΩΝΑΥΤΟΥΥ	νας τῶν αὐτοῦ υἱ[ῶν]	nas, his sons .....
7	ΕΝΜΗΙΑΝΟΥΑΡ	'Εν μη(νί) 'Ιανουαρ(ίω)	in the month of January

Thus the inscriptions on the Byzantine mosaic pavements of Northern Palestine, exhibit a broad range of sponsorship. Unlike the examples of the Phoenician corpus, patronage extended to the civil and civic realm. This factor is perhaps best explained by the skewed nature of the evidence, since many of these examples in the sub-region come from the provincial capitals of Caesarea Maritima and Beth Shean-Scythopolis. In the ecclesiastical realm, sponsorship took the form of either institutionalized or private patronage by members of the clergy, private lay benefaction or State sponsorship through high-ranking officials. Likewise, in the public domain, much of the patronage would appear to have emanated from the civil authorities, since many of the officials were high-ranking officials. As for Phoenicia, the notion that patronage in Northern Palestine was largely institutionalized is supported by the high number of officials who appear as donors (bishop, priest, deacon) or whose roles included financial administration of the Church (*economos* and *higoumenos*). Private benefaction by high-ranking church officials and lay members of the community is attested by their family ties as well as by their lack of title and anonymity. Both categories often appear together within individual inscriptions.

If the two provincial capitals are ignored, benefactions are purely localized initiatives by private individuals and ecclesiastics. Not surprisingly, officials of a high honorific status do not feature and imperial patronage is absent. In no way does this contradict arguments that mosaics were expensive to produce, since patronage was collective and considerable financial resources were marshaled at the expense of local communities.

The Jewish and Samaritan inscriptions of the region represent an entirely different pattern of patronage. The institutionalised character of benefaction apparent in the ecclesiastical realm does not feature in the Jewish inscriptions. Patronage tended, instead, to be very family and community oriented. In the Byzantine ecclesiastical realm we could find no examples of lower class benefaction; sponsorship was confined either to the so-called 'middle class' merchants or wealthy local individuals (ecclesiastical officials or lay members of the community), although we should not exclude the possibility that anonymous donations could be lower class. By contrast, in the case of synagogues there are examples of donations in kind, material goods, or items (such as cloth) by people of more modest means.

The conclusions which we have reached on the basis of the information contained in inscriptions on mosaic pavements, should be gauged against the wider context of Late Antique patronage in the Eastern provinces of the Byzantine Empire.

Table 27. The mosaic inscriptions of Northern Palestine: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
9	Haifa	1	El-Makr		400-800	Ioulianos					
9	Haifa	5a	Karmiel	1	500-600	Zosys					
						Imeris					
						Maximos			Priest		
						Theodoros			Sub-Deacon		
						Procopius			Priest		
						Baracheos			Deacon		
						Appas			Deacon		
						Epiphanus			Sub-Deacon		
						Leontis					
						Glykeris					
						Firminos					
						Seviros					

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Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
9	Haifa	5a	Karmiel	2	500-600				*Economos*		
						Kono					
									Reader		
						Maximos					
						Asdominos					
						Mninos					
						Theodoros					
						?			Arch Deacon		
						Theodoros					
						Aphaeos					
9	Haifa	5b	Karmiel	3	543					Stefanos	Bishop
9	Haifa	5b	Karmiel	4	543	Iokletos					
9	Haifa	9/1	Shiqmona	1			Unnamed Several		Priests		
9	Haifa	9/1	Shiqmona	2	400-500	Eugenios					
9	Haifa	9/4	Shiqmona	3	300-800		Unnamed Individual				
9	Haifa	15/1	Zippori			Marianus			Chief Physician	Eutropius	Bishop
									City Father		
9	Haifa	22/1	Nazareth			Conon			Deacon		

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Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
10	Teverya	5/1	Khisfin		618	Olympios					
						Thomas			Priest		
							Unnamed		Abbot		
10	Teverya	5/2	Khisfin		400-500	George					
10	Teverya	7/1	El-Kursi	1	582-587				Stephanos		Priest
											Abbot
										Mauricius	Emperor
10	Teverya	9	Qal'at el Hisn	1	591						
10	Teverya	9	Qal'at el Hisn	2	591	Procopios					
						Petros		Father			
								Sons			
10	Teverya	9	Qal 'at el Hisn	3	500-600		Several				
10	Teverya	11	Hammath Tiberias	1	300-400	Maximos					
						Aboudemos					
						Zoïlos					
						Ioullos					
						Callinicos					
						Heiortasios					
						Severos			Disciple		
							Individual				

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Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
10	Teverya	11	Hammath Tiberias	1	300-400	Severos			Disciple		
10	Teverya	11	Hammath Tiberias	2	300-400		Unnamed several				
10	Teverya	11	Hammath Tiberias	3	300-400	Profoturos	Unnamed several				
10	Teverya	19/2a	Khirbet el-Karak	1	538-529		Unnamed several		Presbyters		
10	Teverya	19/2a	Khirbet el-Karak	2	538-529	Theodore			*Magister*	Elijah	Presbyter
						Theophilus				Basil	Presbyter
						Basil					
10	Teverya	22	Hammath Gader	1	500-600	Tanhum			Rabbi		
						Moniqah					
						Kyris Patriqios					
						Yoseh					
						Yudan					

