

Economic Aspects of Houses and Housing in Roman Egypt

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by

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ABSTRACT**Economic Aspects of Houses and
Housing in Roman Egypt**

The thesis consists of a general introduction and four chapters.

Chapter I deals with the factors which influence the property market, such as: 1) reasons for selling or purchasing house property or building land, for enlarging or consolidating house property, other forms of acquisition of the property, 2) Factors which determine the price of house property (dimension, construction, building materials and labour costs, etc.).

Chapter II is concerned with the prices of houses and building land. The documents are grouped by nome in chronological order. As far as the evidence allows, comparisons are between price levels in villages and cities, and between nomes.

Chapter III surveys rented house property 1) houses, flats, rooms, 2) industrial and business premises. One particularly interesting problem is the abundance of antichretic loans (with the right of habitation in lieu of interest), which may be linked to the almost complete lack of contracts of rent in the first century of Roman rule.

Chapter IV attempts a comparison between village houses in Roman Egypt and those in Modern Egypt.

The conclusion: The building materials, the location, the dimension, the condition, construction, economic condition play an important part in determining the prices and rents of houses. The sizes of houses varied greatly, but most houses were small. The rural houses were generally larger than the urban houses. The average price in the first two centuries is lower than in the third century. It is also lower in villages than in cities. The level of rents in the first two centuries is lower than in the third century. The rents of houses in the first two centuries are very reasonable compared with the daily or monthly wages of the workers. The modern village houses are very similar to the houses of the Roman period.

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List of abbreviations

Volumes of papyri are cited according to the generally accepted conventions, for which see, eg. E.G.Turner, *Greek papyri: An introduction*, 2nd edition (1980) pp.159-179, those are adopted by the American Society of Papyrologists and published in *BASP Supplement IV 1985* and O.Montevecchi, *La papirologia*, Milano, 1988 2nd edition. The Journal titles are abbreviated according to the form in *L' Année Philologique*.

Introduction

The study of house and housing and business premises in Ptolemaic, Roman, and Byzantine Egypt (332 B.C.- A.D.640) has received the attention it deserves from scholars. The studies of F.Luckhard, H.Rink, H.Schmit, S.Yeiven, I.Noshy, A.R.Schutz, M.Nowicka, E.H.Husselman, G.Husson, R.E.Campbell and J.Krüger mainly deal with the layout and parts of the houses, their locations, uses and building materials. They derive their information from the Greek papyri and excavation reports. A.Berger, A.Manigk, O.Montevecchi, and H.Müller deal mainly with the legal aspects and throw little light on social and economic aspects. M.Hombert and C.Préaux, H.Braunert, C.H.Nelson, D.Hobson and others mainly studied the social aspects.

My purpose has been much more modest and limited. I deal only with the Roman Period (30 B.C.- A.D.284), and mainly with the economic aspects, considering the legal and social aspects when it is necessary. This is not the first time that such a study has been undertaken (the studies of O.Grabe, G.Mickwitz, A.C.Johnson, H.J.Drexhage, H.Maehler and others also deal with the economic aspects). Nor will it be the last. It is realised that no such study can be definitive or final until the sands of Egypt have yielded up all their hidden treasures. In some areas I repeat or confirm the opinions of my predecessors,

in many others I offer a different approach and, I hope, a more plausible interpretation. This study is an attempt to present the material from literature, papyri, ostraca and archaeological reports. Since I spent my childhood and youth in the countryside, it has been striking to find the existence of many features of ancient houses in modern rural houses, so I devoted a chapter to the similarities between the ancient and modern rural houses.

Special thanks are offered to my advisor Prof. H.Maehler, who has been so generous with his time and advice in discussing my research topic with me; credit for whatever of value appears in the following pages must be shared with him. I also wish to express my deepest gratitude to prof. D.Hagedorn and Dr.B.Kramer for their comments which were of great help to me during my stay in Heidelberg where I enjoyed the hospitality of the Institut für Papyrologie, Universität Heidelberg. Its excellent library was an indispensable tool for the composition of this work. I wish to thank Prof.H.J.Drexhage¹ who gave me the opportunity to read parts of his habilitation; Dr.D.Rathbone² who allowed me to read parts of his Ph.D. I am deeply grateful to my friend Mr.Farid George Boury who helped me in translating Italian articles and some

1) H.J.Drexhage, Vorarbeiten zu einer Wirtschaftsgeschichte des römischen Ägypten (I) Preise, Mieten, Pachten, Kosten und Löhne in römischen Ägypten bis zum Regierungsantritt Diokletians, Unveröffentlichte Habilitationsschrift, Münster 1985.

2) D.Rathbone, The Heroninos archive and the estate of Aurelius Appianus, PhD Camb.1986.

German articles before I learnt German. I wish to thank Prof. I.Noshy who was my teacher in Ain Shams University before I came to London. I wish to thank my colleague and my friend Dr. Abd El-Allah Abd El-Raziq Ibrahim of Cairo University for helping me to take photos in his village (Bani Abbaad), and my nephew Mr. Mostafah Abdoh who drew the plans of some rural houses. Special thanks are due to Dr. Georgina Fantoni for helping me to improve my English. It goes without saying that the errors and mistakes of my study are entirely my own responsibility. I wish to thank my department of history, Faculty of Arts at Ain Shams University for the scholarship which gave me the time and the environment in which to carry out this work. Many thanks to the staff of the Egyptian Education Bureau, especially Prof. Dr. I.Hamimy, Prof.Dr.Y.El Batrik., Dr. H.Makhloof, and Dr. A.Galal, and to all my friends and colleagues for their support and encouragement.

I**House property and building lands**

The house and its appurtenances as well as the building lands are an economic asset in several respects. For instance, it could be inhabited by the owner or rented by a tenant, sold or mortgaged.

Within the period under consideration (30 B.C.-A.D.284) there are numerous documents which deal with the sale of houses, of parts of houses or building lands, either from one private individual to another (and this represents the majority) or from the government to a private individual. Sales of houses and building land account for a high proportion of sales contracts; this can be illustrated by two documents from Tebtynis: A) P.Mich.II 121 V. records 32 entries for sales, eight of them for sales of houses and seven for sales of building lands. B) P.Mich.II 123 R. records 46 entries for sales, 13 of them are concerned with houses, and seven are concerned with the sale of vacant lots.

I also took into account some documents in which the subjects are not direct sales such as receipts of sale tax; registration returns; divorce contracts; liturgical lists which record the values of the property of nominees. These values sometimes contain also values of houses; shares of them or building lands.

There are many reasons why someone sells his property, and why someone purchases it: First: The vendor may offer his property for sale because he wants to make a profit. This is illustrated by P.Lond.1164 C, III p.157; 1164 F.p.160 (A.D.212), in which we find that the vendee had purchased a 1/2 share of a house for the sum of 600 dr. After a few days (13 days) he sold the property to another purchaser for the sum of 700 dr. So he made a profit of 100 dr. The desire for profit may compel the purchaser-new owner- to sell his purchased share and the new purchaser has found the offer a good price. It is probable that the reason behind the sale in P.Oxy.XII 1475 (A.D.267) is to make a profit, since the purchaser resold the property¹.

Secondly: The seller may dispose of his property for less profitable reasons: A) When he cannot keep it or use it, especially if he has several houses or nominal shares in different parts either in the city or a village. In CPR I 11 (A.D.108) two brothers agree to divide their inherited property which consisted of two fourths of houses. One of the brothers paid the sum of 220 dr. to the other as compensation for the difference to make balance between the values of the two shares. B) One can imagine disputes breaking out between joint owners and another or neighbours over things such as boundaries, rights of way (entrances and exits, P.Oxford 14) or when the co-owner was casting

1) The new buyer is the previous owner of the property. We do not know why he sold the property and repurchased it, nor the period between the two transactions.

covetous eyes upon the other parts of the house² (P.Oxy.XLIX 3468 I cent.A.D.). These disputes might lead some of the joint-owners to sell their shares and buy a complete house or a vacant lot and build a new house.

Thirdly: The vendor was sometimes obliged to sell his property to release himself from his debt; this is illustrated by several papyri: 1) SPP XX 12 (A.D.180-190) describes the sale of a house and its court foreclosed for 2200 dr. 2) P.Hamb.I 14 (A.D.208-10) describes the sale of 2/3 of a house that was secured for a loan of 1800 dr. The purchaser paid the landlady-debtor the sum of 200 dr. and to the creditor 1800 dr. 3) P.Lond.1164 k III p.160 (A.D.212) is concerned with the release of a third of a house that was inherited. The heir sold it to the creditor to be released from an inherited loan of 2000 dr. plus the interest. 4) In BGU II 362 col.9 (A.D.215) the purchaser paid the sum of 3000 dr. plus the interest of 30 dr. to the treasury of the temple³. 5) P.Oxy.XIV 1634 (A.D.222) two sellers- debtors sell their house to the purchaser-creditor and receive the rest of the price of one talent after deducting the sum of the loan (2 talents 3600 dr.) 6) In CPR I 3 (mid-III cent. A.D.) the purchaser paid the price to the vendor who had transferred it directly to the account of his creditor. 7) CPR I 9= SPP XX 72 (A.D.271)

2) See the dispute between the brothers in P.Berol.Inv.8797, and P.Gen.3,ZPE 37 (1980) pp.255.

3) The seller borrowed the sum of 3000 dr. from the temple.

the vendor-debtor sold his house and its appurtenances in order to release himself from three loans (1500 dr., 1500 dr., and 1200 dr.) that he borrowed from the purchaser and he received the sum of 3000 dr. for the rest of the price.

8) In P.Oxy.XIV 1701 (III cent.A.D), we find that the vendor-debtor had sold his house property to the purchaser-creditor and he received the rest of the price 8900 (+) dr. after deducting the loan (9100) from the price.

Fourthly: The vendor may sell his property, whether land or houses, in one area and move to another one. So in some cases he will probably purchase a larger property in the new area. We have two references which illustrate this; the first one is SB XII 11233 (A.D.247) which describes the sale of three houses, and 37 13/32 ar. for 1 talent 1400 dr. The second document is P.Oxy.XIV 1700 late (III cent A.D.), which deals with a sale of arable land, vineyards, a pigeon-house and house property for 2 talents.

Fifthly: The seller lives in a city and his house is in another village. P.Hamb.I 15 (A.D.209) shows us two brothers who live in Antinoopolis and their two married sisters who live in Arsinoe selling their 2/15th share of a house at Philadelphia to another woman.

Sixthly: The purchaser wants to enlarge his property. So he buys the house or building land which is surrounding his house in order to consolidate his territory. We have several examples which are as follows: A) In P.Oxy.XIV 1696 (A.D.197) a vendee had purchased a court from his

neighbour. B) In P.Oxy.XIV 1634 (A.D.222) the purchaser had bought a house from his neighbour. C) P.Oxy.XIX 2236 (early III Cent.A.D.) is also a sale of half of a house from a neighbour.

Finally seventhly: The vendor wants to consolidate the property. This is one of the main factors either for purchasing or selling the property, especially shares of houses. We have several transactions that reveal an attempt to prevent property becoming fragmented. The papyri give us a high ratio of sales of fractions of houses to joint-owners as well as to neighbours. The result of these transactions is to restore ownership of the house either completely or partially. As the result of the disposal of some of these shares by their owners to strangers without telling the other joint-owners or neighbours it seems that a lot of disputes arose. Many petitions were sent to the prefect C.Avidius Heliodorus (A.D.137-142) who issued an edict which confirms prior rights of purchase to joint-owners and finally to the neighbours, and the joint-owner has to inform the other partner by notices not less than sixty days beforehand, and with his neighbours not less than thirty days beforehand. So the edict grants the rights of refusal to the other joint-owners, and secondly to the neighbours (P.Oxy.XLI 2954 (II cent.A.D.); P.Mich.inv.148

(late II/III Cent.A.D.)= ZPE 27 (1977) pp.124-137.⁴ From P.Mich.inv.148 ll. 6-7, one can conclude also that if the partners or neighbours cannot purchase the property within the period of the previous 60 days, they have the right to restore it within the period of two months after selling it. So both the joint-owners and neighbours have the chance to find a solution by selling other property, whether it is immovable or movable, to consolidate their property in one place. We have another document that tells us the house should be purchased by someone who is neighbour or friend with whom the neighbour would already be familiar (Youtie, Scrip.II pp.696= PSI XII 1259 (II/III cent.A.D.); P.Madrid 11 (III cent.A.D.), shows us that only as a last resort could a total outsider obtain the property. Usually the majority of the transactions led to reunification of the property. However there are a few deeds that led to the fragmentation of the property.⁵

Some of the transactions helped to consolidate the property: 1) P.Ryl.II 160A (A.D.14-37) tells us that three brothers and the wife of one of them had sold 3/20 of a house which was common and undivided, the fraction suggests that the division is a nominal division and the sale partially reunifies the property. 2) PSI VIII 907=P.Mich.V

4) J.Herrmann, Edikt des C.Avidius Heliodorus, ZSS 92 (1975) pp.260-6, H.A.Rupprecht, Zu Voraussetzungen, Umfang und Herkunft des Vorkaufrechts der Gemeinschafter nach Papyri, Symposium 1979 Aegina, Athenes 1981, Koeln-Wien 1983 pp.289-301; Idm, Zum Vorkaufsrecht der Gemeinschafter nach Papyri, Scritti in Onore di O.Montevcchi (1981) pp.235.

5) See O.Montevcchi, Ricerche di Sociologia nei documenti dell'Egitto greco-romano, III 1 Contratti di Compra- Vendita, Aeg. 21 (1941) pp.129

269-71 (A.D.42) tells us that six vendors, four of them brothers and two other persons, sell a half share of a house to a partner who is a co-owner in the second share. Joint- ownership continues but the number of the co-owners is reduced. 3) In P.Strassb.IV 208 (A.D.75) four brothers had sold $1/9$ share of a house. 4) P.Lond.289 II p.184 (A.D.91) tells us that a brother, two sisters and two nieces of another sister had sold $1/4$ of a house to another lady. 4) P.Hamb.I 15 (A.D.209) tells us that two brothers and two sisters had sold $2/15$ of a house to a purchaser. The above transactions partially reunified the house property. From the smallness of the fractions and from the small sizes of houses, one can assume that in most cases the joint-owner could not use their shares which in most cases would be a share of a room, so they sell it. We have three papyri which give a good example about the partial reunification of a one storey house, courtyard and vacant lot, The purchaser partially reunified the house within five years. In SB I 5247 (A.D.47) he bought $1/5$ of the house and its appurtenance. In P.Vindob.inv.G.31933 (A.D.50⁶) he purchased $1/10$ of the property. Finally in P.Vindob.Tandem.25 (A.D.51) he purchased $1/10$ of the property.

Sometimes the purchaser is not a joint-owner, but he purchases the house or part of it from co-owners; e.g 1)

6) See F.A.J.Hoogendijk, P.Vindob.inv.G.31933, XIX Int.Cong.Pap.Cairo, (1989).

PSI VIII 909 (A.D.42/3) tells us that four vendors sell the house except for a room, storeroom... etc. So here, part of the property is reunited, while the smaller part remains fragmented. 2) In P.Oxy.XIV 1648 (late second century A.D.) two brothers sell their house and all its appurtenances. One of the brothers owns 3/4 of the property and the other brother 1/4 of it. 3) P.Oxy.XIV 1699 (A.D.240-80) tells us that four vendors had sold a house to a purchaser. So the sale here eliminates the division or reunites the house in one unit. 4) In PSI VIII 946 (III cent.A.D.) two brothers had sold a house and exedra and building land to one purchaser.

Briefly one can say that the sale of house property or building land was the result of one of the above factors or of more than one.

The following factors play a part in the estimation of the value of house property as well as building land.

First: The location of the property plays an important part in the evaluation of the house as well as the building land. The evidence of the building lands suggests that there is a great difference between the prices of building lands whether in cities or villages. Our evidence comes from two nomes, the first one is Oxyrhynchus. The prices that occur in it, are as follows: A) 2.32 dr. per square metre (P.Oxy.II 330 A.D.77). B) 9.58 dr. per square metre (P.Oxy.I 100 A.D.133). C) 38 dr. per square metre (P.Oxy.III 505=PSI IX 1035 A.D.179).

One can see at once that there is a steady increase of prices of building land in the course of time, but we have to take into account that there are other factors that might play a part in the variation such as, A) the location of the place. B) the quarter. C) The type of the street.

The second nome is Fayum. The prices are as follows: At Karanis the price is 1.52 dr. per square metre (P.Lond.154=Mitteis, Ch.255 A.D.63). At Ptolemais Euergetis the price is 2.23 dr. per square metre (BGU III 914 A.D.113). At Tebtynis it is 0.65 dr. per square metre (P.Tebt.II 472 A.D.120). At an unknown place the price is 1.25 dr. per square metre (BGU V 1047 col.III; A.D.131). Finally at another unknown place the price is 2.53 dr. per square metre (CPR I 154 A.D.180).

From the above references one can conclude that the prices of the vacant lots in the cities are higher than in the villages, moreover one can assume that the prices in the cities or villages themselves might differ from place to place according to the location, the type of street (main street or small one), whether the area is rich or poor. The vendee and vendor take these elements into account when they make the transaction.

The second factor is the dimensions of the houses, although they are rarely stated in the documents.⁷ One can

7) H.J.Drexhage & J.Sünskes, Einige Beobachtungen und Materialien zum Hausbesitz im Fayum (I.Jh.n.), *Anagennesis* 2 (1982) pp.52-53; H.Maehler, Häuser und ihre Bewohner im Fayum im der Kaiserzeit, *Aeg.Trev.* 2 (1983) p.120; G.Husson, OIKIA Le vocabulaire de la maison privée en Égypte d'après les papyrus grecs, 1983, 164-173; H.J.Drexhage, Vorarbeiten zu einer Wirtschaftsgeschichte des römischen Ägypten (I) Preise, Mieten, Pachten, Kosten und Löhne im römischen Ägypten bis zum

conclude that there are large variations between the sizes of the houses. This can be attested either by papyri or by the results of excavations. The smallest house is attested in Oxyrhynchus and its size was 5.15 sq. metre (P.Oxy.II 274)⁸. The range of the sizes of the houses was between 5.15 and 110 sq. metres⁹. This range is supported by the results of excavations which are as follows: at Soknopaiou Nesos the range was between 32.2 sq. metres and 73.3 sq. metres, but there is a house whose size is 300 sq. metres¹⁰. At Theadelphia the average dimensions of houses were between 126 and 204 sq. metres¹¹. At Philadelphia we have only one reference to a house of 152 sq. metres¹². At Karanis they vary between 40 and 323 sq. metres¹³.