Table 27. The mosaic inscriptions of Northern Palestine: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
10	Teverya	22	Hammath Gader	2	500-600	Kyra Protone		Wife of Hoples			
						Kyris Hoples		Father of Phroros and Hanina, Father-in-law of Sallustis and Photios			
						Kyris Sallustis		Son-in-law of Hoples			
						Phroros		Son of Hoples			
						Kyris Photios		Son-in-law of Hoples			
						Kyris Haninah		Son of Hoples			

Table 27. The mosaic inscriptions of Northern Palestine: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
10	Teverya	22	Hammath Gader	3	500-600	Kyris Leontios		Husband of Kalonike			
						Kyra Kalonike		Wife of Leontios			
						Anatoliya	Community of Hammath Gader				
						Moniqah		Mother of Tanhum and of Yoseh			
10	Teverya	22	Hammath Gader	4	500-600	Tanhum		Son of Moniqah and Qarosah and Father of Ada			
						Ada		Son of Tanhum			
						Yoseh		Son of Moniqah and Qarosah			
						Qarosah		Father			
						Moniqah		Mother			

Table 27. The mosaic inscriptions of Northern Palestine: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
11	Netanya	8/1	Caesarea		ca 450	Berylos			Rabbi		
									Administrator		
11	Netanya	8/17	Caesarea Maritima		500-800	Marinos			*Magister*		
						Ampelios					
						Musonios					
11	Netanya	8/17	Caesarea Maritima	2	500-700	Ampelios			*Chartularios*		
						Musonios			*Numerarios*		
							Unnamed Several		*Chartularoi*		
11	Netanya	8/31	Caesarea Maritima		400-700						
11	Netanya	8/32	Caesarea Maritima		400-700	Eusebius			*Numerarios*		
11	Netanya	8/34	Caesarea Maritima		400-700	Dionysos					
11	Netanya	8/40	Caesarea Maritima		400-700	Stephanos	Unnamed Several?	Wife			
								Children			
11	Netanya	26	El-Khirbe	1	300-500	Sophronius					
11	Netanya	26	El-Khirbe	2	300-500	Athemos	Unnamed Several				
11	Netanya	26	El-Khirbe	3	300-500	Marinus					

Table 27. The mosaic inscriptions of Northern Palestine: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
11	Netanya	26	El-Khirbe	4	300-500	Alexas					
11	Netanya	26	El-Khirbe	5	300-500	Alaphion					
11	Netanya	26	El-Khirbe	6	300-500	Sintiacus					
12	Beth Shean	7	Beth Alfa	1	518-527		Community		Rabbi?	Justin I	Emperor
12	Beth Shean	13/1	Beth Shean	1	500-600	Zosimus			*Illustrius* ?		
12	Beth Shean	13/1	Beth Shean	2	500-600	John			Ex-Prefect		
12	Beth Shean	13/1	Beth Shean	3	500-600	Lady Mary		Mother of Maximos			
						Maximos		Son of Mary			
12	Beth Shean	13/1	Beth Shean	4	500-600					Elias	Priest
12	Beth Shean	13/1	Beth Shean	5	500-600	Elias	Priest	Brother of Georgia			
						Georgia		Sister of Elias			
12	Beth Shean	13/1	Beth Shean	6	500-600					George	*Hegumen*
											Priest
										Comitas	*Deutarius*
						Anan					
12	Beth Shean	13/5a	Beth Shean	1	400-500					Leon	*Comes*
											Archon

Table 27. The mosaic inscriptions of Northern Palestine: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
12	Beth Shean	13/5b	Beth Shean	1	500-600					Flavius Theodoros	*Comes*
											Consul
12	Beth Shean	13/5b	Beth Shean	2	500-600					Thodoros	Consul?
12	Beth Shean	13/6	Beth Shean		500-600					Flavius Leon	*Comes* & Consul
12	Beth Shean	13/9	Beth Shean	1	400-500					Palladius Porphy-rius	Governor
12	Beth Shean	13/11	Beth Shean		300-400						
12	Beth Shean	13/12	Beth Shean		500-600						
12	Beth Shean	13/13	Beth Shean		575-640	Ephraim					
						Anan					
12	Beth Shean	13/15	Beth Shean	1	550-600		Unnamed Several				
12	Beth Shean	13/15	Beth Shean	2	550-600		Unnamed Community				

Table 27. The mosaic inscriptions of Northern Palestine: dates, donors and eponyms

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Donors Named	Donors Unnamed	Donors Family Tie	Donors Status/ occ	Eponyms Name	Eponyms Status
12	Beth Shean	26	Khirbet Jabaris		500-600					Eumonios	Priest
						John			Ex-Prefect		
						Peter			Count		
						Anastasius			Count		
							Unnamed Several				

Table 28. The mosaic inscriptions of Northern Palestine: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Name	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
9	Haifa	1	El-Makr		400-700					Wish	
9	Haifa	5a	Karmiel	1	500-600			Church	Nave	Wish	
										Wish	
										Donation	*Gramma*
										Wish	
										Donation	Half *Gramma*
										Donation	*Gramma*
										Donation	*Gramma*
										Wish	
9	Haifa	5a	Karmiel	2					N Aisle Intercols		
										Donation	*Gramma*
										Donation	*Gramma*
										Donation	*Gramma*
9	Haifa	5b	Karmiel	3	543			Church	Narthex	Donation	
9	Haifa	5b	Karmiel		500-600			Church	Nave		
9	Haifa	9/1	Shiqmona		400-500			Courtyard	Monastery	Wish	
9	Haifa	9/4	Shiqmona		300-700				?		
9	Haifa	22/1	Nazareth		400-500			Chapel	Chapel	Donation	
9	Haifa	15/1	Zippori		500-600			Villa	*Triclinium*	Wish	
9	Haifa	15/3	Zippori		400-500			Cardo	Pavement		
9	Haifa	20	'Isfiya		500-535			Jewish Synagogue	Nave	Wish	

Table 28. The mosaic inscriptions of Northern Palestine: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Name	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
10	Teverya	5/1	Khisfin		618			Church		Salvation	
10	Teverya	5/2	Khisfin		400-500			Church	S Aisle	Salvation	
10	Teverya	7/1	El-Kursi		582-587			Church	Baptistery	Donation	
10	Teverya	9	Qal 'at el Hisn	1	591			Church	Nave	Donation	
10	Teverya	9	Qal 'at el Hisn	2	500-600						
								Church	N Aisle		
10	Teverya	9	Qal 'at el Hisn	3	500-600			Church	S Aisle	Wish	
10	Teverya	11	Hammath Tiberias		300-400			Jewish Synagogue	Nave	Wish	
10	Teverya	11	Hammath Tiberias	1	300-400	Ioullos		Jewish Synagogue	Eastern Aisle	Wish	
10	Teverya	11	Hammath Tiberias	2	300-400			Jewish Synagogue	Easternmost Aisle	Wish	
10	Teverya	16/2	Kafr Kama		500-600			Chapel	Hall		
10	Teverya	16/2	Kafr Kama						Room	Salvation	
10	Teverya	19/2a	Khirbet el-Karak		538-529			Church	Atrium	Wish	
10	Teverya	19/2b	Khirbet el-Karak		500-700						
10	Teverya	22	Hammath Gader	1	500-600			Jewish Synagogue	Nave	Donation	1 *tremissis*
											3 *scruples*
											3 *scruples*
											Cloths

Table 28. The mosaic inscriptions of Northern Palestine: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Name	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
10	Teverya	22	Hammath Gader	2	500-600			Jewish Synagogue	Nave	Donation	5 gold *denarii*
10	Teverya	22	Hammath Gader	3	500-600			Jewish Synagogue	Nave	Donation	*Denarii*
											1 *denarius*
											1 *tremissis*
10	Teverya	22	Hammath Gader	4	500-600			Jewish Synagogue	Nave	Donation	1 tremissis
											½ *denarius*
11	Netanya	8/1	Caesarea		*ca* 450			Jewish Synagogue	Nave	Donation	
11	Netanya	8/17	Caesarea Maritima	1	500-700			Official	Room		
11	Netanya	8/17	Caesarea Maritima	2	500-700			Official	Room		
11	Netanya	8/31	Caesarea Maritima		400-700					Wish	
11	Netanya	8/32	Caesarea Maritima		400-700			Paved Area	Wish		
11	Netanya	8/34	Caesarea Maritima		400-700			Paved Area	Wish		
11	Netanya	8/40	Caesarea Maritima		400-700			Warehouse	Room	Wish	
11	Netanya	26	El-Khirbe	1	300-500			Samaritan Synagogue	Narthex	Wish	

Table 28. The mosaic inscriptions of Northern Palestine: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Name	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
11	Netanya	26	El-Khirbe	2	300-500			Samaritan Synagogue	Nave	Wish	
11	Netanya	26	El-Khirbe	3	300-500			Samaritan Synagogue	Nave	Wish	
11	Netanya	26	El-Khirbe	4	300-500			Samaritan Synagogue	Nave	Wish	
11	Netanya	26	El-Khirbe	5	300-500			Samaritan Synagogue	Nave	Wish	
11	Netanya	26	El-Khirbe	6	300-500			Samaritan Synagogue	Nave	Wish	
12	Beth Shean	5/1	Beth Ha-Shitta		500-600			Ecclesiastical Farm	S Chapel	Wish	
12	Beth Shean	7	Beth Alfa	1	518-527			Jewish Synagogue	Nave	Donation	
12	Beth Shean	7	Beit Alfa	2	518-527	Marianos	Father of Hanina	Jewish Synagogue	Nave	Wish	
						Hanina	Son of Marianos				
12	Beth Shean	13/1	Beth Shean	1	500-600			Monastery	Hall	Donation	
										Wish	
12	Beth Shean	13/1	Beth Shean	2	500-600			Monastery	Hall	Wish	
12	Beth Shean	13/1	Beth Shean	3	500-600			Monastery	Hall	Wish	
12	Beth Shean	13/1	Beth Shean	4	500-600			Chapel	Room		
12	Beth Shean	13/1	Beth Shean	5	500-600			Chapel	Room		