From the available evidence one can see that in general the village houses are larger than city houses. So the size of the house plays a part in its evaluation.

The third factor is the design and construction of the house. The papyri give us enough information about the

Regierungsantritt Diokletians, unveröffentlichte Habilitationsschrift, Münster (1985) pp.94-95.

8) H.Maehler, Op.Cit.p.120.

9) P.Oxy.II 274, P.Oxy.XXIV 2406, P.Mich.V 241, P.Hamb.II 218, BGU III 748, Cf.BGU IV 1037, P.Mich.V 293-4, 300; X 584.

10) A.E.Boak, Soknopaiou Nesos, 1935, pp.14-16.

11) O.Rubensohn, Aus Griechisch-Römischen Häusern des Fayum, J.D.I., 20 (1905) pp.1-25; Luckhard, Das Privathaus im ptolemäischen und römischen Ägypten, p.21.

12) BGU VII Introd.p.4., Viereck, Philadelphia, p.9 (Ptolemaic period 144 sq. metre).

13) S.Yeiven, Private Architecture in Fayum villages of the Roman period. M.A. London, pp.188-9; Hussenman, Karanis, pp.15-6, 67; D.W.Hobson, House and housing in Roman Egypt., YCS 28, (1985) pp.215.

number of the storeys of houses which varied between one storey and seven storeys¹⁴. So the number of storeys might be taken into account by the purchaser and the seller. One would expect multi storey houses to have been well constructed.

The papyri give us some descriptions of houses which are well designed and constructed like the stone house mentioned in P.Oxy.XIV 1634 (A.D.222) and the houses with baths mentioned in (P.Theon.3 (A.D.156);16 (A.D.159); P.Oxy.XVII 2145 A.D.186) and finally houses with gardens¹⁵.

The fourth factor is the condition of the house property. The papyri give us some information about the condition of the house whether it is new or old or in a ruined condition¹⁶. In the light of the condition of the house one can assume that the purchaser takes into account whether he will use it without modifications, if it is new. If it is old, that means he might renovate it partially or completely or he might demolish it.

The fifth factor is the value of the money and the economic situation. As is well known, there was a steady increase of the prices of all objects during the Roman

14) Luckhard, *Op.Cit.*, pp.38-9; H.J.Drexhage & J.Sünskes, *Op.Cit.*pp.259-267; G.Husson, *Op.Cit.*pp.257-67.

15) P.Sarapion 56=P.Amh.II 27; P.Oxy.2503; SB V 8002; G.Husson, *Op.Cit.*pp.50; pp.149.

16) See.G.Husson, *Op.Cit.*pp.197-204.

period¹⁷. The prices of houses seem to prove that the values rose steadily but slowly during most of the Roman period. But no doubt the effect of severe economic disruption at all levels in some periods during the Roman period was reflected in the prices, such as the effects of the high or low floods on the economic situation, which often resulted in famine followed by unstable economic periods¹⁸. Consequently the number of loans, mortgages, and properties offered for sale exceeded demand. So the prices might go down. For instance, the results of the Jewish revolt of A.D.115-117 were that: a) The Jews of Egypt were greatly diminished; b) Fighting and looting led to large scale damages to property, whether cultivated land or house property; c) The government had confiscated huge amounts of Jewish property and created a new department to supervise it¹⁹; d) The signs of economic crises during the

17) A.Johnson, *Egypt and the Roman Empire*, 1951, pp.37; R.P.Duncan Jones, *The price of wheat in Roman Egypt*, *Chiron*.6.(1976) pp.241.

18) Gapp, *The universe Famine under Claudius*, *HTR*.28 (1936) pp.259; M.Rostowtzeff, *Social and Economic History of Roman Empire* II.p.677; Toepel, *Studies in Administrative and Economic History of Tebtynis in the First century*, Ph.D. 1973.p 312; R.L.B.Morris, *A Study in Social and Economic History of Oxyrhynchus for the first two centuries A.D.*, Ph.D.1975, pp.1-18; G.Chalon, *L'Edit de Tiberus Julius Alexander*, pp.55-68.; G.Cassnova, *Epidemie e fame nella documentazione greca d' Egitto*, *Aeg*.64 (1984) pp.193-197.

19) The number of jews of Egypt approximate a million in the reign of Tiberius; 40% of the inhabitants of Alexandria were jews, while a considerable jewish minority lived in the rural area possibly as much as 10% of the population. These places were Fayum; Oxyrhynchus; Leontopolis; Apollinopolis and Elephantine. See A.Segré, *The status of the jews in Ptolemaic and Roman Egypt*, *JSS*.VI (1944) pp.285; *Antisemitism in Hellenistic Alexandria*, *JSS* 8 (1946) pp.131; A.Fucks, *The jewish revolt in Egypt (A.D.115-117) in the light of the papyri*, *Aeg*.33 (1953) pp.131; *Aspect of the jewish revolt in A.D.115-117*, *JRS*.51 (1961) pp.98; Schwartz, *CE* 37 (1962) pp.348; V.A.Tcherikover, *The decline of the jewish Diaspora in Roman Egypt*, *JSS*.16 (1963) pp.1; M.K.Abd El A'liem, *The Jews in Egypt During the Ptolemaic and Roman period*, 1968, pp.168, pp.179 (in arabic); A.Swiderek, *Ioudaikos logos*, *JJP*.16/17 (1971) p.45; M.Pucci, *Alexandria ad Aegyptum A.D.117-119*; *SCI*.5 (1979/80) pp.195; *La Rivolta Ebraica Al Tempo Di Traiano*, 1981, pp.50; A.Kasher, *The Jews in Hellenistic and Roman Egypt*, 1985, pp.106.; *Some Comments on the Jewish Uprising in Egypt in the Time of Trajan*, *JJS*.27 (1976) pp.147; W.D.Barry, *Faces of the crowd: Popular society and politics of Roman Alexandria*, 30 B.C.-A.D.215) Ph.D Michigan (1988) pp.125-135; G.Husson, *Op.Cit.* pp.50; pp.149; P.Sarapion 56=P.Amh.II 27; P.Oxy.2503; SB V 8002.

suppression of the revolt were reflected in unstable prices.²⁰

From the meagre evidence²¹, one can assume that the large number of houses (whether in a good or bad condition) and plots of building lands offered for sale, exceeded the demands of the people. So I assume that the prices went down during and after the revolt. Also this period might be a golden one for the wealthy speculator who invested his money.

Another severe economic disruption is demonstrated by the papyri in the second half of the second century A.D. in several areas. The Mendesian nome gives a series of documents that indicate the decline of some villages as follows: At Psenerienepsis and other villages in the toparchy of Nemare the number of the inhabitants had dropped from 25 to 22 to zero (P.Thmouis I 152,11.10, A.D.159/60). At an unknown village from (?) to zero (P.Thmouis I 127,1.4, A.D.166/7). At Psenbienchon-Erkeireos-Choron...; Psenopsemouthis and.... in the

20) P.Oxy.1454 (A.D.117) is an agreement between the municipal bakers and the authority of the city. According to this contract wheat was delivered to the bakers by the Agoranomos. the bakers were allowed 10 ob. per art. for milling, baking, and delivery to retailers of the bread. Unfortunately we do not know the price of wheat in A.D.117, but these regulations might be due to scarcity of food or famine conditions, probably caused by the Jewish revolt, so these regulations were introduced to limit the profit which the middleman might make (see Johnson, Op.Cit.p.371.). P.Brem.63 is a letter which tells us about a) the scarcity of labour which might have been one of the effects of the war, b) the curious demonstration of the hired labourers who march about the town demanding higher wages. We rarely hear of such occurrences in Egypt and the reason behind this one must be that the prices had risen during the revolt and the workers found themselves unable to work for the usual wages.

21) In P.Oxy.III 577 (A.D.118) from Oxyrhynchus, the price of a house is 300 dr., in P.Tebt.II 323 (A.D.127) from Tebtynis, the price of a house is 200 dr., in P.Tebt.II 472 (A.D.120/1) from Tebtynis, the price of sq.metre of building land is 0.67 dr., in BGU IV 1047 (A.D.131) unknown place, the price sq.metre of building land is 1.58 dr. and in P.Oxy.I 100 (A.D.133) from Oxyrhynchus, the price of sq.metre of building land is 9.58 dr. The variations of the prices of building land here are due to the location of the land.

toparchy of Chiastetes from (?) to 14 to 4 (P.Thmouis I 124,11.9,A.D.166/7). At Neblammis (Neompsonomoun) Chnoutou and Psenon... in the toparchy of Thmoerketes from (?) to (?) to (?) to zero (P.Thmouis I 120,1.10, A.D.166/7). At Eky in the toparchy of Psanites from (?) to 2 to 2 to zero (P.Thmouis I 116,1.19, A.D.167/8). At Psobthon-Haryteos in toparchy of Phermouphites from (?) to 2 to 2 to zero (P.Thmouis I 114,1.3,A.D.167/8). At Kerkenouphis (?) from ?-?-? to zero (P.Thmouis I 104,1.9,A.D.168/9). At Petetei Psenharpokratis and Psenbiechis in the toparchy Psanites from ?-?-? to zero (P.Thmouis I 98,1.21, A.D.168/9). At Psen...(ed) from 52 to (?) to (?) to zero (P.Thmouis I 79,11.14,A.D.168/9). At Psenathre in the toparchy of Ptenchat from 89 to 10 to 8 to 2 (P.Thmouis I 77,1.9, A.D.168/9). At Nemero in the toparchy of Phernauphites from 150 to 45 to 34 to 11 (P.Thmouis I 70,11.12, A.D.168/9). At Psenotaea from 27 to 3 (PSI I 101,A.D.170). At Damsty from 54 to 4 (PSI I 102,A.D.170). At another unknown village from 128 to (?) (BGU 903, A.D.168/9-169/70; SB I 8, late II cent.A.D.)²²

One can assume also that the property prices in the Delta greatly decreased during and after the revolt of Avidius Cassius in the year A.D.173²³. In Alexandria, too, one would expect that the prices of houses decreased during

22) See on depopulation P.Thmouis I pp.25-31.

23) Milne, A History of Egypt under Roman Rule, pp.63; pp.221.; A.Baldini, Le rivolta Bucolica e l' usurpazione di Avidio Cassio (Aspetti del principato di Marco Aurelio) Latomus 37 (1978) pp.634-678.

and after the revolt in the year A.D.153²⁴. At Karanis, A.E.R.Boak has estimated the total population in the year A.D.145/6 or 168/9 between 2636 as a minimum and a maximum of 4068; in the years A.D.171-174 between 2160 and 2560. Thus there is a loss of perhaps as much as 40% between the two periods.²⁵ It seems the economic crisis also reached Oxyrhynchus. This is demonstrated by P.Oxy.I 76 (A.D.179) in which we find a lady who did not wish to inherit her father's property. Another document, P.Oxy.IV 705 (A.D.200-2), points to economic disruption in Oxyrhynchus, giving the reason of the trouble as the annual compulsory public service. In the Papyrus we find a wealthy man, who has large holdings in land in the Oxyrhynchite nome, proposing in essence to establish a trust fund to assist persons appointed to the annual liturgical offices, he states that his reason for making this proposal is that the villages are utterly exhausted by the burdensome demands of the annual compulsory public service, and there is a danger of their being ruined.

Anyway whether the depopulation in the Fayum or the Mendesian nome or in other areas was a result of epidemic or emigration movements from the small hamlets or villages to the large cities, the result was that some villages were

24) On this revolt, see SHA, Antoninus, cf.Meyer, *Klio*, 1907,p.124; see also BGU 372=W.Chr.19.

25) A.E.R.Boak, *The Population of Roman and Byzantine Karanis*, *Historia*, 4 (1955) pp.157; *Egypt and the Plague of Marcus Aurelius*, *Historia*, 9 (1959) pp.248; J.E.Gilliam, *The Plague under Marcus Aurlius*, *AJP*.82 (1961) pp.239; H.Geremek, *Karanis*,1969, pp.37.

partially or completely deserted, yet on the other hand some towns (e.g. Alexandria) flourished²⁶. So one can assume that the prices in the first group greatly decreased while they increased in the second.

One can sum up by saying that during the period of economic depression the prices decreased in some places and increased in others and supposing the crisis spread all over the country the prices might have decreased in general. It is more probable that small owners during these periods were obliged to either sell or mortgage their property. So the market would be full of private property offered for sale in addition to large amounts of government property. So the price might have decreased, on the other hand these periods would be golden periods for the wealthy speculators who invested their money in purchasing the properties that were offered for sale either by the government or by private individuals. It would be appropriate to discuss another essential factor:

The price of the building materials and labour

The building materials are one of the most important elements in the prices of houses. The papyri offer scanty evidence for the costs of the building materials or the

26) Milne, *Egyptian Nationalism under Greek and Roman Rule*, JEA. (1928) p.231; A.Boak, *Sokhopaiou Nesos*, p.21; Rostovtseff, *SEHRE*, I (2nd ed.) pp.470-90; Martin, *Rech.Pap.2* (1962) pp.52; R.MacMullen, *Nationalism in Roman Egypt, Aeg.* (1964) pp.189-90 and notes; H.Braunert, *Die Binnenwanderung*, pp.166; J.F.Oates, *Bibliotheca Orientalis*, 23 (1966) pp.263-66; J.D.Thomas, *JEA*, 53 (1967) pp.189-191; V.B.Schuman, *P.Gen.inv.108*, *P.Osl.111* 111, *Rech.Pap.4* (1968) pp.171-173; D.Bonneau, *Le Fisc et le Nil*, 1971, pp.189.

wages of the labourers.²⁷ We have a few papyri which refer to the progress of building operations in a private house, but they do not give us any information on the costs of building materials and labourers' wages. One piece of evidence records the costs of building materials as well as labourers' wages that were fixed for a new building of the State Archives for the total sum of 3282 dr.3 obols; the cost was borne by the present keepers as part of a liturgy (P.Lug.Bat.VI 15 A.D.114-115)²⁸.

Building materials are many and various but the main material in the villages and everywhere in Egypt were bricks (sun dried mud brick as well as baked brick); to lesser extent, wood; stones; palm; reeds; nails etc...were used.

1) The brick

Let us start with the bricks. They can be divided into two categories: Baked and sun dried mud bricks of which the former were rare and were used especially in places affected by humidity (e.g.stables and wells); in places that were liable to extensive wear or damages such as: corners of houses which were on the main streets; thresholds; windows sills; floors; in edging around trap doors to vaults and also stairs, Sun dried mud bricks, on

27) G.Husson, *Op.Cit.*pp.312-318.

28) See W.EH.Cockle, *The State Archives in Greco-Roman Egypt*, JEA.70 (1984) p.121.

the other hand, were used for most other parts of buildings²⁹. It is worth mentioning that several hundred bricks have been measured until now³⁰. The measurements show that there are variations in the dimensions between the bricks³¹. So one can conclude that the prices also varied according to the quality and dimensions.

We have four pieces of evidence that are concerned with the price of the bricks³². The first document, SPP XXII 35 (A.D.50), is a contract of manufacture of 65000 bricks. The two contractors, "brickmakers", acknowledge that they have received the price of the bricks; they emphasise that they will work every day until they finish the above quantity and if they are absent they shall pay to the first party 2 dr. per day. Unfortunately the papyrus does not mention the price. The customer will transport the brick from the yard, and he will also pay the public tax (*δημοσία*) on the manufacture of the brick.

The second document, SB XIV 11958 (A.D.117)³³, gives us the price of 2500 burnt bricks as 25 dr. and another

29) S.Yeivin, *Op.Cit*, pp.28-32; A.J.Spencer, *Brick Architecture in Ancient Egypt*, 1979, pp.57; p.82; pp.102-3; p.110; G.Husson, *Op.Cit*, pp.232; S.Youtie, *ZPE* 50 (1983) pp.59.; R.E.Campbell, *An archaeological study of Egyptian houses, particularly those from the hellenistic period.*, Ph.D.Durham, 1984, pp.161-172; J.Krüger, *Über Stadt und Gau Oxyrhynchos, Literatur, Topographie, Verwaltung*, Diss.Frei Univ. Berlin, 1987, pp.284-250.

30) A.J.Spencer, *Op.Cit*.pp.57;P.82; pp.102; p.110; R.E.Campbell, *Op.Cit*. Vol.II., note 33, pp.32-37.

31) Cf.Luckhard, *Op.Cit*.pp.28.

32) See A.C.Johnson, *Roman Egypt*,1936,p.472; H.J.Drexhage & J.Suenskes, *Op.Cit*.p.63; H.J.Drexhage, *Op.Cit*.pp.134-5.

33) See P.Reinach 2065-6, *JJP* 11/12 (1957/8) pp.59; Lewis, *JJP* 13,pp.87.

2100 burnt bricks whose price is 21 dr. So 1 dr. was the value of 100 burnt bricks.

The third document, P.Oxy.Hels.39 (II/III cent.A.D.), contains a list of building costs, two entries of which register the cost of the bricks. The first records 12 dr. as the price of 600 bricks. The second one records the sum of 4 dr. as the price of 200 bricks. Here the price of 100 bricks is 2 dr. The papyrus does not tell us whether the bricks were baked or not. Also it does not mention the dimensions of the bricks.

The fourth document, SB VI 9363 (A.D.247/257)³⁴ from Theadelphia, records in line 10 the price of 3500 bricks which is 136 dr, each 1000 bricks cost 38 dr. So the price of 100 bricks is 3.8 dr. The papyrus does not mention whether the bricks are baked or not. Evidently, the price was accounted per hundred or per thousand bricks.

The document suggests that there was a steady increase in prices of bricks: 1 dr. per 100 bricks in the first reference, 2 dr. in the second, and finally 3.8 dr. in the third. But the quality and the size of the bricks are factors that may influence their price.

The scanty evidence for prices of bricks indicates that most of the house owners made their own mud bricks.³⁵ This will be confirmed by some papyri and ostraca that shed

³⁴) See Bingen, Documents provenant des Archives d'Heroninos, CE.49 (1950) pp.87, no.3, pp.92.

³⁵) D.W.Rathbone, The Heroninos Archive and the Estate of Aurelius Appianus, Ph.D.1986, p.106.

light on brickmakers' wages. Some private accounts record payments for wages of brickmakers; they are as follows: P.Sarap.55=Amh.II 126 (early second century A.D.) from Hermopolis, is a private account of receipts and expenditures during the month of Epeiph; among the expenditures recorded are the wages of brickmakers 32 dr.³⁶ We do not know the number of the workers or the days worked.

The second reference, P.Goodsp.30 from Karanis, is concerned with an account of an estate. Among its entries are several for brickmakers' wages during a period roughly between Hathyr (October) and Pachon (April) A.D.192. Some of the figures are completely or partially missing; the rest record a large amount of money paid as wages. The total sum is 526 dr. The sum of 502 dr. was paid to the local brickmakers and 24 dr. were paid to outside brickmakers.

The third reference, O.Strassb.686 (II century A.D.) from upper Egypt, is an account which contains an entry for the wages of brickmakers who worked for two weeks. The sum is 56 dr.

The fourth piece of evidence, O.Strassb.713 (II century A.D.) from upper Egypt, is an account which records the sum of 28 dr. as wages of brickmakers. The same sum is recorded also in O.Strassb.723 (II century A.D.).

36) The figure was read as 50 dr. by the editors of P.Amh.II 126, l.42.

From the above evidence one concludes that the landlord pays for the building materials that are used for making the bricks. On the other hand one may infer from SPP XXII 35 that the brickmakers presumably pay for the materials such as the earth, straw, some sand, and water. Unfortunately we do not have any evidence that records the cost of the materials which were used in making the bricks.

2) Stone

So far as our information goes the quarries were property of the State and were either worked directly by the government's agents or leased to contractors.³⁷ The quarries lay mainly in upper and middle Egypt, in the desert between the Nile and Red sea.³⁸ These quarries produced several kinds of stones such as: alabaster; basalt; breccia; diorite; dolerite; flint; granite; gypsum; limestone; marble; porphyry; quartzite; sandstone; schist; serpentine and steatite.³⁹

37) K.Fitzler, *Steinbrüche und Bergwerke im Ptolemäischen und Römischen Ägypten*, pp.110; Johnson, *Op.Cit.*pp.241; Lewis, *Life in Egypt under Roman Rule*, p.137.

38) K.Fitzler, *Op.Cit.*pp.94-110; D.Meredith, *The Romans in The Eastern Desert*, *JEA.*,38,1952, pp.94.

39) Lucas, *Ancient Egyptian Materials*, pp.171.

From the quarries the broken stone was transported overland to the Nile, where it was loaded onto barges especially built or adapted for carrying stone and after being carried up or downstream as required it had once again to be taken overland from the nearest river port to the work site.⁴⁰

The stone is one of most important building materials which was used mainly in religious buildings, public buildings and palaces. But for domestic houses, stone was used rarely.⁴¹ One can suppose that the rich people - who have their houses in the capitals of the provinces or in Alexandria ⁴²- used baked bricks, besides using stone for solidity of the foundations of their houses, unless they used stone as a main material for their houses.

From the excavation reports we know that the stone was used as auxiliary building material, especially in building walls of underground rooms and some of these walls extended above the ground level. It was used in combination with baked bricks in foundations of some houses; in places which were liable to extensive wear or damages like door jambs, lintels and thresholds. Steps were sometimes reinforced with stone. It was used also in some stairways. Some houses

40) K.Fitzler, Op.Cit.pp.138; N.Lewis, Op.Cit.p.138.

41) J.Krüger, Op.Cit.pp.350-351.

42) Lumbroso, Recherches, p.13.; T.Reil, Beiträge zur Kenntnis des Gewerbes im hellenistischen Ägypten, p.31.

at Karanis have stone in their corners as a device to prevent damage⁴³. In some rich houses at Philadelphia the floors are covered with limestone slabs.⁴⁴

We have three papyri that describe the houses as stone houses. The first document, P.Strassb.32a Dem.Greek.=SB I 5117 (A.D.55)⁴⁵ from Soknopaiou Nesos is a stone house (?) from father to his daughter, but unfortunately the price is not stated. The second document, P.Oxy.III 489 (A.D.117) from Oxyrhynchus, is a will in which a testator bequeaths to his wife after his death a rent free apartment in his stone house. The third document, P.Oxy.XIV 1634 (A.D.222), from Oxyrhynchus, gives the sum of 21600 dr. as a price of a stone house and court, with a cellar underneath as well as building lands. The price is the highest price among house prices during the Roman period. It is understandable why the price is very high, given that the house was built from stone; in addition, there might be other expensive building materials such as foreign wood, mortar, plaster, decoration and paving. Anyway to build a stone house one needed a large amount of money and this will be illustrated by the following references that deal with the wages of the stone cutter and the price of the stone itself.⁴⁶

43) S.Yeiven, *Op.Cit.* pp.13; pp.30; pp.36; Boak, *Karanis*, 1924-28 pp.23; 53; Husselman, *Karanis*, p.35; pp.72-3 ; K. Michalowski & others, *Tell Edfou*, 3 (1939) p.139; Spencer, *Op.Cit.* pp.100-103; p.133; M.Nowicka, *La Maison privée dans l'Égypte ptolémaïque*, p.139.; Husson; *Op.Cit.* pp.310-313; R.E.Campbell, *Op.Cit.* pp.172; pp.191; pp.218.

44) P.Viereck, *Philadelphia*, p.10.

45) Spiegslberg, *Dem.Strassb.* 32.

46) For the wages and price of stone see, H.J.Drexhage & J.Sünskes, *Op.Cit.* pp.63-64; H.J.Drexhage, *Op.Cit.* pp.136-7.

The first document, P.Oxy.III 498 (second century A.D.) is a contract by which two stone-cutters agree to supply the stone required for a house of a Roman woman, at different wages ($\mu\iota\sigma\theta\acute{o}\varsigma$) according to the size and the nature of the stones. The rates are as follows: a) for the outer wall 16 camel loads of square stones for the sum of 4 dr. b) For the inner wall, 30 camel loads of square stones for the sum of 4 dr. c) For the inserting in vacant spaces between larger stones 100 camel loads of fractions of stone chips ($\acute{\alpha}\nu\tau\iota\beta\lambda\acute{\eta}\mu\alpha\tau\alpha$) for the sum of 3 dr. d) Of oblong corner stones, 16 camel loads outer walls for the sum of 8 dr., and for inner walls 30 camel loads for the sum of 8 dr. e) For 50 camel loads of chipped square stones for the sum of 4 dr. f) For 50 loads of oblong chipped corner stones at the sum of 8 dr. g) The contract also states that for stones delivered without ornamentation, each stone-cutter will receive a loaf of bread and relish for each day's work and if the builders need their services in stone cutting, each of them will receive a wage ($\mu\iota\sigma\theta\acute{o}\varsigma$) of 4 dr. for each day's service and likewise each of them on each day a loaf of bread and relish. The document does not give the sizes of the blocks and does not say who will pay for the material but one can assume from the clauses of the contract that the stone-mason will pay for the cost of the materials. The document does not tell who will pay for the transportation. On the other hand the additional payments - which are a loaf of bread and relish

per day's work - may point to a shortage of food at Oxyrhynchus. The document gives two methods of payment the wages: a) per number of camel loads which differ according to the size and the shape of the stones, b) per day.

The second document, SB XIV 11958 (A.D.117) from Oxyrhynchus, records the sum of 223 dr. as a price (τιμῆς) paid to stone-cutters in return for cutting 100 blocks of stone; the dimensions of each block are: the width 9 palms, the length 11 palms, and height 7 palms 2 fingers = 79 cm x 97 cm x 67 cm.⁴⁷ So the wage of each stone cut is 2.23 dr. The cost of transportation was 180 dr. (150 dr.).⁴⁸ From the document we conclude that the stone-cutters cut the stone according to the need of their customer. So it differs from one operation to another. The cost of the transportation was paid by the customer.

The third document, P.Oxy.XX 2272 (II century A.D.) is part of an account that deals with the cost of building materials in which there are some entries for the stone that are as follows: a) To the mason for dressing and fitting stones, for a corner above the foundation a wage of 6 dr. b) To the stone cutter, for cutting 100 blocks of stones for the corner of the gateway a wage of 10 dr.3 ob. The document does not mention the dimensions of the stones. From the document one can assume that the customer will

47) Palm = 4 fingers = 8.8 cm .See Multsch, Griechische und Römische Metrologie, p.613; Cf H.J.Drexhage, Op.Cit.p.137.

48) The editor suggests that the sum was either 180 dr. or 150 dr. See A.Swiderek, Deux papyrus de la Sorbonne, JJP.11/12 (1957/8) p.70, l.31.

also pay for the value of the stone. So the cost of cutting about 10 stones is 1 dr.

The fourth document, P.Hib.II 217 (A.D.176-8) from Heracleopolis, is an offer by two stonemasons to the high priest and probably other officials of Heracleopolis recalling the writer's offer to sell 9 columns, 9 carved bases and 9 uncarved capitals. The price of each column with its carved base and uncarved capital is 264 dr. The total cost is 2367 dr. They will transport them from the quarry of Ancyronon to the Palaestra of Heracleopolis and they will erect the carved base mouldings on the ground and the capitals on the columns. It is clear from the document that the stonemasons will provide the city with ready columns. So the cost of each column with its base and capital is 264 dr. and this includes the price of the stone, cutting transporting,⁴⁹ and fixing them.

The fifth document, SPP V 86=Wilcken.Chr.195 (A.D.266) from Hermopolis, tells us that a representative of the Senate requests an allocation from the city treasury of 5 talents for the purchase and transport of the quarried stone of Porphyry and other blocks.

From the above references one can say that sometimes the customers pay separately for the wages of the stonemasons, which were accounted either by producing specified numbers of stones that differed from type to

49) Transporting the stone needs the approval of the prefect, see: K.Fitzler, *Op.Cit.*p.21; Wessely, *Ius Lapides Transportandi III cent.*, Studi Bonfante,2,pp.17-18, Reinmuth, *The Prefect of Egypt from Augustus to Diocletian*, p.34.

type, or pay them daily wages, then they pay for the transport and for construction or the stonemasons undertake all operations from the cutting and transporting to the laying and fixing of the stones.

Evidently, using stone as a building material sharply raises the value of the houses, especially if we take into account the cost of successive operations before laying it at the work site. This is illustrated by P.Oxy.XIV 1634 and P.Hib.II 217. The sum of 264 dr. given in P.Hib.II 217 as the cost of a stone column is more than the prices of several houses in some villages in the Fayum.

3) The Timber

Wood has always been scarce in Egypt. It was necessary from very early times to import part of the wood required and the practice continues to the present day. The foreign timber was obtained from different countries e.g. Lebanon, Africa, and India⁵⁰.

50) Yeiven, *Op.Cit*, pp.11; M.Lewis, *On Timber and Nile shipping*, TAPA.90 (1960)p.137-141; H.Cadell, *P.Genève 60*, BGU II 456 et le problème du bois en Égypte, CE 51 (1976) pp.345; S.E.Sidebotham, *Roman Economic Policy in Erythra Thalassa 30 B.C. - A.D.117* pp.20; P.J Sijpesteijn, *Customs Duties in Greco-Roman Egypt*, 1987 p.60,65; Pliny,N.H.12.44.98.

The Ptolemies and the Romans gave special attention and care to growing of trees⁵¹. The felling of the trees and cutting of their branches were either forbidden or tightly regulated with heavy penalties imposed upon the transgressor⁵².

The principal trees that grew in Egypt are the Persia; myrobalanos; acacia; sycamore; palm; sebesten; acanthus; oak; tamarisk; willow etc..⁵³

The papyri tell us that trees growing upon public embankments, in temple land, along highways or among the fields of public or royal land or estate land were owned by the government (*ἀδέσποτα*),⁵⁴ whereas the trees that grew on private land were private individual property.⁵⁵

Let us now discuss the uses of wood in houses. The excavations gave us some information about the uses of wood in several parts of houses. Probably the most important use of wood was in the construction of roofing which was usually formed of planks supported on wooden beams⁵⁶ or palm logs; above these beams or logs there was usually a

51) P.Tebt.I 5, ll.200-6; 703, ll.191-211; P.Oxy.1188 ; P.lond.139; P.Yal.Inv.289; 1078 ; Digesta. 47.11.10.; Plaumann, *Der Idioslogos*, pp.24-6 ; Johnson, *Op.Cit.*p.5; P.R.Swarney, *The Ptolemaic and Roman Idios logos*; pp.49; Parassoglou, *On the Idios Logos and fallen trees*, AP.24/25, 1976, pp.90-99.

52) P.Brem.35; P.Lond.214; P.Lug.Bat.3 A.

53) P.Tebt.703, ll.191-211; Lucas, *Op.Cit.* pp.429; 444; 448; M.Schnebel, *Landwirtschaft*, pp.294; R.Meiggs, *Trees and timbers in the Ancient Mediterranean world* pp.57 -62.; R.E.Campbell, *Op.Cit.*pp.173.

54) P.Oxy.1188; P.Yale Inv.289; 1078; BGU 492 =AP.24/5 1976 pp.90.

55) P.Oslo.II 45; P.Oxy.909.

56) Grenfell & Hunt.P.Fay.P.51; Yeiven, *Op.Cit.*pp.58; Spencer, *Op.Cit.* pp.130; Husselman, *Op.Cit.*p.37.; R.E.Campbell, *Op.Cit.*pp.273; J.Krueger, *Op.Cit.*pp.351-352.

cover of palm sticks (grid) or bundles of reeds⁵⁷. The second use was in making doors and windows which were of several types⁵⁸. Frames; thresholds; jambs and lintels of doors were made from wood⁵⁹. The jambs were jointed to blocks of wood set into the walls. The timber was also used in making the window frames; shutters; sills; and lintels⁶⁰. It was also used in the structure of brick walls as a device of reinforcing the courses of bricks and in strengthening the corners of brick walls⁶¹. It was sometimes used to panel the brick walls of administrative buildings at Soknopaiou Nesos⁶². It was also employed above and below cupboard niches and in their shelves⁶³. Finally it was sometimes used purely for decorative purposes⁶⁴.

The scarceness of wood is reflected in the singularly high price of wood which may be seen in contracts of leases of houses where a clause is inserted whereby the tenants

57) Yeiven, Op.Cit.pp.59-60; Boak, Op.Cit.p.26.; R.E.Campbell, Op.Cit.pp.192.

58) G.Husson, Op.Cit.pp.159; R.E.Campbell,Op.Cit, pp.207.

59) Boak, Karanis,1924-28, p.49; Soknopaiou Nesos, pp.11-16; E.Bresciani, Medinat Maadi, 1966-7 p.45; Husselman, Op.Cit.p.40.; R.E.Campbell, Op.Cit.pp.204; pp.224; P.Viereck, Op.Cit.p.10.

60) Boak, Karanis, 1924-28, p.28; Spencer, Op.Cit. p.131; Husselman, Op.cit.p.41; R.R.Campbell, Op.Cit.pp.235.

61) P.Viereck, Op.Cit.p.8; Bresciani, Op.Cit.pp.43-4; J.Schwartz &H.Wild, Qasr Qarun, Dionysias I p.19; Husselman, Op.Cit.pp.33-4; Boak, Karanis 1924-28,pp.13; Soknopaiou Nesos.p.19.; R.E.Campbell, Op.Cit.pp.189; pp.199.

62) Boak, Soknopaiou Nesos,pp.10-13.

63) Spencer, Op.Cit.pp.98-99; Viereck, Op.Cit, p.11; Husselman, Op.Cit.p.41.

64) Spencer, Op.Cit.p.100; Husselman, Op.Cit.p.36.

agreed to restore the doors and shutters in the same condition as they received them.

The papyri give us some information on wood merchants during the Roman period. They occurred in Alexandria; Arsinoe and Oxyrhynchus⁶⁵.

For the house which he was building in Hermopolis, Apollonius the strategos bought the timber which he needed for it from Koptos and Oxyrhynchus⁶⁶. He sent to his architect who is in Alexandria an order to buy the wood from Oxyrhynchus. In P.Alex.27 (II/III century A.D.) the sender asked another person to buy wood for doors. The sender hopes that the price is not to be high.

The wood was transported to the building sites either by ships⁶⁷, camels⁶⁸ or donkeys⁶⁹.

65) BGU IV 1053; 1151 col.2; P.Lond.III 1177 pp.180; Lond.Inv. 1562= ZPE,46,pp.191.; P.Oxy.XLI 2981; SB VI 9450; P.Alex.27.

66) P.Brem.15;48; P.Giss.47; P.Ryl.II 233.

67) P.Col.2/1 R.4 col.10, P.Oxy.XIV 1738; SB X 10299.

68) e.g.P.Hamb.I 54, P.Prag.I 102;106.

69) e.g. P.Mich.VIII 511, P.Lond.III 1177,p.180.

The price of wood⁷⁰

Date	Place	Object	Price	Document
13 A.D.	Oxy. Kerkeura & Peenno	offer to purchase: 1 dried branch of small tree 2 dried branches of liv- ing persea- tree 1 dried branch of living persea tree 2 fallen acacia-tree	6 dr. 2 dr. 2 dr. 8 dr. total 18 dr.	P.Oxy.IX 1188
I/II cent.	Oxy.	daily purchase of wood ?	30 ob. 2 ob. 2 ob. 3 ob.	P.Oxy.Hels 33.
113 A.D.	Arsinoe	An account of water sys- tem : 2 pieces of cypress wood used for fastenings on the water screw. 4 other pieces. 2 pieces of acanthus. plugs of olive wood for fastening water pots. pulley flange for the machine at the grove sycamore wood used in repairing pots. cypress for shadufs at the grove.	4 dr. 8 dr. 3 dr. 2 dr. 2 dr. 4 dr. 7 dr.1 ob	P.Lond.III 1177,p.180 col.8

70) A.C.Johnson, Op.Cit.p.472; H.J.Drexhage & J.Sünskes, Op.Cit. p.64; H.J.Drexhage, Op.Cit.pp.137-144; Idem, Eigentumsdelikte im Römischen Ägypten, ANRW.II 10,1 (1988) pp.994-997.