Table 28. The mosaic inscriptions of Northern Palestine: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Name	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
12	Beth Shean	13/1	Beth Shean	6	500-600			Monastery	Room	Donation	
12	Beth Shean	13/1	Beth Shean	7	500-600						
12	Beth Shean	13/5a	Beth Shean	1	400-500			Public Space	Exedrae	Donation	
12	Beth Shean	13/5a	Beth Shean	2	400-500			Public Space	Portico	Donation	
12	Beth Shean	13/5b	Beth Shean	1	500-600			Public Space	Exedra	Donation	
12	Beth Shean	13/5b	Beth Shean	2	500-600			Public Space	Exedra	Donation	
12	Beth Shean	13/6	Beth Shean		500-600			Public Space	Hall	Donation	
12	Beth Shean	13/9	Beth Shean		300-500			Commercial	Shop	Wish	
12	Beth Shean	13/11	Beth Shean		300-400			Public Space	Stoa		
12	Beth Shean	13/12	Beth Shean		500-600			Monastery	Room	Wish	
12	Beth Shean	13/13	Beth Shean		500-600					Wish	
12	Beth Shean	13/14	Beth Shean		500-600			*Villa*	Room	Wish	
12	Beth Shean	13/14	Beth Shean	1	500-600			*Villa*	Room	Salvation	

Table 28. The mosaic inscriptions of Northern Palestine: craftsmen, building and donation

Zone No	Zone Name	Site No	Site Name	Inscr No	Date AD	Craftsman Name	Craftsmen Family Tie	Building Type	Building Part	Donation Type	Donation Sum
12	Beth Shean	13/13	Beth Shean	1	575-640	Marianos	Father of Anina	Samaritan Synagogue	Room	Dedication	
						Anina	Son of Marianos				
12	Beth Shean	13/13	Beth Shean	2	575-640			Samaritan Synagogue	Room	Wish	
12	Beth Shean	13/15	Beth Shean	1	550-600	Unnamed		Jewish Synagogue	Nave	Wish	
12	Beth Shean	13/15	Beth Shean	2	550-600	Unnamed		Jewish Synagogue	Nave	Wish	
12	Beth Shean	13/15	Beth Shean	3	550-600	Unnamed		Jewish Synagogue	Nave	Wish	
12	Beth Shean	26	Khirbet Jabaris		500-600			Church	Nave	Donation	

5. The Historical Aspect of Patronage in the Eastern Provinces of Late Antiquity

As research in Late Antique urbanization has amply demonstrated, the Roman Empire was an agglomeration of cities (*civitates*), self-governing communities responsible for the administration of the territories which they occupied. Each *civitas* possessed a town which acted as its administrative capital and, to varying degrees, its economic and social centre.[34] This trend continued through the fourth, fifth and into the sixth century and beyond, although the political position and local status of the local aristocrats who ran the cities and constituted the *curiae* (the *curiales* or decurions) was considerably eroded by the strengthening of central government.[35] Prominent figures in the Late Antique provincial city were the bishop and clergy, the major landowners, and certain lay officials with financial and judicial responsibilities, such as the 'city advocate' and 'father of the city'.[36] Citing written sources, M. Whittow has presented a convincing argument for the bishop, clergy and landowners – the ruling trinity of the Late Roman city – to have come from the same social background as their predecessors (*curiae*) and become the main benefactors of urban projects: 'in the same way, just as expenditure on public baths, temples and gymnasia had once bought and confirmed status and membership of an élite,

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[34] Jones, II, 1964, 712; Jones, 1966, 237.
[35] Jones, 1964, II, 737-757; Jones, 1966, 242-247; Liebschuetz, 1972, 174-86; Ward-Perkins, 1998, 373-382.
[36] Jones, 1964, II, 760-6; Claude, 1969, 114-29; Rouché, 1979, 173-85; Dagron and Feissel, 1987, 215-20; Whittow, 1990, 12.

so in the sixth century did the founding of churches and monasteries, and expenditure on mosaics and liturgical silver.'[37]

For instance, among the donors of the Kaper Koraon silver treasure in Syria, M. Mango[38] identified a single archbishop (Amphilochioch) and three high-ranking lay officials: Megas, a prominent figure at the court of Constantinople, ranking third after the Master of Offices and the *quaestor*; Sergios, who may be plausibly identified as an official in a state silver factory (*tribunus fabricae*); and Symeonios, a *magistrianos* (one of the 'master's men'). Mango suggests that the other donors of the silver treasure were 'middle class' property owners, merchants or artisans. She also detected two extremes of donorship in Late Antiquity: imperial patrons, such as the *magister utriusque milititae* Flavius Vlalila who built an entire church and equipped it with furnishings and an income;[39] and 'subscription' donors, each of whom contributed in a relatively small way towards the construction of a church or its decoration, or who presented it with individual objects, produce or property.[40]

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[37] Whittow, 1990, 29. Whittow draws attention to the work of C.J. Wickham (1988, 65), who has documented a similar process in the territory of the Tuscan city of Lucca in the eight and ninth centuries, when landowners ceded land to the church in order "to become associated with the bishop and the power structures of the city, for such gifts were very often associated with entry into the episcopal clientele."
[38] Mango, 1986, 8-11.
[39] Mango, 1986, 264 (entry No. 91).
[40] Cohen, 1979, 21.

A. Patronage in the Byzantine Provinces of Phoenicia and Palestine

Patrons in the Byzantine Provinces of Phoenicia and Palestine (as well as in the other provinces of the diocese of *Oriens*) may be divided into the following categories:[41] public authorities (the emperor), civil authorities (*comes Orientis*, provincial governors), military authorities (*duces*, *comites rei militaris*), church authorities (bishops), municipal authorities (*megas*, *neotkistos*, *proteuon*, *astynomos*, *pater tes poleos*, *magistranus*, and so on) and private individuals (bishops and other members of the clergy acting at a personal level, landowners and other members of the community).

Ai. Public Authorities

i. Emperors

Imperial sponsorship of civil building projects in Northern Palestine include the harbour of Caesarea Maritima, restored by Anastasius between AD 501-518,[42] and secular buildings restored by Justinian in Palestine I and II in AD 531.[43] The repair of the city walls of Beth Shean-Scythopolis under Justin I in AD 524-526,[44] the repair of the city walls of Gaza in AD 536[45] and the repair of the circuit wall of Bethlehem AD 531-560 under Justinian[46] bear witness to imperial patronage of urban defence projects in

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[41] For the section that follows I rely heavily on the excellent analysis of patronage in the diocese of *Oriens*, by Marlia Mango, 1984, I, 75-94; 1984, II, 445-452.
[42] Schwartz, 1962, 72-3, 75.
[43] Schwartz, 1962, 72-3, 75.
[44] Martindale, II, 1980, 665.
[45] Downey, 1955, 199-208.
[46] Procopius, *Buildings*, V.ix.12.

Palestine. Church building in Palestine included: the Church of the Holy Sepulchure in Jerusalem under Constantine in AD 326-335;[47] the Church of Gethsemane in Jerusalem by Theodosius I *ca* AD 385;[48] the building of the patriarchal palace in Jerusalem by Theodosius II in AD 443-460;[49] the rebuilding of the Church of St Procopius in Caesarea in *ca* AD 484,[50] the restoration of the Church of St Procopius in Neapolis in *ca* AD 484,[51] the construction of the octagonal church on Mount Gerizim in *ca* AD 484 under Zeno;[52] the restoration of the Church of Theotokos in Jericho in AD 527-560,[53] the construction of the Nea complex in Jerusalem (AD 531-43),[54] and the rebuilding of the Church of the Nativity in Bethlehem under Justinian,[55] all resulted from imperial sponsorship of church building in Palestine.

Aii. Civil Authorities

i. Comes Orientis

Civil authorities also figure prominently as benefactors. Many building projects have been directly attributed to the *comes Orientis* (the officer in charge of the diocese of *Oriens*), notably the building or restoration of streets, colonnades, *fora*, roads, aqueducts, bridges and walls. In Palestine, acting upon the order of the Emperor Constantine, the

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[47] Wilkinson, 1981, 160.
[48] Vincent and Abel, 1926, 905.
[49] Vincent and Abel, 1926, 910.
[50] *Chr. Pasch.*, I, 604.
[51] Malalas, 382f.
[52] Malalas, 382f.
[53] Procopius, *Buildings*, V.ix.6.
[54] Procopius, *Buildings*, V.vi.1-26.
[55] Schwartz, 1962, 72-3, 75.

comes Orientis provided money and workmen for the building of the Church of the Holy Sepulchure. A building of unknown use was constructed in AD 605 at Sobata in Palestine by two military officers (*priores*) and a *vicarius* (a title by which the *comes Orientis* was known - *vicarius* of the *praefectus praetorii*), who is also mentioned there in a private capacity.[56]

ii. Provincial Governors

Provincial governors also figured conspicuously as benefactors among the civil authorities. Most of the recorded building projects recorded by provincial governors were urban and public. Some examples of building by governors in Palestine include the construction of walls and gates at Diocaesarea (AD 395-402),[57] at Caesarea (AD 500-516-7),[58] Beth Shean-Scythopolis (AD 524-6)[59] and Gaza (AD 536-48);[60] streets and porticoes in Gaza (AD 536-48);[61] the building of an aqueduct at Caesarea (AD 385);[62] the construction of *fora* at Diocaesarea[63] (AD 517-8 or 532), Gaza (AD 536-48)[64] and Caesarea (AD 562 and 577);[65] a bathhouse and theatre at Gaza (AD 536-48)[66]; and the

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[56] Negev (1981, 88-90), however , identifies him as the governor.
[57] *MAMA*, III, 70, no. 64
[58] See Mango, 1984, 457 (table of building by governors) VII.A.1.
[59] Fitzgerald, 1939, 46f, Pl. XVIII.
[60] Choricius, , *Laud. Marc.*, I, 7; II, 16.
[61] Choricius, , *Laud. Marc.*, II, 28-54.
[62] Jones, *et alii*, I, 1971, 366.
[63] Avi-Yonah, 1960, 184-7.
[64] Choricius, , *Laud. Marc.*, II, 17-20.
[65] Lifshitz, 1961, 122.
[66] Choricius, *Laud. Marc.*, II, 17-20.

laying of paving at Beth Shean-Scythopolis (AD 526-7).[67] In Phoenicia Libanensis, a road was built by a governor in AD 382-3.