Date	Place	Object	Price	Document
		sycamore wood for water troughs. 5 pieces of acanthus. cypress yoke piece. acanthus for repairing machines. plugs of acanthus for repairing the crews. acanthus plugs used in watertight. 3 pieces of cypress for shadufs 3 felloes of acanthus for the machine. cypress for yoke piece acanthus for machines. acanthus for rims cypress for yoke olive wood , , epseinus ?(εψεινα) 2 pieces of sycamore . 2 pieces of acanthus for rim. 1 piece for pully flange cypress for shadufs. 2 pieces of olive wood. cypress for yoke piece. cypress for shaduf. 5 pieces of cypress.	40 dr. 22 ob. 4 dr. 5 dr.2 ob. 4 ob. 2 dr. 7 dr. 50 dr. 4 dr. 14 dr. 8 dr. 5 dr. 8 dr. 30 dr. 18 dr. 10 dr. 3 dr. 8 dr. 16 ob. 4 dr. 8 dr. 13 dr.	P.Lond.III 1177,cols. 9-10
A.D.135	Heracl.	2 private acacia trees.	140 dr.	P.Osl.II 45.
148	Oxy.	the estimated value of 2 fallen sycamore trees. the estimated value of 2 fallen sycamore. the price of the above four trees.	492 dr. 554 dr. 840 dr.	P.Iand.VII 139.

Date	Place	Object	Price	Document
149	Herm.	1 door.	12 dr.	P.Vind.Sal 11
169/70	?	wood for fire	4 dr.	SB VI 9348 col.1.
180	Fayum	theft of erika wood	3000 dr.	BGU III 731.
188	Oxy.nome	4 acacia trees. 3 acacia trees.	52 dr.+ additional charges 3 dr.1.5 ob. total 55 dr.1.5 ob. 40 dr. + 2 dr.3 ob. total 42 dr. 3 ob.	P.Oxy.VIII 1112
191/2	Karanis	wood for fire. (ῥλη)	24 dr.	P.Cairo. good.30
II cent.	Tebtynis	(δοκοί) beams.	20 dr.	SB VI 9494
second half of II cent.		erica wood for repair- ing the door of temple. piece of erica wood total cost of local and foreign wood including transportation.	50 dr. 8 dr. 124 dr.	P.Oxy.XX 2272 col.1
II/III	Oxy.	4 planks.	2 dr.	P.Oxy.Hels 39
225	Oxy.	14 private acacia trees.	1200 dr.	P.Oxy.VI 909
240	?	100 bundles of (χαριτινω λεπτῶ ξυλων)	7 dr.1 ob.	P.Upps.9.

Date	Place	Object	Price	Document
mid.III cent.	Thead.	2 axles (αξονες) 8 cubits long.	160 dr.	P.Flor.II 262
mid III cent.	Thead.	αξων 9 cubits long.	90 dr.	CE.50,1980 pp.196-207 col.1.
260	Herm.	αξων of irrigation machine.	260 dr.	P.Princ. III 174, col.1
III cent	Herm.	1 μελαθρον roof-tree cubit of wood. (7200 cubits) cubit of beam	100 dr. 4 dr.4 ob. 5 talents 2912 dr. 4 ob.	SB X 10299
IIIcent.	Oxy.	doors of capitol ?	2500 dr.	P.Oxy.2128
IIIcent.	Arsinoe	wood	12 dr.	P.Prag.I 94

Before discussing the price of wood recorded in the above table it is worth mentioning that the papyri give us some glimpses on estimating the value of the trees, especially those owned by the government. The Idios Logos instructed the officials to register the exact measurements of the trees and all large branches and to set a price upon them before offering them for sale by auction⁷¹. Let us now discuss some prices of trees or branches mentioned in the above table. The first document, P.Oxy.IX 1188 (A.D.13), tells us that Didymos offers to purchase the following objects from the Idios Logos'department: At the

71) P.Oxy.IX 1188; P.Iand.VII 139; P.Yal.Inv.289; BGU 492 =AP 24/5 (1976) pp.94.

village Kerkeura 1 branch of a small persia tree dried, worth 6 dr. and another 2 branches from a living tree, dried worth 2 dr. At the village Peenno 1 branch of a living persia tree, dried worth 2 dr., and finally 2 acacia trees fallen, worth 8 dr.; the total value is 18 dr. The Idios Logos Attius Fronto forwarded the application to the Royal Scribe with instructions to verify details and to value the wood⁷². The instruction then descended in the usual way from the Royal Scribe to the Topogrammateus and from the latter to the village Scribes and from the village scribes to those who were responsible for supplying the information required by the Idios Logos. One can conclude from the above document that the purchaser attracted the attention of the authorities to the wood but we do not know the result of the inspection and whether the prices evaluated by the village scribes were higher or equal to the price offered above. If the government accepted to sell the wood, the purchaser will pay supplementary charges of $6 \frac{1}{4}$ %⁷³. Finally the purchaser will also pay the costs of transporting the wood.

The second document, P.Iand.VII 139 (A.D.148) from Oxyrhynchus, gives us the official estimated value of 2 sycamore trees as 492 dr. and the value of another 2 sycamore trees as 554 dr. The total estimated value is 1046

72) Johnson, says that "perhaps the government officials were capable of making a sale to their own advantage". Roman Egypt.p.477.

73) See P.Oxy.VIII 1112.

dr. These four trees were evaluated by the village scribe. They were sold at 840 dr. plus supplementary charges. One can conclude that after reporting their measurements and the estimated price set upon them by the official, the trees were offered for sale by auction. the price actually paid was 840 dr. plus the extra charges. So the purchase price is less than the official estimated price. Sometimes the offered price is equal⁷⁴ or higher⁷⁵ or lower⁷⁶ than the official estimated price. There is also considerable variation between the values of the trees. So the value of the four trees may differ from one to another according to the condition and the size. The average price of the tree is 210 dr. without adding the extra charges. This is quite expensive in relation to the average prices of village houses. In any case, using wood in building a house raises the price; and the price of one tree is higher than the value of several houses in villages of the Fayum (P.Strassb.I 31).

The third document, P.Oxy.VIII 1112 (A.D.188) from Oxyrhynchus, describes a sale of seven acacia trees in several villages as follows: one at Namera; two at Seruphis; one at Sento; the value of the above four trees is 52 dr. plus the additional charges of 3 dr.1/2 ob.,

74) See P.Petaus 13-14.

75) See.P.Oxy.III 513.

76) See.P.Iand.139. It seems that no one offered to buy the trees because the price was higher than the real value, therefore the estimated price was reduced by a committee who reestimated the price (P.Strassb.31).

total 55 dr.1/2 ob. The other three are at Namera and Thosbis and their price is 40 dr. plus the additional charges 2 dr. 3 ob., total 42 dr.3 ob. The papyrus does not give the purchase price of each tree separately but gives the purchase price of four together then the purchase price of three together. From the variation between the above sums one can say that the values of the trees differ from one to another. But we do not know the estimates set by the officials and whether they were equal or less than the above prices; the average price is 13.96 dr.

We have also two contracts concerned with the sale of private trees. The first document, P.Osl.II 45 (A.D.135) from Heracleopolis, gives us the sum of 140 dr. as the price of two acacia trees. The document does not state the value of each tree separately nor whether there is a difference in their sizes and condition. One can suppose that each tree was evaluated separately according to its size and condition, then they gave the price of the two trees together, which makes an average price of 70 dr.

The second document, P.Oxy.VI 909 (A.D.225) gives 1200 dr. as a price of 14 trees; besides this the purchasers have to perform the complete uprooting and removal of them at their own expense and after pulling up and removing the trees the place shall be set in order in equal shares, half by the purchasers and half by the sellers. The papyrus gives the total value of the trees. There may have been some variations among them depending on

their sizes or conditions. Therefore their prices varied, and if we add the cost of their pulling up and removal besides half of the cost of setting their places in order⁷⁷, the value of them will increase above the sum stated and it will be raised again if we add the cost of transport. Anyway the average price is 85.71 dr., disregarding the cost of their removal and setting their places in order as well as their transport.

P.Lond.III 1171 pp.177 (A.D.113) gives several prices of wood which might differ according to the type of the wood as well as the condition and size. The prices mentioned in the document vary between 2 dr. and 50 dr. per piece.

For the relation between price and size, the documents give the following variations: The price per cubit is as follows: 9.47 dr. (P.Vind.inv.23010)⁷⁸; 10 dr. (P.Flor.2,262); 4 dr.4 ob. (SB X 10229). P.Lond.1177 also shows that the prices of wood differ from kind to kind.

In P.Princ.III 174,col.I (A.D.260) the sum of 260 dr. was paid for wood. H.J.Drexhage says that " perhaps this large sum was due to the scarcity of wood during that time, or this wood was used in a large building or project or because of the inflation." If we compare this sum with the price in P.Iand.VII 139 (A.D.148) which gives 840 dr. as a

77) We have one unique document which records the wages of cutting and pulling out the trees. The rate of daily wages of ἀμάξης is 1 dr. 1 ob. and ἀμάξης is 2 dr. (P.Oxy.XX 2272).

78) CE. 50 (1980) pp.196-207.

price of four trees, we will find that the first sum is not very large, especially if we assume that the purchaser used it for roofing, doors (their frame, jambs, lintels and thresholds), windows (their frames, jambs, lintels and shutters) and as a device for reenforcing the corners and walls. So the price of 260 dr. may not even refer to an unusually large quantity of wood.

We have two documents that mention erica wood (ἐρείκη) and its value. One is BGU II 731 (A.D.180) which mentions the theft of erica wood valued at 3000 dr. but we do not know the quantity. The second document, P.Oxy.XX 2272, col.1 mentions 50 dr. for erica wood. That wood was used in repairing a temple door. One can assume that this type of wood was not cheap, and the door may have been very large.

P.Vind.Sal.11 (A.D.149) from Hermopolis gives us the sum of 12 dr. as a price of a door. P.Oxy.XVII 2128 (III century A.D.) states the sum of 2500 dr. as a price of doors of the Capitol. But we do not know their numbers. The sources give several types of doors as well as windows. The prices of doors and windows differ according to the size and the type of wood and whether it is local or foreign wood.

To sum up our discussion; the scarcity of wood in Egypt had its effect on its price. The range of prices varied between 4 dr. and 210 dr. per tree. The price was accounted either per tree or branch or per cubit or per

piece. The prices of trees were sometimes higher than the value of some houses in Fayum⁷⁹.

The reed

The reed was used for roofing and also as a device to strengthen the walls by inserting bundles of reed in them.⁸⁰

The papyri give some prices of reed, as follows: In P.Mil.Vogl.308 (mid second century A.D.) from Tebtynis, several entries are concerned with the price of reeds: 50 bundles of reeds for 55 dr. (10,000 reeds for 220 dr.); the price of a schoenion (52.5 sq. metre.) = 5 bundles of reed is 20 dr.; the price of newly cut reed is 10 dr. and finally the price of a schoenion is 24 dr. In P.Mil.Vogl.II 69 (II century A.D.) from Tebtynis, two prices of reed are given as follows: 50 bundles of reed for 55 dr. and the price of schoenion (5 bundles) for 20 dr.

From the above prices one can say that there is a variation in the prices of reed, due to the size and the type of reed. And if we add the costs of transport, the prices of reed will increase.

79) See. P.Strassb.I 31.

80) Yeivin, Op.Cit.p.36;60; P.Viereck, Op.Cit.p.11.

The value of other building materials

Other building materials are: plaster, gypsum, nails, glue, painting materials and decoration etc... The results of excavations give a good and clear picture about the uses of them as building materials⁸¹. The documents on the other hand, give scanty evidence for the prices of some of them or the wages of the artisans, such as builders, stonecutters, brickmakers, plasterers, carpenters, metal workers etc...

The documents do not say anything about the value of clay that was used with sun dried mud bricks as binding material or for plastering. The explanation must be that most of the owners of houses produced their own mortar and even if they bought these materials they did not record the expenditures. So our information depends upon the data preserved by the large private accounts; temple accounts and municipal accounts which shed light on the wages of the plasterers and not on the value of the clay itself.

As for **gypsum**⁸², it was used with stone and backed bricks as binding material or for coating as a plaster. Fortunately we have two papyri that record some values of gypsum. The first document, SB XIV 11958, col.1 from Oxyrhynchus, gives the value of 1 talent 2 minae=27 kg. for

81) Boak, Karanis, 1924-8, pp.32;34 ; Soknopaiou Nesos. pp.9;29; Viereck, Op.Cit.p.10; Yeiven, Op.Cit.pp.15; E.M.Husselman, Op.Cit.pp.33; R.E.Campbell, Op.Cit.pp.193.

82) See Yeivin, Op.Cit.pp.15-16.; H.J.Drexhage, Vorarbeiten zu einer Wirtschaftsgeschichte des römischen Ägypten I: Preise, Mieten, Pachten, Kosten, Löhne im römischen Ägypten, pp.145.

4 ob.=6.76 kg. per 1 ob.; the value of 23 talents 7 minae =605.65 kg. for 24 dr.=25.235 kg. per 1 dr.= 4.2 kg. per 1 ob.; and finally 3 talents =78.6 kg. for 2 dr.=39.3 kg. per dr.=6.55 kg. per 1 ob. The document also records the value of a mina=436 g. of another kind of gypsum (απόχυμα) that was used in coating and plastering ceiling 1 dr. The document demonstrates that there is a great variation among the prices of gypsum which varied between 6.76 kg. per ob. and 436 g. per dr. The variations in prices may be due to the differences of the quality⁸³.

In the second document, SPP V 82. (A.D.266) from Hermopolis, we find that a councillor of the city who was chosen to oversee and purchase gypsum and rubble for a bath requests a payment of at least one talent from the civic treasury. The document does not specify the values of each kind separately or the quantity of each of them.

As for nails⁸⁴, we have several references that mention the prices of nails. They were used in fixing and joining the doors and windows with their frames etc... and the ceiling. P.Lond.III 1177,col.10-11= Wilcken, Chr.193 (A.D.113) gives the prices of nails as follows: 1/2 minae of 4 dactyl=about 8 cm. and 3 minae for 36 dr., 8 minae for 20 (+) dr., 10 minae for 40 dr. From the document one can conclude that the prices differ from type to type according to the quality, the size and the weight of the nails.

83) See Lucas, Op.Cit.pp.76-77.

84) See H.J.Drexhage, Op.Cit.p.146.

BGU IV 1028 (II century A.D.) gives us the price of nails for architraves and their facings, the panels at 24 dr. per mina, for building doors at the rate of 24 dr. per mina⁸⁵, for the door of a plastered room at the rate of 22 dr. per mina⁸⁶, and finally for the price of key and nails and the work on door of a plastered room 72 dr. This document, too, shows the variation in the prices of nails but the document does not give the value of the nails separately.

SB IV 9363 (A.D.247 or 257) gives us the price of nails which is 9 dr. per mina.

BGU I 14 (A.D.255) records 288 dr. as a price of 24 minae = 12 dr. per mina.

Finally the fourth document, P.Vind.Inv.32019= CE. 50,1980, pp.189-96 Verso, col.2 (III century A.D.) gives 2 dr. per mina.⁸⁷

The variations in the price of nails shown in these documents make one suspect that they differed from one type to another according to their quality, sizes and weight. The prices varied between 2 dr. and 24 dr. per mina.

As for **keys**, although there is a clause in the leases that concerns the doors and windows lockers and keys⁸⁸,

85) The purchaser paid 15 dr. as a part from the price (see the editor, note 22).

86) The purchase paid a part of the price the sum of 10 dr. (see the editor, note 22).

87) Cf. D.W.Rathbone,(p.110), considers the sum here as a wage of the smith.

88) See.H.Müller, Untersuchungen zur ΜΙΣΘΝΣΙΣ von Gebäuden im Recht der Gräko-Ägyptischen Papyri.1985,pp.272.

the papyri give only scanty information about the prices of metals that were used for keys and door fixtures. BGU IV 1028 (II cent.A.D.) records the price of 4 rings, 2 persia (?) blocks and 2 small doors for the double door of the entrance, for which 100 dr. were paid for the foreman of the bronze workers and his assistant. The same document states that the price of the key and nails and work on door is 72 dr. The second document, SB III 7181 A.D.220, gives several prices of keys which varied between 28- and 180 dr.⁸⁹

For glue⁹⁰, the papyri offer also scanty evidence. There are two terms for it in the papyri: a) table glue (κόλλα τεκτονική), b) γλοιάφιον. The glue was used with wood, ebony, ivory... etc⁹¹. It was employed to fasten the wood together such as the wood of a ceiling or the door and windows⁹²

The following documents record prices for glue: SB XIV 11958, col.2 (A.D.117) gives the sum of 19 dr.4 ob. as a price of 3.25 minae of glue (about 6 dr. per mina). The second document, SB IV 9409, col.5 (A.D.255) from Theadelphia, gives the sum of 32 dr. as a price of 4 Oxyrhynchitia of glue (γλοιάφιον) . The third document, SB VI 9408, col.2 (A.D.253-256) from Theadelphia, gives the

89) Luckhard, Op.Cit.pp.91; Husson, Op.Cit.pp.104-105.

90) H.J.Drexhage, Op.Cit.p.145.

91) See Lucas, Op.Cit.pp.3.

92) P.Oxy.XX 2272.

sum of 20 dr. as a price of 2 Oxyrhynchitia of glue. The fourth document, P.Oxy.XX 2272 (second half of the second century A.D.) gives us the sum of 3 dr.3 ob. as a price of a mina of glue, 6 dr. per mina of the glue which used for the front door of pylon, staircase hall (πέσσος) and the door of ταμείον and the total price of the glue and ropes 29 dr. The fifth document, SPP V 127= SPP XX 68 (A.D.267) from Hermopolis, gives several values of glue but in all cases mentioned with iron and wood together So we do not know the value of the glue separately.

Finally the sixth document, P.Oxy.XVII 2144 (late third century A.D.) has four entries that deal with the value of the glue. The first entry mentions the sum of 152 dr. as a value of 1/4 mina of glue. The second entry mentions the sum of 300 dr. as a price of 1/2 mina. The third entry mentions the sum of 152 dr. as a price of 1/4 mina of glue. The fourth entry mentions the sum of 152 dr. as a price of 1/4 mina of glue.

From the above references we find that: 1) There are variation in the prices of the glue. 2) The prices in the late third century A.D. increased sharply because of rising inflation.

As for the **ropes**, we have only one piece of evidence about the price of ropes. In P.Oxy.XX 2272 4 dr. is recorded as the price of ropes for the front door of pylon.

As far as **painting materials** are concerned, fortunately the results of excavations give us an idea

about the painting and decoration of walls. The colours are usually maroon, black and brown which are painted on white lime washed over gray plaster⁹³. The papyri also give us an idea about the colours and their values. SB XIV 11958 (A.D.117) mentions several colours such as: yellow, ochre, red and colours like stone and blue. All their values are lost except one which mentions the sum of 2 dr. 3 ob. for an ochre colour, but we do not know the quantity. P.Lond.928 III p.190 (II/III century A.D.) is a fragment of an account including payments for painters' colours which are as follows: olive, narcissus, rose, purple, laurel rose and almond paints at 9 dr. per measure and also gives the value of topaz colour at 7 dr.1 ob. per xestes (ξέστης). P.Oxy.XVII 2144 (III century A.D.) has two entries: The first puts the value of 5 minae of ochre at 500 dr., then the value of 10 minae of ochre at 1000 dr. P.Oxy.XIV 1739 (III century A.D.) gives as the value of marine blue 4 dr., supple colour 16 dr. and finally calainus 2 dr.4 ob., but the quantity is not specified. It seems that not everyone decorated his house. Sometimes, people may have decorated them partially, or some rooms and not all the house. Also it is more likely that rich people who lived in the cities had their houses decorated.

Finally the mosaic decoration was introduced to Egypt by the Greeks after the conquest of the country by

93) Rubensohn, Op.Cit.p.6; P.Viereck, Op.Cit.pp.14-5; Boak, Karanis,pp.32; Husselman, Op.Cit.p.36; R.E.Campbell, Op.Cit.pp.359.

Alexander the great. Mosaics were never very numerous. This may have been a result of the shortage of the material and also of the limited demand. It is more probable that in Roman Egypt only the rich people used mosaics to decorate both the floors and walls of their houses⁹⁴. Unfortunately the papyri do not give us any information about its cost. To sum up the prices of the building materials are as follows:

94) W.A.Daszewski, *Corpus of Mosaics from Egypt*, I 1985 pp.67; 98.

The prices of building materials

object	measure/weight number	price
wood	per cubit per tree	between 4 dr.4 ob. and 10 dr. between 4 dr.and 210 dr.
brick	per 100 brick	between 1 dr. and 3.8 dr.
building - land	per sq.metre	between 0.65 and 2.53 dr.in Fayum between 2.32 dr. and 38 dr.in Oxyrhynchus
stone	per a block of stone	between 4 dr.and 8 dr.
reed nails	per bundle per mina	between 1 dr. and 4.5 dr. between 2 dr. and 24 dr.
gypsum	per talent	between less than 4 ob. and more than 26 dr.
glue	per mina per oxyrhynchit- ia	between 3 dr.3 ob.and 600 dr. between 8 dr.and 10 dr.
colours	per xestes per mina	between 7 dr.1 ob.and 9 dr.1 ob. 100 dr.

If we compare the prices of the timber and the bricks, we will find the price of wood is between 4 dr. 4 ob. and 10 dr. per cubit and between 4 dr. and 210 dr. per tree while the value of 100 bricks is between 1 dr. and 3.8 dr. So the value of wood is very high.

Building land, by contrast, costs between 0.65 dr. and 2.53 dr. per square metre in Fayum and between 2.32 and 38 dr. per square metre in Oxyrhynchus. In most cases we find

the value of wood is higher than the value of building land.

The value of stone is calculated according to size, type and the form of the stone. The price of a block of the stone is 2.23 dr. The price of stone to price of brick is therefore relatively more expensive. The price of one block of stone is equal to between 100 and 300 bricks.

Prices of reed per bundle (50 reeds) vary between 1 dr. and 4.5 dr.

Gypsum costs between less than 4 ob. and more than 26 dr. per talent.

Prices of nails vary between 2 dr. and 24 dr. per mina.

As for the price of glue that varies between 3 dr.3 ob. and 600 dr. per mina and between 8 dr. and 10 dr. per oxyrhynchitia.

Finally the price of colours alternates between 7 dr.1 ob. and 9 dr. 1 ob. per xestes (ξέστης) and 100 dr. per mina.



Wages of craftsmen

Let us now discuss the wages of different craftsmen involved in building. The papyri give us some information about the wages of builders and their assistants, stonecutters, plasterers and their assistants, brickmakers and carpenters....etc. Let us look first at the wages of the builders and their assistants.

The builders and their assistants⁹⁵

Date	place	Number	wage	Document
A.D.1	Oxy.	1 oikodomos	?+relish 1 ob.	P.Oxy.V 739
79	Herm.	1 oik.	6 ob.	P.Lond.131
Beg.II. century	Herm.	2 oik.	2 dr.each 1 dr. per day	SB XIV 11958, col.1
172	Tebtynis	1 oik.	40 dr. per 10,000 bricks	P.Tebt.II 402
191/2	Karanis	1 oik. 1 oik. more than one 1 oik. 1 oik.	8 dr. 18 dr. 2 ob. 60 dr. 100 dr. 100 dr.	P.Cairo.Good.30, col.9 col.24 col.30 col.31 col.41

95) See Reil, Op.Cit.pp.31; H.J.Drexhage, Op.Cit.pp.146-148.

Date	Place	number	wage	Document
II cent.	Herm.	1 oik.	4 dr.	P.Sarap.61 = P. Strassb.21
II cent.	Upper Egypt	1 oik.	1 dr.2 ob.per day	O.Bruss.Berl.71
II cent.	„	1 oik.	1 dr.1 ob.per day	O.Bodl.II 1755.
II cent.	„	1 oik.	1 dr.3 ob. per day	O.Strassb.701, col.1
II cent.	Tebtynis	1 oik.	56 dr. for building a wall	P.Mil.Vogl.II 69 a, col.5
II half II cent.	Busiris/ Delta	1 oik.	6 dr. for repairing temple	P.Oxy.XX 2272.
A.D.214	Arsinoe	3 oik. 6 boys	18 ob.per man (7 dr.4 ob.) 10 ob. each. (8 dr.2 ob.)	BGU III 362
255	Theadelphia	1 oik.	8 dr.for 2 days work	SB VI 9409.1 col.4.
256	Theadelphia	1 oik.	4 dr.	P.Flor.III 321 col.2
IIIcent.	Herm.	1 oik.	4 dr. per day	SB X 10299

The table shows: 1) Apart from P.Oxy.739 and P.Lond.131, our available evidence comes from the second and third centuries.

2) The wages were accounted either per man and day or per number of bricks that the builder will build.

3) The wages of the builders were sometimes higher than those of the other workers. In P.Lond 131 (A.D 79), for instance, the wages of bricklayers were between 6 ob. per

day while the wages of the other workers varied between 3 ob. and 4 ob.

4) The wages of bricklayers varied between 6 ob.⁹⁶ and 4 dr. The level of the wages increased steadily and reached 4 dr. per day in the third century.

5) Some accounts give us a large amount of wages e.g.P.Cairo.Good.30. These wages were paid either for one builder or for several builders. If it was paid for one builder one can assume that he himself worked several days or he received these wages as a foreman on behalf of his assistants and distributed them among them.

6) The sum of 40 dr. given in P.Tebt.II 402 as wage for building 10,000 bricks will have included other assistance and making mortar. So one can say that the owners paid to the builders either per day or gave them a certain amount of money in return for all the building operations such as preparing the mortar and carrying it as well as the bricks.

⁹⁶) The 29- ob. tetradrachmae seems to be used in making payments (Johnson, Op.Cit.p.662).

The builders' assistants⁹⁷

The builders needed assistants to help them perform their jobs. The papyri describe them as follows:

Date	Place	Worker	Wage	Document
II cent.	Upper Egypt	brick carrier	1 dr. 1 ob.	O.Strassb.686
II cent.	„	brick carrier	1 dr. 1 ob.	O.Strassb.688
II cent.	„	ὑπουργός	1 dr.1 ob. 6 ob.	O.Strassb.705
II cent.	„	ἐργάται	1 dr.1 ob.	O.Bodl II 1755
II/III	Oxy.	„	3 dr.2 ob.	P.Oxy.Hels.39
215	Arsinoe	„	10 ob.each day or whole work ?	BGU III 362,VIII
255	Thead.	ὑπουργός	2 dr.2 ob.	SB VI 9409.1 col.4
III cent	Arsinoe	„	2 dr.	BGU III 699
III cent	Herm.	„	4 dr.	SB X 10299

The above table shows that 1) The evidence dates from the second and third centuries A.D. 2) The daily wages of an ὑπουργός vary between 1 dr.1 ob. and 4 dr. The daily wages of an ἐργάτης vary between 2 dr. 2 ob. and 3 dr.2 ob. We have two wages of boys, the first one is 6 ob. per day

97) H.J.Drexhage & J.Sünkses, Op.Cit.P.63; H.J.Drexhage, Op.Cit.pp.148-150.

while the second is 10 ob. but we do not know whether it is a daily wage or for the whole work. 3) The wages increased steadily especially in the third century.

There were also other assistants⁹⁸ who sometimes give help to the builders and facilitate their work especially when they build a stone building, they need the help of the stonecutter (λαξός) or (λατόμος). The papyri give us some of their wages which are as follows:

In SB XIV 11958 (A.D.117), the wages of λαξός is 2 ob. only, this seems very low and may have been for a part time job.

The second document, P.Mil.Vogl.VII 307, col.5 (II century A.D.), gives 40 dr. and 28 dr. as wages of λαξός. We do not know the daily wage here, nor the reason behind the difference between the two wages, it might be due to the number of days of work.

The third document, P.Oxy.XX 2272 (II century A.D.), has three entries, as follows: 1) the wage of λαξός is 6 dr. 2) The wage of λατόμος is 10 dr. 3 ob. 3) The wages of λαξός is 210 dr. 2 ob. We do not know whether the first two wages are daily wages or more than one day's wage, the third one is the total wage that might be paid to a foreman who would divide it among either his assistants or his colleagues.

98) H.J.Drexhage, Op.Cit.pp.153-155.

Finally the fourth document, P.Oxy.III 498 (II century A.D.), states that if the builders need the help of the stonecutters, each one of the latter will receive 4 dr. as a daily wage and a loaf of bread and relish. Thus, the wages of the stonecutters are accounted either per day or per especial number of stones cut or per especial number of camel loads. They receive their wages either in money or in both money and in kind.

The plasterers and their assistants

The papyri give us some information about the plasterers and their assistants, their wages are as follows:

SB VIII 9699 col.2, A.D.78/9, Hermopolis: Plasterer's
assistant received 5 ob.per day.

P.Oxy.XX 2272 II cent.Bousiris /Delta: Kiln stoker
(κονιατήρ) received 6 dr. in return for
preparing, firing and cleaning out the
remaining of plaster and chalk from the
kiln.

:Plasterer (κονιατήρ) received 2 dr. in
return for burning and mixing the
chalk.

:κονιατήρ, who flowed the chalk,
received 1 dr.

:κονιασποιοι, who mixed the chalk with sand 1 dr.

Two others who mixed chalk, gypsum and sand together with watter, received 2 dr.3 ob. (each of them 1 dr.1 1/2 ob.)

:κοιναται, who prepared the stucco, received 16 dr.

BGU II 362, page 8, (A.D.215) from Arsinoe : Plasterer received 2 dr.

P.Mich.XI 620 (A.D.239-240) from Fayum (Dionysias, Alexandrou- Nesos and Theadelphia) R.VI.: 4 workmen received 8 dr. (each of them 2 dr.) in return for breaking up lime for white wash.

V.III.: Plasterer received 2 Oxyrhynchitia of wine.

Plasterers received 2 metra of lentils.

V.IV.: Plasterer and his fellow plasterers received 1/2 art. of wheat.

BGU 952 (III century) from Hermopolis: 2 workmen received 24 dr. (each 12 dr. per day or for complete work ?).

From the above references one can see that: First: The evidence starts from A.D.78 /9 onward.

Secondly: P.Oxy.XX 2272 gives us a good idea about the expenses incurred on the plaster work. It shows also the variations among workers' wages.

Thirdly: The plasterers and their assistants sometimes received their daily wages in money or partially in money and partially in kind. The wage was paid either daily or for the whole work or the plasterer estimated his wage per square cubit, but unfortunately in the last case the wage is not stated (P.Oxy.XVII 2145).

Fourthly: It is more probable that the wages which were paid in kind were portions of wages, especially when the plasterers worked more than 17 days to plaster a wall (P.Mich.XI 620).

Fifthly: The table suggests that the wages varied according to the nature of the work and the average wage in money ranges between 5 ob. and 2 dr.

The wages of the carpenter⁹⁹

The papyri give us some information about the wages and activities of the carpenters (free men and slaves) which are as follows:

Date	Place	Carpenter	Wage	Document
Late I.cent	Oxy.	young slave	2 dr.	P.Oxy.XVIII 2190
113	Arsinoe	more than one	140 dr. (?)	P.Lond.III 1177 11.269-79
117	Oxy.	1 carpenter	1 dr. 2 ob. 1 dr. 2 ob. 1 dr. 1 dr. 1 dr.	SB XIV 11958, col.1.
166/7	Tebt.	1 carpenter	4 dr.	P.Mil.Vog.III 152, col.2.
191/2	Karanis		4 dr. 15 dr. 3 ob. 20 dr. 20 dr. 60 dr.	P.Cairo.Goods. 30,col.6 col.10 col.14 col.20
II cent.	Tebt.	carpenter	17 ob.	SB X 10563.
II cent.	Tebt.	carpenter	2 dr. daily	SB VI 9494
239/40	Thead.	carpenters	+ 2 1/2 art. of wheat	P.Mich.XI 620

99) H.J.Drexhage, Op.Cit.pp. 150-153.

Date	Place	Carpenter	Wage	Document
246	Euhemeria	carpenter 6 days work	24 dr. plus 2 loaves of bread daily	SB VI 9406.2
250	Thead.	carpenter 6 days work	24 dr. 8 dr. for repairing a door	SB VI 9409.5, spalte 1.
253/56	Thead.	carpenter 5 days work	20 dr.	SB VI 9408.2, spalte. 5
258/9	Thead.	carpenter	4 dr. for repairing several doors	P.Lond.III 1170 V col.3.p.92
III cent.	Herm.	carpenter	3 dr. 3 ob.	SB X 10299

From the table one can conclude that : First, the evidence starts from the late first century A.D. onward.

Secondly, the daily wages varied between 1 dr. and 4 dr. From the unique document of the first century A.D. one can say that the daily wage of the carpenter varied according to the job that he performed, so the wages of the carpenter might differ from one job to another.

The clear evidence of the second century A.D. shows that the daily wages varied between 1 dr. and 2 dr., but we have other documents which give us the sum of the total wage that the carpenter received without giving the number of days. So there are three possibilities: 1) There may have been other carpenters who worked with him, after receiving the wage he divided it between himself and his

fellow carpenters. 2) The carpenter himself worked for several days, therefore the total sum represented his wage. 3) The carpenter himself estimated his total wage in order to perform the work.

The evidence of the third century shows that the daily wage varied between 3 dr. 3 ob. and 4 dr. plus 2 loaves of bread.

Thirdly, the carpenter sometimes receives his wage partially in kind (SB VI 9406.2), but it is not clear from P.Mich.XI 620 whether the amount of wheat represents the total wage or part of it only.

Fourthly, in P.Lond.III 1170 we find that the carpenter received his wage of 4 dr. in return for repairing several doors. So one can assume that he estimated his wage for the whole work.

Finally it is very clear that there is a steady increase in wages. So we find that the rate of daily wage in the third century is four times that of the first century A.D.

The wages of the other workers

The papyri also give very scanty information about the decoration and ornamentation of the buildings. The results of the excavations show that several wealthy householders decorated their houses in rich multi-coloured patterns and frescoes. Unfortunately the papyri do not give

us any evidence about the costs of decoration of private houses, but they do give some detail of the wages of the ornamentation and decoration of public buildings.

SB VIII 9904=P.Corn.Inv.1133 (Rech.Pap.3, 1964, pp.25) gives the monthly wages of four alabaster workers as 32 dr. (each of them received 8 dr.), and if we compare this wage with wages of other artisans, e.g the wage of builders and stonecutters, it seems very low as a monthly wage. N.Lewis has suggested that the four workers were sharing a single allotment (κλήρος), dividing the month's work among them. This view can be supported by PSI 822 which shows that the groups of alabaster workers served in turns determined by lot ' μεθέστακαν τόν κλήρον ἐπί ἐτέρων ἀνθ[ρ]ωπων', but their wages are not stated.

P.Köln I 52 (263 A.D.) is an offer by two workers to decorate a part of the ceiling of the gymnasium of Antinoopolis. They will decorate and dress it with golden powder and also fix the gold leaf on wood. In return they will receive 230 ob.¹⁰⁰ as wages while the price of gold leaves and glue is 140 ob. so the whole costs (wages and materials) are about 106 dr. It is very interesting to find the wages of the craftsmen are 164% of the cost of the materials.

In P.Oxy.I 55 (A.D.283) we find two kasiotic joiners who decorated both sides of the street from the gateway of

100) 1 dr.=7 ob. see the editor, note 15-25, V.B.Schuman, The seven-obol drachma of Roman Egypt, CPh.47 (1952) pp.214-218.

the gymnasium leading southward to the lane of Hieracus. They requested as their wages due for the work the sum of 4 talents 4000 dr. The papyrus does not give the period of work, from the large sum of wage one can assume that the two kasiotic joiners had several assistants.

Finally, in P.Got.7 (III cent.A.D.) from Koptos, three workers on glass agree to work for 6 dr. 6 ob. per sq.cubit instead of 8 dr. which they had been paid. Their work is concerned with the glass of bath windows. We do not know why they agree to decrease their wages ? Perhaps other artisans offered lower wages, so the workers were forced to accept a pay cut.

To sum up, one can say that the wages mentioned above show that there are unaccountable variations, apart from a steady rise. The evidence of the third century A.D. seems to prove that labour was relatively better paid than it had ever been before. The artisans' wages (builders, stonecutters, brickmakers ...etc.) are higher than those of others, e.g. farmers. The wages were accounted either per day or per man or per number of bricks (builders), or square cubit (plasterers and glass workers), or per column or piece of stone (stone cutters), or per lot (alabaster workers), or the whole work (builders and stone cutters) Finally the wages were either paid in money or partially in money and partially in kind (wheat, bread, lentils and wine).