Aiii. Military Authorities

i. Magister Militum per Orientem, Comites rei Militaris

The military forces of *Oriens* were under the command of the *magister militum per Orientem* who, from Antioch, controlled both the *duces* with their *limitanei* attached to the provinces and the *comites rei militaris* with their field armies. Military patrons were associated with the construction of certain city walls and towers (which were normally civic concerns). Around 50 examples may be attributed to individuals with titles (in some cases ecclesiastical), but these are mainly outside the region, concentrated in the Mesopotamian provinces. In times of war, military officers participated in building projects, such as the construction of a tower at Heliopolis in Phoenicia Libanensis (AD 635-6).[68]

ii. Soldiers, Curiales

Non-military and entirely urban work was supervised and implemented by military personnel in a number of cities. For example, the cathedral at Gaza was built (AD 402-7)

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[67] Avi-Yonah, 1944, 165.
[68] *IGLS*, 1929-82, no. 2828.

partly by soldiers,[69] and a canal was dug at Heliopolis-Baalbek (AD 430-1) by a member of the *curia* most likely in the *strategia* of the *dux*.[70]

Aiv. Church Authorities

i. Bishops

Bishops may be specifically linked by name to many building projects in the region, by, under, or through whom public works were carried out. Some examples include: the repair of the city wall of Gaza (AD 536);[71] the construction of waterworks in Heliopolis (AD 300-400);[72] the refurbishment of a bathhouse in Beth Shean-Scythopolis (AD 558-9);[73] the rebuilding of a civil basilica at Diocaesarea (AD 517-8 or 532-3);[74] and an unspecified number of building projects across the Provinces of Palestine I and II (AD 531).[75]

Av. Municipal Authorities

Municipal figures – civic or village officials and prominent members of the local community – figure as 'patrons' in the region during the Byzantine period. These fell

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[69] Jones, *et alii*, II, 1971, 331.
[70] *IGLS*, 1929-82, no. 2831.
[71] Downey, 1955, 199-208.
[72] *IGLS*, 1929-82, no. 2830.
[73] Avi-Yonah, 1963, 325f.
[74] Jones, *et alii*, II, 1971, 922.
[75] Schwartz, 1962, 72-3, 75.

into three main categories according to title of office. To the first category belonged individuals who were elected city officials responsible for managing civic affairs, and by, under, or through whom public works were carried out (all officials in this section joined with the bishop in conducting civil duties.): an *astynomos* who repaired the aqueduct at Caesarea (*ca* AD 526);[76] and an *astynomos* who donated money to the repair of churches in the Provinces of Palestine I and II (AD 531). Other city officials mentioned in Palestine include a *pater tes poleos* (or possibly a *proteoun*) who built a forum at Caesarea (AD 562 or later).[77]

The second category consisted of persons bearing high honorific titles, who acted on behalf of their city in public building works, such as a *megaloprepestatos comes* who was associated with the project in Caesarea mentioned above (AD 568 or later); and a *magistrianus* who contributed to the renewal of a bathhouse in Gadara in Palestine II (AD 664).[78] In the village of Suhmata in Phoenicia Maritima, an inscription mentions the paving of a church by a *lamprotatos comes* (AD 555).[79] A *magister* paved a church in the village of Philoteria (Palestine II) in AD 528-9).[80]

The final category comprised individuals named as *proteuontes* (decurions) and others who did not belong to the curial class (but donated private sums for building works): a *proteuon* associated with the construction of a canal in Heliopolis

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[76] Bury, II, 1958, 420, no. 1.
[77] Bury, II, 1958, 420, no. 1.
[78] Hirschfeld and Solar, 1981, 197-219.
[79] Avi-Yonah, 1933, 96-97.
[80] Delagouz and Haines, 1960, 53f.

(AD 430-1);[81] another who built a church in Emessa in the same province (AD 601)[82] and a *megas* and *neotkistos*, who donated money to the building of a canal in Heliopolis (AD 300-400).[83]

Avi. Private Individuals (Patron as Donor)

Private sponsorship of building (by, under, or through whom public works were carried out) extended both to the public and private sphere. Some public building by individuals may have been the manifestation of the execution of (perhaps compulsory) curial responsibilities. Contributions towards church building, however, tended to be conducted on a voluntary basis.

Inscriptions often stated that a particular person paid for, or had the work done or that it was done 'at his expense,' 'through his offering,' or 'labour'. The inscription may state that the donation was made to the building for communal benefit but more often for the donor's salvation or for that of a loved one.

Against the background of varied sources of patronage in the Byzantine Palestine and Phoenicia, it is notable that the patronage of the floor mosaics, where stated, is relatively narrow. There is no evidence of visiting dignitaries or rich officials. Instead, benefactors tend to be local ecclesiastical officials.

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[81] *IGLS*, 1929-82, no. 2831.
[82] *IGLS*, 1929-82, no. 2241.
[83] *IGLS*, 1929-82, no. 2830.

6. Conclusion

By closely scrutinizing the various formulas in the Byzantine mosaic inscriptions of Phoenicia and Northern Palestine, we have been able to reveal a serious flaw in recent interpretations of the patronage of mosaic floors, which have failed to make the distinction between actual donors and eponyms referred to purely for chronological purposes. As such, the present chapter represents a useful contribution to Byzantine art history and the study of patronage.

The trends of benefaction observable in the Corpus of inscriptions on the Byzantine mosaic pavements of Phoenicia and Northern Palestine, generally follow the pattern of sponsorship in the diocese of *Oriens* as described above. More specifically, patronage in Phoenicia and Northern Palestine reflects the general patterns of institutional change characteristic of the Byzantine period.

The most important factor to have emerged from the patterns of patronage detectible in the Corpus of inscriptions is the institutionalised nature of ecclesiastical patronage. This is supported by the great number of identifiable individual officials who controlled the finances of the church. It is also clear, however, both that Church officials exercised patronage privately, and that private contributions were made by the lay community. Within a bureaucratic framework, patronage emanated from private individuals, such as the 'Archive Building' at Caesarea (Nos11/835-38). In public spaces

of the city, civic benefaction was limited whilst civil (or State) sponsorship appears to have been strong.