The costs of transportation

Finally we must look at the costs of the transportation of building materials. The documents contain very scanty information about the costs of transporting building materials whether by land or by river (P.Oxy.XX 2272). The cost of shipping is rarely indicated, e.g shipment of vegetable seed from Arsinoe to Oxyrhynchus (115 km. upstream) costs 40 dr. per 100 art. (P.Lond.980). The daily earnings from camels varied from 1 dr. to 4 dr. per day. (BGU 921) Donkey hire varied from 4 ob. a day (PSI 688 R) to 14 ob. (P.Oxy.1049) in the second century. In the third century the wage is 4 dr. per day.

For the cost of transportation of lumber, the papyri give us four references: The first document, P.Lond.III 1177 (A.D.113), has several entries for the cost of transport of wood: 1 ob. for transporting cypress valued at 7 dr., 12 dr. for transporting mulberry wood, 12 dr. for transporting olive wood, 4 ob. for transporting plugs of acanthus valued at 4 dr. and finally 3 ob. for carrying pieces of mulberry valued at 18 dr. The documents show that the costs of transport differ, the reason behind that is the distance between the place of the work site and the location of the materials.

The second reference, P.Oxy.XX 2272, has some entries concerning the transporting of wood, but unfortunately the amounts are missing.

The third reference, BGU II 362 (A.D.215), has some entries concerned with the costs of transporting trees and palm branches. The daily wage of an ass is 4 dr.

The fourth reference, SPP XX 68 (A.D.267), mentions that lumber was shipped from Cleopatris to Hermopolis at the rate of 4 dr. per cubit.

As for the transportation of the stone we have two references, P.Hib.II 217, gives us the value of a column 264 dr. (including the price of stone cutting, transporting and setting it up), the cost of transportation is not stated separately. SPP V 86 = Wilcken, Ch.195+96 col.I (A.D.266) gives the sum of 5 talents for purchasing and carrying stone without giving the amount.

As for transporting brick, the papyri give us three references, as follows: P.Lond.131V (A.D.78/9) has an entry for transporting 1000 brick to the house and 550 brick to the court by donkey . The expenses are: 4 dr. (silver) and 17 dr.4 ob. (bronze). SB XIV 11958 has several entries for transporting bricks by boys and donkeys, but unfortunately their wages are missing. P.Tebt.II 402 gives the rate of 16 dr. per 10,000 bricks for the transportation from the kiln to building site. The total of bricks transported is 44600, at a cost of 68 dr.23 ob. One notices that the sum paid is less than 16 dr. per 10,000 bricks¹⁰¹. From this unique piece of evidence one may conclude that the cost of

101) It is probable that it is a mistake by the writer of the document.

transporting the bricks was calculated according to the number of bricks. The distance between the kiln and the building site might have been taken into account by the transporter. BGU II 362, page 8 (A.D.215) gives the sum of 12 dr. as a price of an unknown number of sun-dried bricks and for their transportation. Anyway the scarcity of evidence for the cost of transportation of bricks suggests that each small landowner produced his bricks either on the building site after carrying the materials that he needs to make bricks, or he made the bricks in the public yard, then he himself carried the bricks to the building site or hired someone to carry them. This assumption is suggested by the private accounts of some estates where the bricks were made, perhaps near the building site (SB XIV 11958, P.Goodsp.30, P.Tebt.402).

Finally as for transporting other building materials we have two references as follows: P.Oxy.XX 2272 is a good example which is concerned with transporting building materials - gypsum, chalk, sand and wood - either by river or by land. It gives us several entries refer to transport, but we have few entries in which the charges are stated. For freight charge of a boat transporting gypsum, 1 dr.4 ob.; for freight charge of a boat bringing sand, 2 dr. For transporting the sand by donkey from the harbour to the work site 1 dr. The second document, P.Mich.XI 620 R., has two entries for the wages of donkey-drivers who carried the gravel and sand. The daily wage was 2 dr.

To sum up, one can say that the costs of transportation whether by land or river vary according to the distance between the work site and the place of materials. The costs were accounted either per daily wages or per number of bricks, piece of stone or per column... etc.

So after discussing the various factors which contribute to the prices of houses, and consequently to the level of rents, let us turn to discuss the prices and values of houses themselves.

II

**The price of the house property
and building land**

The available evidence for the value or the price of house property and building land in Egypt under Roman rule suggests that the ownership of houses does not mean that the owners had a large wealth or high social status. There are a large number of people who own houses or portions of them. The ratio of sales of houses is very high compared with sales of other objects, and the price in many cases is not higher than the price of other objects, indeed house prices are sometimes very low. This may be due to either the smallness of the houses or to the cheapness of building materials, or sometimes the transfer may be a matter of friendly agreement and one cannot be certain that the real values are stated.

In the following tables I have tried to collect all the documents which throw light on house sales and purchases. I shall classify these sources into groups according to their location. This will facilitate comparison among nomes and among the villages of the nome, where it is possible.

Our evidence comes mainly from five nomes : Fayum; Oxyrhynchos; Antinoopolis; Hermopolis and Heracleopolis, Alexandria gives us two references but there is only one piece of evidence from Panopolis and Elephantine in addition to one reference of unknown provenance.

A) Fayum

Date	Place	Price	Object	Document
3/2 B.C.	Soc.Nes.	not stated	two storey house and mill	SB I 5246
early I cent.A.D	Tebt.	„	vacant lot "tax in copper (x) talents"	P.Mich.IV 236
A.D.2	Soc.Nes.	„	share of two storey house	P.dem.Berl.P. 8139=Enchoria 7,1977 p.153
11	„	740 dr.	house and veranda; inner court and adjacent building space.	P.Lond.266= Mitteis,Chr. 181;SB 5231; 5275;P.Vind. Sal.4
14	„	300 dr. (offer)	vacant lot.	SB I 5237
14	„	1500 dr. (offer)	house;veranda;inner court & vacant lot	SB I 5234
16	„	500 dr.	vacant lot	P.Lond.355 II p.178
16	Tebt.	not stated	house and its measurements SN 8.5 & WE 13 cubits	P.Mich.V 241
17	Soc.Nes.	500 dr.	vacant lot	SB I 5240
18	Talei	not stated	1/3 of a house and court	P.Mich.V 249
19	Talei	„	1/9 vacant lot	P.Mich.V 250
19	Tebt.	„	vacant lots and other fixture	P.Mich.V 251

Date	Place	Price	Object	Document
23	Soc.Nes.	not stated	1/2 of one story house	P.Dem.Wien, D 6934= Enchoria, 13, 1985 p.67= ¹ P.Mich.V 245
28/9	"	"	2/5 of two storey house and court	P.Ryl.dem 47 =Ryl.II 160
29	"	"	2/5 of two storey house and court.The measurements SN. & WE unknown.	P.Ryl.44 Dem& Greek = BJRL. 49 (1966/7) pp.466
28/9	Oxyrhyncha	"	house and court and its appurtenances. The measurements SN 11 & WE.15 cubits	P.Hamb.III 218
30	Soc.Nes.	"	parts of two storey houses, one of them is a ruined house, half of two rooms	P.Dem.Berl. 7058=BJRL.49 (1966/7)p.218
30	Tebt.	"	1/2 two rooms	P.Mich.V 253
30	Talei	"	1/3 of three storey house and court	P.Mich.V 257
32	Soc.Nes.	100 dr. (loan)	one storey house, in subscription it is two storey	P.Ryl.II 160c
14-37	"	not stated	3/4 of two storey house and court	P.Ryl.II 160a
14-37	"	"	house property	P.Ryl.II 305 descrip.
37	"	"	three storey house SN. (X) & WE.(X) cubits	P.Ryl.II 160 b Greek& Dem.

1) See BJRL 52 (969) pp.218.

Date	Place	Price	Object	Document
41	Tebt.	6600 dr. or 600 dr.? and 60 dr.tax	1/2 house.	P.Mich.V 235
41/53	Soc.Nes.	lost	share of a house	P.Strassb.IV 265
41-54	„	„	house or share ?	P.Strassb.VII 602
41-68	Ptolemais Euergetis	„	immovable.	P.Athen.26.
42	Soc.Nes.	not stated	2/5 of two storey house and court as well as half a fallen down house and 1/12 of a mill	P.Ryl.II 160d = SB I 5109
42	Tebt!	„	a) 7 sales of vacant lots (fractions like 1/4; 1/3; 1/2 or the whole lot e.g 15 Bikoi. b) 7 shares of houses and their courts e.g. 1/4; 1/3; 1/2 . c) 1/6 share of court	P.Mich.II 121 V=SB III 7705
42	„	„	1/2 house	PSI VIII 907= P.Mich.V 269- 171
42	Theogonis	„	1/2 fallen down house and court	P.Mich.V 304
42/43	Tebt.	100 dr.+ interest	2/3 of three storey house	PSI VIII 908
42/43	„	not stated	three storey house except a room	PSI VIII 909
43	Soc.Nes.	34 dr. loan	2/7 of 2/4 of a ruined house	P.Ryl.Dem.45= BJRL.49, 1966- 1967 pp.486

Date	Place	Price	Object	Document
45	Soc.Nes.	not stated	two storey house	BGU III 854= CPJ.III 483
45	"	"	two storey house in western quarter	SB XIV 11894
45	"	"	two storey house, court and oil press	P.Vind.Tand. 24
45/6	Tebt.	320 dr.	share of a house	P.Mich.V 340
45/7	"	not stated	a) 7 sales of vacant lots.eg 1/2;2 1/2 and 3 Bikoi. b) 3 houses c) 5 shares of houses eg.1/10;1/3 and 1/2. d) 1 immovable ?	P.Mich.II 123
47	Soc.Nes.	"	1/5 of one storey house; court and 1/5 building place in two parts in south and west of the village	SB I 5247 = CPR I 4 + P. Vind.Tand.25
47	"	84 dr. loan	share of two storey house and its court	P.Vind.Dem.& Greek.6933 = BJRL.1969/70 pp.218
47	Ptolemais Euerg.	not stated	1/7 of half share of a house	P.Mich.V 276
47/8	"	"	house	P.Dem.Berl. 7057= Studi Bressini, pp.607
48	Tebt.	132 dr. loan	1/4 of a new three storey house	PSI VIII 910= P.Mich.V 332
48	"	not stated	one storey house	P.Mich.V 277

Date	Place	Price	Object	Document
First half cent.	Soc.Nes.	not stated	house property	P.Ryl.II 304 descr.
"	"	"	part of a house property	P.Ryl.II 306 descr.
"	"	"	part of a house property	P.Ryl.II 307 descr.
"	"	"	part of a house property	P.Ryl.II 308 descr.
50	"	"	1/10 one storey house, courtyard, and vacant lot	P.Vindob.inv. G.31933 ²
51	"	"	1/10 one storey house; court and vacant lot in two parts (CPR 4;SB I 5247)	P.Vind.Tand. 25
51/3	"	"	1/5 building space one sq. cubit.(SB I 5247+Vind.Tand.25	CPR I 4
55	"	"	a house	SB I 5117
55	"	"	two storey house (built of stone)	P.Strassb.Dem. Greek.32 a
56 ?	Tebt.	448 dr.+ interest (loan)	two storey house and court in which two storey hall and portico... etc.	PSI VIII 911= P.Mich.V 335
59/60	"	400 dr.	a share of a house	BGU XV 2476
62	?	not stated	a house with two inner courts and courtyard, the size of the court is 19 cubits	BGU III 748

2) F.A.J.Hoogendijk, Op.Cit.

Date	Place	Price	Object	Document
63	Karanis	200 dr.	walled court, the measurements are from SN.15 1/6 & WE. 33 cubits	P.Lond.154 = Mitteis, Chr. 255
69-79	?	124 dr.?	1/3 share of vacant lot	P.Lond.140 II p.180
71	Tebt.	lost	1/2 of a house	P.Tebt.II 35
71	Soc.Nes.	100 dr. (loan)	immovable	BGU III 910
71	,,	(.)8 dr.	1/4 two storey apartment	P.Ryl.II 161
72 75	,,	64 dr.	1/9 of a house	BGU I 184 + P.Strassb.IV 208
76	,,	220 dr.	a house in the east part of the village	PSI XIII 1319 =Aeg.20,1940, p.27
78	Bakchias	100 dr.	4/9 of a house and partially collapsed courtyard	P.Mich.X 583
78	Soc.Nes.	140 dr.	1/2 of a house	SPP XX 175
69/79 or 81/96	,,	not stated	1/6 or 1/10 of a house and court	P.Ryl.II 313 descr.
81/96	?	,,	3/8 of a house and court	BGU XV 2478
82/96	Soc.Nes.	,,	2/15 of a house, inner court and courtyard	P.Ryl.II 312 descr.
82/96	,,	160 dr.	1/2 of a two storey house and court in the east of the village	PSI XIII 1320 =Aeg.20,1940, p.21=SB VIII 8950
83	,,	160 dr.	1/2 of a house	BGU XI 2095
84	,,	200 dr.	3/4 half share of a house and court	P.Ryl.II 107

Date	Place	Price	Object	Document
91	Dionysias	not stated	1/4 of a house	P.Lond.298 II p.184
99	Theadelphia	600 dr.	1/2 of a house, court and vacant lot	P.Fay.100
96-117	Tebt.	lost	a house	P.Tebt.frag. 21,047 ³
98-117	Soc.Nes.?	,,	a house and court	P.Strassb.III 151
98-117	?	,,	part of a house and Court	CPR I 171
First century	Tebt.	not stated	a house	P.Mich.V 288- 289
''	''	''	2/5 of fallen house ,court,lots,gate building and rooms above it	PSI VIII 914= P.Mich.V 307
''	''	''	1/2 three storey small house and small court, the measurements are SN.x cubits 6 fing- ers & WE 17 cubits	PSI VIII 915
''	''	''	1/2 two storey house and court	P.Mich.V 299
''	''	''	1/2 two storey ? house and court	P.Mich.V 296
''	''	''	one storey house & court.(152 cubits)	P.Mich.V 294
''	''	''	two parts of courts (46 and 57 cubits)	P.Mich.V 306

3) P.E.Wall, New texts in the economy of Tebtynis, Ph.D, Duke Univ.1983, pp.149-156.

Date	Place	Price	Object	Document
I cent.	Tebt.	"	one storey house and court, SN.17 & WE. 9 cubits	P.Mich.V 300
"	"	not stated	1/5 three storey house and court except a room in the house and another room in gate building	PSI VIII 913= P.Mich.V 298
"	"	"	vacant lot (SN.20 & WE.10 cubits)	PSI VIII 916= P.Mich.V 309
"	"	"	1/5 walled lot (96 sq.cubits)	P.Mich.V 280
"	"	"	1/2 vacant lot (SN. 7 3/4 & WE.14 32/3 cubits	P.Mich.V 297
"	"	"	share of vacant lot partially walled SN.8 & WE.5 cubits	P.Mich.V 301-302
"	"	"	x Bikoi from walled vacant lot	P.Mich.V 305
"	"	"	vacant lot in which there are storerooms SN.7 & WE.26 cubits	P.Mich.V 308
"	Soc.Nes	40 dr.	1/4 lodging house (κατάλυμα)	CPR I 220
"	Talei	not stated	2/5 of two storey house	PSI VIII 912= P.Mich.V 290
"	"	"	house and land ? SN.8 cubits WE.x , 1/3 house ? wide WE.20 cubits	P.Mich.V 287
"	Theogonis	"	house and court , SN.8 & WE.25 cubits	P.Mich.V 293
"	Kerkesouch Orous	"	share of vacant lot	PSI VIII 917
"	"	"	share of a vacant lot	P.Mich.V 282-284

Date	Place	Price	Object	Document
I cent.	Kerkesouch Orous	not stated	walled vacant lot	P.Mich.V 291-292
,,	Kerkeosiris	,,	1/5 of vacant lot	P.Mich.V 285-286
I/II	?	missed	immovable	CPR I 179
,,	?	100 dr.?	1/4 house and court	CPR I 187
,,	?	1300 dr.	house, inner court and pigeon cote	CPR I 120
early II century	Tebt.	400 dr.	house ? or share	P.Tebt.frag. 21,046 ⁴
102-117	Soc.Nes.	300 dr.	fallen house	P.Lond.292 = Aeg.Trev.2, 1983, pp.134
102-117	,,	500 dr.	1/3 house, inner court and courtyard	BGU I 350
105	Philadel-phia	1500 dr.	1/2 house and small court	P.Hamb.I 97
106	Soc.Nes.	320 dr.	house and court	SPP XX 23
108	,,	220 dr. (part of the price)	1/8 of a house	CPR I 11
113	Ptolemais Euerg.	132 dr.	lot	BGU III 914
114/5	Tebt.	not stated	house property (immovable)	P.Tebt.II 510 descr.
117-138	Ptolemais Euerg.	lost	1/9 and 1/36 shares of house and inner court	CPR I 223
120	?	,,	part of a house	CPR I 178
120/121	Tebt.	200 dr.	vacant lot (5 Bikoi 36 7/8 cubits)	P.Tebt.II 472

4) P.E.Wall, Op.Cit.pp.139-47.