Outside of the provincial capitals - Caesarea and Beth Shean - and large cities, such as Zippori, patterns of benefaction were exclusively localized initiatives by ecclesiastics or wealthy lay members of the community. As a consequence, State and imperial patronage played no role. This phenomenon did not prevent the production of fine mosaics, since the wealth amassed by the Church was considerable, so that financial resources were available for building and decorating ecclesiastical edifices.

The Jewish and Samaritan inscriptions of the region form a different pattern to that provided by the Christian inscriptions: patronage tended to be less institutionalised, more family and community-oriented, and extended to the lower echelons of the community who offered benefactions in kind, material, or produce.

The scarcity of civic patronage by *curiales*, the great number of donations by members of the clergy, and the contribution of private individuals to the decoration of churches adhere to the pattern of decline of the traditional Roman system of civic management counterbalanced by the increase in power of the Church and of wealthy landowners who soon became an urban force to be reckoned with.

Study of the inscriptions on the mosaic pavements of Phoenicia and Northern Palestine has added data to that provided by the study of technique and decoration in the

attempt to answer some fundamental questions pertaining to the socio-economics of the region in the Byzantine period. The results of this quest are synthesized in the conclusion.

CONCLUSION

A 'STRATIGRAPHIC' APPROACH TO MOSAIC FLOOR ART

The principal objective of this thesis has been to investigate the mosaic pavements of Phoenicia and Northern Palestine from the fourth to the seventh centuries AD from a socio-economic perspective. The research has been conducted on both a micro and macro scale. In particular, we have attempted to assess the economic conditions of a specific region of the Byzantine Empire by examining the chronological pattern of mosaic floor laying, and we have investigated various socio-economic aspects by analyzing technique and bedding, the quality and distribution of decoration, and the social categories of patronage as evidenced by mosaic inscriptions. In the process we have diverged from the standard approaches to, and interpretations of, Graeco-Roman and Byzantine floor mosaics, which have tended to be predominantly art historical as opposed to archaeological. The majority of previous studies have focussed largely on the diffusion and development of style or on exegetic approaches to iconography, and socio-economic questions have, for the most part, been ignored or treated in subsidiary fashion.

Since the Corpus of more than 300 examples fortunately includes a sizeable group of dated floors, this encouraged us to attempt to use them as a gauge of economic activity. In doing this we have built upon earlier approaches which viewed mosaic pavements as an index of economic conditions, and we have pushed this particular aspect of mosaic studies to what some may regard as its logical extreme. As there are problems inherent in many of the floors in the Corpus, this chapter underlined the limits of inference in using mosaic pavements on their own as

an economic indicator.

In Chapter II, then, we attempted to evaluate the mosaics in the Corpus against general economic trends in the Byzantine Empire, and in particular against more specific and local economic indicators - such as inscriptions, the distribution of settlements, and the production and export of oil and wine - in the provinces of Phoenicia and Northern Palestine in the fourth to seventh centuries. Major historical events, such as the Justinianic plague of AD 540, and the Persian and Muslim conquests of AD 614 and 636-40 respectively, have also been taken into account.

The limitations and value of using mosaic pavements as an index of economic conditions were discussed. However, as the evidence from the mosaic pavements in the Corpus largely corroborates the evidence from other economic indicators, the incidence of mosaic flooring can, it is suggested, be taken as a reasonably reliable index of economic activity within a region. It must be emphasized, though, that the value of this approach will only be realised when a more refined dating becomes available for the great majority of mosaic floors in Palestine and Lebanon.

Chapter III examined the economics of the bedding of pavements and the techniques involved in laying floors. The constituents of the bedding of the pavements, in terms of the quality and thickness of materials, were investigated, as well as the materials and technique of the mosaics themselves. This principally involved examining such aspects of technique as *tesserae* size, cube density, interstice width, and colour range. An assessment was made of how technical quality may have related to room function, relative wealth of patrons, the hierarchy of patrons (or, in the

religious realm, the liturgical hierarchy of participation), and both individual and collective financial expenditure. Finally, the relative cost of laying floor mosaics was calculated.

This chapter attempted to build on previous analyses of bedding, in that most earlier studies have failed to grasp its financial consequences. The analysis of bedding represents, I believe, the most comprehensive approach of its kind in studies of Graeco-Roman mosaic pavements. It raises questions about the manner in which mosaics have tended to be viewed as a "two-dimensional" phenomenon. More importantly, it challenges those studies which have suggested that mosaic pavements did not represent a large-scale expense. Our view is quite the contrary, and we have sought to support our case with evidence from written sources, and from technical aspects of the mosaics themselves, which indicate that elaborate mosaic floors of good technical quality would have required a sizeable team of artists and designers, and a commensurate increase in cost.

A fundamental assumption made by many of those who have argued that mosaic floors were relatively inexpensive has been that the sums of donations occasionally referred to in mosaic inscriptions related to the actual cost of the floors. Our argument has been that that the sums stated reflected levels of donation rather than total costs.

Another area in which we have attempted to offer a new approach is in the appraisal of technical quality in relation to the function of the building, the social category of patronage, and financial expenditure *per se*. Although function, social

status and financial expenditure have long been known to be key determinants of technical quality, we have demonstrated that function did not always hold sway over technique, and that technical quality did not always directly relate to social levels of patronage.