Date	Place	Price	Object	Document
127	Tebt.	200 dr.	house and court	P.Tebt.II 323
128	Ptolemais Euerg.	not stated	house	P.Lond.279 b
129	Theadelphia	200 dr.	1/5 of a house, court and the whole tenement in a lodg- ing house	P.Fay.31
131	?	2800 dr. plus the charges	38 Bikoi of vacant lots	BGU IV 1047
134	Karanis	100 dr.	1/2 house and court	P.Mich.VI 427
135	Tebt.	lost	shop	P.Bon.24
138/9	„	8000 dr.	8 1/2 ar.+ house	P.Mil.Vogl.II 98
138/161	?	600 dr.	equipment, brick- yard and courts	CPR I 206 = ZPE.61.p.85
„	Tebt.?	not stated	house and court	P.Tebt.II 515 descr.
139	?	400 dr.	1/2 of house and court	CPR I 198
143	Soc.Nes.	80 dr.	1/3 of a house and court	P.Vind.Tan.26
1 half of the second century	Soc.Nes.	800? dr.	house and court	P.Strassb.IV 543
154	Karanis	800 dr.	a house and two courts	P.Mich.V 429
155	Tebt.	6400 dr. or 2 T. 400 dr.? 1600 dr.	1/4 a house and court	P.Tebt.II 580
155	Heraclia	500 dr.	gate building, two cellars, cow stable and lots	SPP XXII 31= SB XIV 13072= ZPE.56,1984 p.93

Date	Place	Price	Object	Document
159	Heraclia	800 dr.	1/2 ar., 1/3 court and other property	BGU I 80(446)
159	Soc.Nes.	60 dr.	1/2 house and court	P.Ryl.II 162
159	Dikaiu Nesos	1200 dr.	a share of a vacant lot	P.Prag.I 20
163	Heraclia	100+ dr.	house or share ?	P.IFAO.I 33
166	Soc.Nes.	21 dr.	1/42 of a house and another share of it 1/42 = 1/21	P.Lond.334 II p.211
168	?	200 dr.	1/2 of a house	SPP XX 10 = CPR I 5
175	Psenerpsenesis	100 dr.	a house in a ruin condition	BGU I 282
180	?	460 dr.	3.6 Bikoi	CPR I 154
180-190	?	2200 dr.	house property	SPP XX 12
180-192	Soc.Nes.	120 dr. plus charges	(offer) 1/3 of a house, court and oil press	P.Amh.II 97
184	Ptolemais hormu	1700 dr. 1300 dr.	3/4 house, inner court, courtyard and building land 3/4 house and inner court.	P.Petaus 10
184	,,	300 dr. 40 dr. 600 dr. 400 dr. 700 dr.	1/12 vacant lot 1/12 vacant lot 43/240 house and court 1/6 house and court 1/6 house and court	P.Petaus 11
184/5	Syron	missed	two houses, one of them described as small house	P.Petaus 13
184/5	,,	200 dr. (offer)	a new house that was built upon the third share of an old house; 2/3 house and court and 2/3 of a house	P.Petaus 14

Date	Place	Price	Object	Document
184/5	„	lost	1/5 of fallen down house and courtyard	P.Petaus 15
186	Soc.Nes.	200 dr.	1/2 of a house	BGU I 243
189	Karanis	300 dr.?	vacant lot	BGU I 71
191	?	lost	a house	BGU III 825
194	Soc.Nes	500 dr.	a house and court	SB X 10572 = P.Lond.Inv. 1982
II cent.	„	not stated	building land (57 sq.cubits)	P.Vind.Tand. 2
„	Tebt.	600 dr.+ 60 dr. sale tax	1/2 of a house and small courtyard	P.Tebt.II 351
„	Bernikis - Aiglou	170 dr.	1/3 small house and small court	BGU VII 1643
„	Polemon ?	lost	house and court	SB VIII 9831
„	Theadelphia	2500 dr.	house property	P.Fay.23 a
„	?	lost	immovable	P.Ross.Georg. II 32
„	?	„	immovable	CPR I 113
„	?	„	immovable	CPR I 119
„	?	„	immovable	CPR I 121
„	?	„	immovable	CPR I 192
„	?	„	1/2 of a house	CPR I 214
II cent.	?	200+ dr.	an old house and mill	P.Lond.1179 III p.144

Date	Place	Price	Object	Document
II/III cent.	?	306 dr. 308 dr. 37 dr. 60 dr. 24 dr. 8 dr. 4 dr. 120 dr. 50 dr.? 18 dr. lost ,,	house property and 78 cubits with entry and exit part of a house part of a house 1/8 share of a house a house in ruin 1/4 of a house and inner court common court new house, inner court and courtyard new house and court 1/3 of a two storey house, inner court and court 1/8 of a house and house property	P.Strassb.31
II/III	?	,,	immovable	BGU III 901
209	Philad.	100 dr.	2/15 of a house	P.Hamb.I 15
209/210	Arsinoe	2000 dr.	2/3 doubled towered house	P.Hamb.I 14
,,	Athena & Anubis	800 dr. 800 dr. 1000 dr. 1000 dr. 1000 dr. 800 dr. 800 dr. 800 dr. 800 dr. 600 dr. 600 dr. 1000 dr.	house property house property house property house property house property house property house property house property house property house property house property	P.Oxy.XVII 2121 col.1 col.2. col.3
211	Euhemeria	100 dr.	festival hall in a house	P.Strassb.I 14=IV 314= P.Monac.84
215	Arsinoe	3030+ dr.	house	BGU II 362 co.9

Date	Place	Price	Object	Document
222	Phylakitike Nesos	800 dr.	house without court	BGU II 667
early III cent	Cynopolis & Lysimachis	1000 dr. 600 dr. 600 dr. 600 dr.	house property house property house property house property	P.Ryl.II 90
„	Euhemeria	1000 dr. 1000 dr. 1000 dr.	house property house property house property	P.Ryl.II 91
„	?	1300 dr.	immovable	CPR I 120
„	?	lost	part of a house	CPR I 127
„	?	„	immovable	CPR I 159
„	?	„	immovable	CPR I 169
Mid III cent.	?	2000 dr.	1/3 of a house and court	CPR I 3
260	?	1500+ dr.	1/16 of a house + house with two gates building and court	P.Gen.44

From the above table one can see that the Fayum province produces a substantial amount of material that sheds light on the price or value of houses, of part of houses, and of building land. From the Arsinoite nome alone we have one hundred and seventy four documents. One can classify this material into: 1) Sale contracts either in Greek or in demotic, 2) registration returns, 3) liturgical lists and finally 4) tax receipts.

More than one third of these documents comes from Soknopaiou Nesos and more than one fourth from Tebtynis.

So more than half of the data comes from the above two villages. The other villages give between one and seven references each.

Concerning the measurements of the property, the table gives us twenty three documents that mention the size. Fourteen of them come from Tebtynis, the rest come from Soknopaiou Nesos⁵, Oxyrhyncha⁶, Karanis,⁷ Talei⁸, Theogonis⁹, and two other unknown places¹⁰, three only record the price, in the others it is either not stated or lost.

Seventy seven documents record the price or the value of houses or parts of them or building land. Six documents are liturgical lists that record the value of twenty six properties. One document is a list of confiscated property that records the nominal value of nine objects.

The evidence set out in the table covers the three centuries of the Roman period. The data can be classified in three groups according to their dates. The first century is represented by 107 documents. Fortunately our evidence has few gaps from the year 2/3 B.C. onward till the end of the first century. We can classify these references as follows: a) Thirty nine are concerned with houses and their

5) Three references.

6) One reference.

7) one reference.

8) Two reference.

9) one reference.

10) Two references.

appurtenances¹¹. b) Sixty deal with parts of houses¹². c) Thirty four deal with vacant lots or parts of them ¹³. d) Three deal with courts.e) Four deal with other immovable property. So the total number of these objects is 140.

The papyri come from the following villages and towns: Soknopaiou Nesos ¹⁴, Tebtynis ¹⁵, Oxyrhyncha¹⁶, Talei ¹⁷, Ptolemais Euergetis ¹⁸, Theogonis¹⁹, Karanis²⁰, Bakchias²¹, Kerkesoucha-Orous²², Kerkeosiris²³, and finally unknown places²⁴.

The prices are given for 23 objects, 7 more for fiduciary sales; the remaining texts either do not state the price, or it is lost. The documents which do not state

11) Eight of them are recorded in P.Mich.123 V.

12) Seven of them are recorded in P.Mich.121, and five are registered in P.Mich,123 V.

13) Fourteen of them are registered in P.Mich.121 and 123 V.

14) Soknopaiou Nesos produces 42 references from the first century A.D., 24 of them do not mention the purchase price and one price is missing, 12 references mention the purchase price or the offered price, five of them deal with one property or part of it. These papyri date from between A.D.11 and A.D 17. Finally four references are concerned with fiduciary sale.

15) Tebtynis gives us 31 references; three of them only mention the price while another three deal with fiduciary sales and the rest do not mention it, in other words we can say that about 25% mention the price, where as 75% do not.

16) There is only one piece of evidence from Oxyrhyncha and the price is not stated in it.

17) This town gives us six references that are concerned with the sale of houses, shares of them and vacant lot, but the price is not stated.

18) This town gives us two references but the price is not stated.

19) Theogonis gives us two references but the price is not stated.

20) Karanis gives us one piece of evidence that gives the price as well as the size.

21) Bakchias gives one reference that records the price.

22) Kerkesoucha-Orous gives us three references in which the price is not stated.

23) This village gives one reference in which the price is not stated.

24) There are seven references from unknown places. Three of them record the price.

the price are either subscriptions or docketts of demotic contracts; the local Egyptian law made a distinction between the so-called deed of silver (συγγραφή πράσεως) and the deed of renunciation (συγγραφή ἀποστασιου)²⁵. To put it in percentages: about 26.65% mention the price while 73.35% do not mention it.

From the table one notices that there are no references to the price from the period between the beginning of the Roman period and A.D 10. Then the papyri give us some references for the price from the period between 11 and 17, but it is worth mentioning that these references are concerned with one property or part of it. Then we have a gap from the year 18 onward until the year 40. We have scattered references from the period 41 and 69. From this year onward there are regular references to the price for successive years until the end of the first century.

Let us discuss now the purchase price or offered price of the property from A.D. 11 onward. Of particular interest are five references which concern a house, veranda, inner court and some vacant lots or part of the property which became the object of a dispute (among three parties, the purchaser, another person and the government) which continued till the year A.D. 17. The first reference is P.Vindob.Sal.4 (A.D.11) from Soknopaiou Nesos, which gives us the purchase price of the property as 740 dr. After

25) Taubenschlag.R., The Law 2 p.317 and note 1.

three years we have SB I 5237 (A.D.14) in which another party offers to purchase the vacant lots from the government (Idios Logos) reporting that the property belongs to the State and offers the price of 300 dr. In SB I 5232 the purchaser protested against that stating that he had the documents of ownership, moreover he had spent money on repairs and he had rebuilt on the existing old foundations. In the same year the opposing party offers (SB I 5234.A.D.14) to buy the whole property, house, veranda, inner court and vacant lots, and his offered price is 1500 dr. Then two years later the purchaser of the whole property was obliged to pay 500 dr. for the vacant lots to the government and in return for that the government gave him the right of ownership of the vacant lots (P.Lond.II 355 pp.178. A.D.16; SB I 5240 A.D 17). So if we try to form an accurate picture of the value of the above property, we find that the first price is 740 dr. for the whole property in year 11. Unfortunately the document does not give us the price of each part of the object separately. So we cannot know the value of the house and its appurtenances alone and the value of the vacant lots and whether the value of these vacant lots is equal to the sum of 300 dr., or less when the purchaser bought them. In other words, was the sum of 300 dr. as offered for the vacant lots equal to their value when the vendee purchased them in year 11 or was this offered price estimated after the improvements that had been made by the purchaser who is in the same time the possessor? One can suppose that the value of the vacant

lots was equal to the sum of 300 dr. as the offered price for them and this sum represented the real value of these vacant lots after the improvements which had been done by the purchaser. Neither do we know why the purchaser paid the sum of 500 dr. and not the sum of 300 dr. Did the increased sum include a fine, or was the purchaser (possessor) obliged to offer a higher price -which was 500 dr.- than that offered by his opponent? I am inclined to the view that there was a fine²⁶, and also that the purchaser offered the sum of 500 dr. as a price of vacant lots. I assume that either the purchaser accepted to pay the sum of 300 dr. as a price and the other 200 dr. as a rent for six years, so that the monthly rent will be 2.8 dr. and yearly 33.33 dr., or this sum was demanded by the government as an interest on the sum of 300 dr. This assumption is supported by P.Oxy.III 513. However another question arises: Is the value of the whole property really equal to the sum of 1500 dr. which was offered in year 14? Or is this sum higher than the value of the property ? I assume that first of all the man wants to get his opponent into trouble with his offer, and in fact he succeeded in annoying him for a time because the authorities took the case seriously and made an inquiry into the rights of the ownership of the property. The result of the inspection was that the house and its appurtenances was private property and the purchaser owned it by sale. But the vacant lots

26) Cf. Swarney.P.R., The Ptolemaic and Roman Idios Logos, 1970, p.47.

were owned by the government and the man had bought them by mistake. I assume the sum of 1500 dr. as the offered price represents the real value of the property after the purchaser had made some improvements to them.

Anyway the government gave the purchaser the chance to buy the property on the assumption that: 1) He had made the improvements before knowing they belonged to the government. 2) He possessed it already. 3) He is the neighbour of the vacant lots. If so, he has the priority to buy the property from the government.

The table gives us seven deeds of fiduciary sale -four from Soknopaïou Nesos and three from Tebtynis - which made the property a security for the loans²⁷. It is worth discussing these deeds here, even though they are not real sales. The first deed, P.Ryl.II 160 c (A.D.32) from Soknopaïou Nesos, deals with a fiduciary sale of a one storey house (in the subscription it is called a two storey house). The amount of the loan is 100 dr. plus interest. The document does not give us any information about the size and its condition but describes it as either a one or two storey house; from this description we assume that the value of the house was much higher than the amount of the loan. But due to economic pressure, the debtor was forced by the creditor (who wanted to have the property as guarantee for his capital) to write a sale contract although he knew that the value of his property was higher

27) See P.Ryl.II 160 C Introd.

than the debt.

The second document, PSI VIII 908 (A.D.42-3) from Tebtynis, is concerned with a fiduciary sale of $\frac{3}{4}$ of a three storey house. The sum of the loan is 100 dr. plus the interest. The papyrus does not give us any information about its size and condition but describes it as a three storey house, from this description we assume that the house was well constructed. So its value was presumably higher than the above mentioned sum.

The third document, P.Ryl.dem.45 (A.D.43) from Soknopaiou Nesos, is a fiduciary sale of $\frac{2}{7}$ of two fourths of a ruined house. The amount of the loan is 34 dr. plus the interest. Although the property was described as a ruined property its value may have been higher than the above sum.

The fourth document, P.Vind.dem & Greek, 6933 (A.D.47) from Soknopaiou Nesos, deals with a fiduciary sale of a share of a two storey house and its courtyard. The amount of the loan is 84 dr. plus the interest. From the description of the house one can assume that its value is much higher than the above sum, although its condition and size are not mentioned.

The fifth papyrus, PSI VIII 910= P.Mich.V 323 (A.D.48) from Tebtynis, deals with a fiduciary sale of one fourth of a new three storey house. The loan is 132 dr. plus interest. It does not mention the size of the house but it describes it as a new three storey house. Consequently one can safely say that the value of the portion was higher

than the loan.

The sixth papyrus, PSI VIII 911 = P.Mich.V 335 (A.D.56 ?) from Tebtynis, is concerned with a fiduciary sale of a two storey house and its court in which there is a new two storey hall and portico...etc, the amount loaned is 448 dr. plus interest. The size of the house is not mentioned. Judging from the description of the property, one can conclude that the amount loaned is less than the value of the house, especially as this two storey house had a two storey hall in the court. So presumably the owner was a wealthy man and the house was not small, but as a result of urgent financial need, the owner was obliged to agree to that type of contract.

Finally the seventh deed, BGU.III 910 (A.D.71) from Soknopaiou Nesos., is concerned with a fiduciary sale of an immovable property. The amount of the loan is 100 dr.

One can see from the above references that the value of the objects in the contracts compared with the amounts of loans are very different from the real prices of these properties. So we would be mistaken if we considered the sums mentioned equal to the value of houses²⁸. Therefore one wonders why the contracting parties adapted or invented this form of deed: why did they not make a loan contract ? Is this because of the smallness of the amount of the loan ? Does this depend on the creditor's wish ? I assume that the smallness of the amount of the loan means that the

28) Cf. O.Montevicchi, *Compra-vendite di edifici*, Aeg.21 (1941) 126.

purchaser-creditor can secure his money and have it repaid in a fixed time without delay. So they draw up this kind of contract which puts more pressure on the debtor. On the other hand the seller-debtor was obliged by urgent financial need to accept this type of contract. So the purchaser-creditor in fact wants to be sure that if the seller-debtor fails to repay his debts, he will lose his property and he can not make a claim to regain it. Also as a result the purchaser-creditor would avoid a lot of legal procedure, before owning the property which he would face if he made a contract of loan on security. So the debtor will try to repay his debts in the fixed time without delay, otherwise he would not get his property back. In other words, if the seller-debtor refuses or fails to pay his debt the purchaser-creditor will duly acquire the property.

Let us turn to discuss the prices of whole houses from the first century. The table gives us three references for whole houses. One of them has already been discussed. The other two are:

PSI XIII 1319 = Aeg 20 (1940) p.27, from Soknopaiou Nesos, is concerned with the sale of a house in the east part of the village. Its price is 220 dr.

CPR I 120, of the late first/early second century from the Fayum, deals with the sale of a house, inner court and pigeon cote. The price is 1300 dr.

The value of the first house is less than one sixth of the second. The variation in the prices of these houses

seem to be related to their respective sizes: a small house, a middle size house and finally a larger house.

We must bear in mind that these are only samples of prices which have reached us by accident. So it is probable that there were cheaper houses as well as more expensive ones. This will be emphasised after dealing with the evidence that concerns shares of houses from the first century.

I shall now turn to discuss the references that shed light on prices of portions of houses. The table gives us 13 references which are as follows: The first papyrus, P.Mich.235 (A.D.41) from Tebtynis, is a receipt for a transfer tax on the purchase of a half share of a three storey house and courtyard and its price is 600 dr. plus sale tax 60 dr. The two contracting parties are brothers. The price of the whole house would be 1200 dr., if neither of the two brothers made any improvement in his share before the sale. But if one of them made some improvement or carried out some repairs the value of his share would be increased.

The second document, P.Mich.V 340 col.111 verso (A.D.46) from Tebtynis, describes the sale of a share of a house of which the stated price is 320 dr. The document does not state the proportion of the share. Therefore, it is difficult to estimate the value of the whole house.

is difficult to estimate the value of the whole house.

The third document, BGU XV 2476 (A.D.59/60) from Tebtynis, gives us an agreement of relinquishment of a claim to a share of a house between a father and his son. In return for that agreement, the resigning party acknowledges that "he received from his father forthwith from hand to hand out of the house 400 dr." which will be left to him by his aforementioned father when he dies.