A similar range of issues were explored in Chapter IV in relation to the quality of decoration, and once again we attempted to support the argument by drawing on as comprehensive a range of data as possible. We first assessed the quality and distribution of representational and non-representational decoration, and suggested that the various decorative schemes applied (plain, geometric, figurative) were influenced by a variety of socio-economic factors. It proved inescapable to codify geometric designs following international rules devised by the Association Internationale pour l'Etude de la Mosaïque Antique (AIEMA) and grade them according to four levels of complexity. Our analysis of quality of decoration and of its distribution was conducted by functional building type, rooms and parts of rooms. Our conclusions have strengthened those of our technical analysis. Thus function, social hierarchy, social usage, relative wealth of patrons, financial expenditure and liturgical factors (in religious buildings) played a key role. Although their importance has been assumed in some previous studies, this is, we believe, the first attempt to test these variables against a broad array of data. Once again, the more complex the decoration, the greater the numbers of artisans involved in a team of mosaicists, and the higher their wage bill; although this may seem self-evident, the implications have largely been overlooked in previous studies (for instance, Caillet, 1990; Dunbabin, 1999).

Our comprehensive analytical approach to the codification of mosaic decoration as opposed to its use purely for descriptive purposes, is novel in Byzantine mosaic studies. In recent decades, despite a move towards the codification of mosaic floor decoration, interpretations have concentrated on analyzing a small number of motifs. Alternatively, floors were merely coded *per se*, with no attempt to analyze the data. This effectively turned mosaic studies into an abstract and sterile discipline, whereby mosaic pavements were wrenched away from their human context. We hope to have succeeded in reintroducing the human element and ended the dissociation of mosaics from their human context.

Chapter V sought to bring the human element to the fore, by looking at the spread of patronage as revealed by the mosaic inscriptions of Byzantine Phoenicia and Northern Palestine. The pattern of patronage observed fits well into the historical picture of institutional change from Roman Antiquity to the Byzantine period, and furnishes additional proof for various types of patronage in both the Christian and Jewish communities. A key aspect of our epigraphic analysis was the recognition that Byzantine art historians have, in misinterpreting data provided by inscriptions in mosaics and other media, erroneously assumed that eponyms were necessarily benefactors.

The approach adopted in the present thesis has tried to be holistic and multifaceted. Each aspect explored - the chronological, the technical, the decorative, and the epigraphic - has been underpinned by a large range of data which has been interpreted both on the micro and macro scales. The aim has been to offer a complement to art-historical analyses which have been concerned with the meaning

and style of mosaic floor decoration on a two-dimensional surface level. Instead, our emphasis has been laid on a three-dimensional, archaeological appraisal of floor mosaics from a socio-economic viewpoint. Archaeology, in which the stratigraphic analysis of excavated sites plays a major role, offers us an apt metaphor. Our research has comprised the physical stratigraphic analysis of mosaic pavements from bedding to surface, and a social stratigraphic analysis which has revealed the make-up of the teams who laid the floor mosaics, the people who walked on them and admired them, and the patrons who commissioned and paid for them.

Bibliography

List of Abbreviations

AAS	*American Antiquarian Society. Proceedings*
AIEMA	*Bulletin de l'Association Internationale pour L'Etude de la Mosaïque Antique*
ARAM	*ARAM Periodical*
BA	*Biblical Archaeologist*
BAIAS	*Bulletin of the Anglo-Israel Archaeological Society*
BASOR	*Bulletin of the American Schools of Oriental Research*
BMB	*Bulletin du Musée de Beyrouth*
DACL	Cabrol, F., and Leclercq, H., ed., *Dictionaire d'Archéologie Chrétienne et de Liturgie* III, 1904.
DOP	*Dumbarton Oaks Papers*
EI	*Eretz-Israel*
ESI	*Excavations and Surveys in Israel*
GRBS	*Greek, Roman and Byzantine Studies*
HA	*Hadashot Arkheologiyot*
IEJ	*Israel Exploration Journal*
IGLS	Jalabert, L., and Mouterde, R., *et alii*, *Inscriptions grecques et latines de la Syrie*, I-VI, XIII, Paris, 1929-82
IJNA	*International Journal of Nautical Archaeology*
ILN	*Illustrated London News*
JAC	*Jahrbuch Für Antike und Christentum*
JESHO	*Journal of the Social and Economic History of the Levant*
JPOS	*Journal of the Palestine Oriental Society*
JRA	*Journal of Roman Archaeology*

LA	*Liber Annuus*
MAAR	*Memoirs of the American Academy in Rome*
MAMA	Keil, J. and Wilhelm, A., eds, *Monumenta Asiae Minoris Antiqua*, vol. III, no. 73, Manchester, 1931, 70.
OCP	*Orientalia Christiana Periodica*
PEQ	*Palestine Exploration Fund Quarterly Statement*
PBSR	*Papers of the British School at Rome*
QDAP	*Quarterly of the Department of Antiquities in Palestine*
RAC	*Rivista di Archeologia Cristiana*
RAN	*Revue Archéologique de Narbonnaise*
RB	*Revue Biblique*
REB	*Revue des Etudes Byzantines*
SEG	*Supplementum Epigraphicum Graecum*
SWP	Conder, C.R., and Kitchener, H.H., *Memoirs of the Survey of Western Palestine. I, Judaea; II, Samaria; III, Galilee*, London, 1881-1883
TAPA	*Transactions of the American Philological Association*

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