.....ἀπέχειν [παρ'] αὐτοῦ παραχρῆμα
 [διὰ χειρὸς ἐξ οἴκ]υ ἀργυρ[ί]ου δραχμὰς τετρακοσίας
 [καταλειφθησομένης] αὐ[τ]ῷ ὑπ[ο] τοῦ προγεγραμ[μέ]-
 [νου πατρὸς αὐτοῦ] ὁρσενο[ύ]φως μετὰ τὴν ἑαυτ[οῦ]
 [τελευτήν]

The editor reconstructed the gap in the above lines and as a result there are contradictory phrases, particularly concerning the payment of the price immediately and after his father's death. Here some questions arise: Is the sum of 400 dr. as the purchase price equal to the real value of the share of the house? Or is the real value higher? Or is the agreement an amicable transaction between the father and his son? If the son received the 400 dr. at once, that sum may have been the real value of the share, but if he was to receive the sum after his father's death, the value of the share may have been less than the sum of 400 dr.; this becomes clear if we first take into consideration that the resigned share was assigned to the resigning party according to an alimentary contract between his parents, which would mean that the house is not new. Secondly, the

son is likely to receive the sum after his father's death sooner or later (the father was 42 years old), and moreover, if we try to calculate the compound interest the sum will be doubled within six years, or in other words the main capital will amortize after six years, in which case the value of the share of the house could have been less than 400 dr. If we consider the transaction as an amicable agreement between them, then the sum does not express the real value of the share. Moreover, if we also consider that the son may have been obliged to accept the stated amount for fear his father "or parents" would deprive him of his share of the property, because he realized that his parents have the right to change the agreement as they wish. The money was accepted by him but we can not know for certain whether it was more or less than the actual value of the property. The document raises another question: What proportion of the house was that share? We could answer that if we had the alimentary contract between the parents, but unfortunately we do not. So it is difficult to ascertain the real value of the whole house.

The fourth document, P.Lond.154 = Mitteis.Chr.255 (A.D.63) from Karanis, describes the sale of a walled court. The measurements are as follows from the South to North $15 \frac{1}{6}$ cubits & West to East 33 cubits = 135.71 square metres. The price is 200 dr. So the price of the square metre is 1.47 dr.

The fifth is a pair of documents, BGU I 184 (A.D.72), P.Strassb. IV 208 (A.D.75) from Soknopaiou- Nesos, dealing

with a sale of $1/9$ of a house, and the purchase price is 64 dr.

The sixth document, P.Mich.X 583 (A.D.78) from Bakchias, describes the sale of $1/3$ of a house inherited from the seller's mother, and $1/9$ share purchased by the seller, making four ninths of a jointly owned house and an old courtyard which had partly fallen into ruin. The price is 100 dr. The house was described as common property, so one can say that the division was a nominal division.

The seventh document, SPP XXII 175 (A.D.78) from Soknopaiou Nesos, describes the sale of a half share of a house, the price is 140 dr.

The eighth document, PSI XIII 1320 (A.D.82-96) from Soknopaiou Nesos, deals with the sale of a half share of a two storey house and court in the east of the village, its price is 160 dr.

The ninth document, BGU XI 2095 (A.D.83) from Soknopaiou- Nesos, is concerned with a half share of a house; the price is 160 dr.

Although the prices of the last two properties are the same, there may have been differences between the properties: one of them is described as a two storey house, the other simply as a house.

The tenth papyrus, P.Ryl.II 107 (A.D.84) from Soknopaiou Nesos, describes the registration of $3/4$ of a half share of a house and court, the purchase price is 200 dr.

The eleventh document, P.Fay. 100 (A.D.99) from Theadelphia, describes the sale of 1/2 of a house, courtyard and vacant lot. The price is 600 dr. The document does not give the size of the property or the condition of the house.

The twelfth document, CPR I 220 (1 st century A.D.) from Soknopaiou Nesos, deals with the sale of 1/4 of a lodging house (κατάλυμα) and its price is 40 dr.

Finally the thirteenth reference, CPR I 187 (late first/ early second century A.D.) from the Fayum, deals with the sale of a fourth share of a house and courtyard, the price is 100 (+) dr.

We notice the following points: 1) The period covered by the records of shares of houses offered for sale extends from A.D. 41 onward till the end of the first century. 2) The evidence for the prices comes from six places in the Fayum, as follows: Soknopaiou Nesos that produces seven references; Tebtynis that produces three references and finally each of the following places gives one reference only, Karanis, Bakchias, Theadelphia and an unknown place. 3) The available evidence reveals the variation in the value of houses. For example, we have three sales of half shares of houses from Soknopaiou Nesos; their prices are as follows: 140 dr., 160 dr., 160 dr. So the total value of these three shares is 460 dr. On the other hand we have also one sale of a half share of a house from Theadelphia. The price is 600 dr. So its value is 130% compared with the

value of the above three half shares of houses. 4) The evidence from Soknopaiou Nesos tells us that there is also some slight variation in the value of the houses, but in general the prices are low. 5) The price stated in the unique document that concerns the walled courtyard is the lowest price for courtyards that we have among the papyri.

For sales of building lands (vacant lots), the table gives us several references, of which some mention neither the price nor the size, others mention only the size and finally one document, P.Lond.140 II p.180 (A.D.69-79) from an unknown place, deals with a sale of a vacant lot of which the price is 124 (+) dr., but the measurements are not given. So we have no document which mentions both the price and the size of the vacant lot. Perhaps the papyri will give us some information in future.

One can sum up as follows: there is a large group of references from the Fayum province. But these references give us little information about the prices, often the prices are not stated or are lost. The reason behind a price not being stated may be that the document is either a translation from Demotic into Greek or a subscription or a docket of contracts. The available prices suggest that there are small houses, medium size houses and finally large houses.

Let us turn to discuss the references of the second century. The table gives us sixty documents that deal with either sales contracts, registration returns, or liturgical lists that give us several houses or parts or vacant lots

and their estimated values, as well as a document that records several estimated values of houses, parts of houses and vacant lots.

None of the papyri of the second century mention the measurements of the houses or parts of them. There are four papyri which give the size of the vacant lots. Three of them mention the price.

The price or the value of the whole house and its appurtenances is stated in the following documents: P.Tebt.frag.21,046 (early 2nd century A.D.) from Tebtynis, deals with the sale of a house or share of a house for 400 dr.

P.Lond.293= Aeg.Trev.2 (1983), p.134 ff. (reign of Trajan) from Soknopaiou Nesos, deals with the sale of a ruined house of which the price is 300 dr. From the description of the house as ruined we can assume that the purchaser pays the purchase price mainly for the site (building land of the house) as well as the suitable building materials which he can reuse in a new building or sell them. I assume that this house is larger than the house in the next document.

SPP XXII 23 (A.D.106) from Soknopaiou Nesos, deals with the registration of a house and courtyard and the price mentioned is 320 dr.

P.Tebt.II 323 (A.D.127) from Tebtynis, deals with a sale of a small house for 200 dr.

P.Mil.Vogl.II 98 (A.D. 138-9²⁹) from Tebtynis, describes a case brought against a village-scribe of Talei and Ibion. The accusation is that he had purchased 8 1/2 ar. of vineyard and a house. In his circumscription, he used his mother -in- law who was very rich, as a shield, but in fact he enjoyed the ownership of the property that was held nominally by his mother-in- law. The prefect set out the following three points of inquiry: Who made the accusation ? What was the value of the property ? Had the woman acquired the property for her own use or for that of her son-in-law? The inspection concluded that: a) The property was recorded in the state Archive (Βιβλιοθήκη εγκτήσεων) under the name of the scribe's mother-in-law and the scribe denied the accusation. b) The alleged price of 5 talents was a 'rhetorical' error (πλάνη ρητορική) and the sum of one talent 2000 dr. was actually paid. Here some questions arise: Did the purchaser pay the sale tax plus the additional fees on the sum of 5 talents or on one talent 2000 dr.? Was the value of the property equal to 5 talents or to one talent 2000 dr.? Let us try to answer these questions. Our document is the sole document that records the registered price of the property as being more than its real value. The situation is not immediately obvious, for one could consider this an abuse if the real value was 5 talents but the stated value was 8000 dr. The purchaser could then use his power to avoid paying the

29) V.Arangio-Ruiz, ΚΩΜΟΓΡΑΜΜΑΤΕΥΣ concussinario e il 70 dil ΓΝΩΜΩΝ, Studi Epigrafici e Papirologici, Napoli (1974) pp.577-590.

whole sale tax which would be 3000 dr. plus additional fees. But here the real value is 8000 dr. only and this was confirmed by one of the witnesses; moreover if we compare the 8 1/2 ar. of vineyard plus the house property with the property in SB XII 11233 (A.D.247), we discover that the value of 37 13/32 ar. and three houses is 7400 dr. and in P.Oxy. XII 1475 (A.D.267), the value of 11 13/16 ar. and two houses is 9700 dr. Therefore the value of the property in P.Mil.Vogl.II 98 is much more likely to have been 8000 dr. and not 5 talents. One can assume that the value of the 8 1/2 ar. and the house property is higher than the value in P.Oxy.XII 1475 because the land is a vineyard. The document does not specify the value of each item separately, so it is impossible to discover the accurate value of the house alone, and, as I mentioned before perhaps the evaluation of each object from the property may have been made either by official experts or according to the current value of the market by auction and they then recorded the value of the property as a whole.

P.~~S~~crassb. VI 543, of the first half of the second century from Soknopaiou Nesos, deals with the sale of a house and court. The price is 800 (+) dr. (Maehler, Aeg.Trev.II (1983) p.133)

P.Mich.V 429 (A.D.154) from Karanis³⁰, deals with a sale of a house and two courtyards for 800 dr. The document does not mention either the size or the condition of the

30) Karanis is one of the sites that was partially recovered by the Michigan expedition, the results were very fruitful, according to my personal observations, it shows that there are three types of houses: those are in a rich area, middle area and poor area.

property, but from the description (especially of the two courts) one can assume that it is a large house. This is the only document that we have at the present time from Karanis.

The next document. P.IFAO.I 33 (A.D.163), from Heraclia, describes the sale of either a house or share. The price is partially missing, but was more than 100 dr.

BGU 282 (A.D.175), from Psenarpsenesis³¹, deals with a sale of a house in a ruined condition, for 100 dr. One can assume that it is a small house and that the purchaser pays his money primarily for the value of building land of the house.

P.Petaus 14 (A.D.184-5), from Syron, describes an offer to purchase from the government's confiscated property a new house that was built upon the site of a third share of a house; 2/3 of a house and courtyards and finally another 2/3 of a house. The price offered is 200 dr. plus the additional expenses according to the official estimated price without increase. The village scribe reported the above information to his superintendent, adding that the value of the above property was very low. This was because there was no income from it; finally he stated that the above offer was the only offer that he had received. So from the above information we do not know whether the authorities responsible accepted that offer or not; if not the property would be offered for sale by auction again. This document raises another interesting point which is that no other offers were received for the

31) This village produces this document only; it was near Karanis.

property. So one can conclude that the official estimate is the lowest amount that the government would accept. Or in other words the official estimate of the value of the property was only the preliminary price for the property and the official authority expected tendering of higher bids to go on until the highest bid was offered during the period of auction.

SB X 10572=Lond.inv.1982 (A.D.194), from Soknopaiou Nesos, describes the sale of a house and its courtyard for 500 dr.

P.Fay.23 a (2nd century A.D.), from Theadelphia, is a liturgical list and contains one reference that gives the value of a house property; the estimated value is 2500 dr. This estimate may either be the accurate value of the property or the real value of the property is higher than the above estimated sum because the nominator would be safe if his estimation was either accurate or more than the real value of the property. But if one of the officials estimated the accurate value of the property but he nevertheless ignored the obligations of the nominee (such as debts), the result would be a complaint from the nominee (such as P.Petaus 10). And if the property of the nominee who was in need was sold to meet the obligation of the job, the nominator then had to pay a fine to the fisc as well as four times the value of the sold property to the nominee (P.Wisconsin 86)³².

SPP X 12 (2nd century A.D.?), from Arsinoe, describes

32) See Westermann, JEA 40 (1954) 107-111.

the sale of a house and inner court. The price is 2200 dr.

P.Lond.1179 III p.144 (III century A.D.), from the Fayum, deals with a sale of of an old house with mill for 200 (+) dr.

P.Strassb.I 31 (late second/ early third century A.D.), from the Fayum, records confiscated house properties and their value. This document gives a good illustration of the procedure in estimating the value of the confiscated properties that were offered for sale. The authorities issued an order to advertise the property for sale and also set the price. The document shows that there were several stages before the property was offered for sale. First, the village scribe reported the estimated value of the property. Here a question arises: How did the village scribe evaluate the property ? There are two possibilities: either he took his information from public records³³ or from the current market evaluation. The latter is more probable, as the record values or prices were not always up to date, especially concerning inherited property. So the recorded values or prices are often lower than the current values or prices.

The second stage: The scribe's report was inspected by a committee which was nominated to check the value of the unsold property. The survey concluded that: 1) They kept some value without change. 2) They changed some values stating that "on surveying boundaries 20 dr. were added

(....αί δέ ἐξ επισκ(εφεως) ὀρισμοῦ προσορισθ [εισαι]

33) See N.Lewis, Compulsory Public Services of Roman Egypt, p.75.

(δραχμαί) κ). Here some questions arise : Why did the evaluation of the village scribe make the value of the property lower than the evaluation of the committee ? It is more likely that the estimation of the village scribe was based on his available sources that recorded the size of the property and followed by this phrase (...ἢ ὅσων ἐὰν ᾧσι ἐπὶ τὸ πλῆν.) (e.g. P.Mich.II 294). The committee may have carefully checked or surveyed the boundaries or the measurements of these properties. The increased sum may therefore be due to the differences between the recorded size and the real size after the boundaries were checked.

We may assume that after the committee's inspection the estimated value of the property was still the minimum sum that the authorities would accept, and if the house was evidently of sufficient value to encourage competition in bidding the bidders would overbid against each other.

Finally I must deal with the values of houses mentioned in P.Strassb.I 31. There are four references to houses and their appurtenances. The first is concerned with a house property (?) plus 78 cubits of land with entry and exit; the determined value is 306 dr. The second reference is concerned with the evaluation of a house in a ruined condition; its estimated value is 24 dr. The third reference is concerned with the evaluation of a new house, inner court and courtyard. The first evaluation had been made by the village scribe who had estimated its value at 100 dr. But after the survey of its boundaries by the committee which was nominated to check the value of the

property, 20 dr. were added. So the total value is 120 dr. Finally the fourth reference is concerned with the evaluation of a new house, courtyard and its entrance and exit. The determined value is 50 dr.(?).

It is worth mentioning that these values are the minimum values that could be accepted by the government after the property had been offered for sale by auction whereas there was no objection to higher bids during the period of auction. The second reference P.Strassb.I 31 gives the lowest of all recorded house values. In general the determined values are very low compared with prices from the Fayum, especially when one considers the relatively late date of this document (late second/ early third century A.D.).

To sum up the discussion: The documents that give the value or the price come from: a) Tebtynis: two references in which the prices are 400 dr. and 200 dr. b) One piece of evidence from Ibion and Talei which gives the price of 8 1/2 ar. plus a house property as 1 talent 2000 dr. c) Three references from Soknopaiou Nesos in which the prices are 300, 320, and 500 dr. One might infer from the last three mentioned prices that there was a steady increase in price, but we must not forget that it is difficult to generalize about the upward trend of the prices of houses from only three references. This is because our references survive by accident, and we do not have sufficient evidence which could help us to form a clear picture about any steady

increase of the prices of houses ³⁴. This will be emphasised after dealing with prices of shares of houses which will show us that there are some high prices of houses from the beginning of the second century which go side by side with low prices and this is applicable to end of the second century too (P.Strassb.I 31.). d) In four references from unknown places (Fayum), recorded in P.Strassb.I 31, the prices are as follows: 306, 124 and 50 (?) dr. but the first price included the price of 78 cubits of vacant lots. e) The following places give us only one reference each, Karanis 800 dr, Psenarpsenesis 100 dr., Syron 200 dr., Theadelphia 2500 dr. and finally Arsinoe 2200 dr. So it is hard to make any comparison from these few references between the villages of the Fayum. It would be a mistake to consider these samples as standard prices, because values of houses may have been higher or lower. We are waiting for more references to be published. In any case, the variations may reflect differences in size and quality.

Next we must deal with the price or the value of shares of houses in the second century. Fortunately the table gives us twenty two references to the value or the price of portions of houses, as follows:

BGU I 350 (A.D.102-117,) from Soknopaiou Nesos, is a sale of 1/3 of a house, inner court and courtyard. The price is 500 dr.

P.Hamb.I 97 (A.D.105), from Philadelphia, concerns a sale of 1/2 of a house and small court. The stated price is 1500 dr.

34) See Fig.1

CPR I 11 (A.D.108), from Soknopaiou Nesos, deals with an agreement between two brothers to divide their shares which form one fourth of two houses. The value of one of them is higher than the other. So one of the two brothers has to pay 220 dr. to make up the difference between the values of the two $\frac{1}{8}$ shares of the two houses. Consequently the value of one of the two shares is 440 dr. higher than the other. But unfortunately the document does not tell us the value of each share separately, and as I mentioned above the two contracting parties must have evaluated the two shares either by offering these shares for sale by auction, or by having them valued by experts. As a result the value of one of the two shares is 440 dr. higher than the other. From this variation in the value of the two shares, one can assume that one of the two houses, the value of which is higher, as a whole is a large house and the difference between the value of the two houses would be 1760 dr.

P.Fay.31 (A.D.129), from Theadelphia, describes a sale of $\frac{1}{5}$ of a house, its court and the whole of the tenement in the lodging house for 200 dr. From the description of the property as common and undivided, one can assume that the value of the whole house is about 1000 dr.

P.Mich.VI 427 (A.D.134), from Karanis, deals with a sale of $\frac{1}{2}$ of a house and its court for 100 dr.

CPR I 198 (A.D.139), from Fayum, deals with a sale of $\frac{1}{2}$ of a house and its court for 400 dr.

P.Vind.Tand.26 (A.D.143), from Soknopaiou Nesos,

describes a sale of 1/3 of a house and court for 800 dr.

P.Tebt.II 580 (A.D.155), from Tebtynis, deals with a receipt for sale tax on a fourth share of a house and its courtyard. The editor reconstructed the price and the tax as follows:..... $\left[\begin{array}{l} \text{(ταλάντων) Β} \\ \text{(δραχμῶν) υ (δραχμας) ἑκατόν} \\ \text{εξήκοντα} \end{array} \right] \left[/ \right] \text{(δραχμαί) ρξ} \dots \dots$. Two scholars Naber and Johnson³⁵ say that" probably the house was valued at 6400 dr. and the tax was calculated on the sale of a fourth part (1600 dr.). So they estimate the value of the house from the sum of the sale tax that was 160 dr., taking into consideration that the sale tax was 10% of the price.

Anyway from the sum of the sale tax one can conclude that:
a) The house is very large which is more common in villages than towns. b) The price of this house is the highest price that we have from Tebtynis. So the owner of this house belongs to the upper class.

SPP XXII 31 =SB XVI 13072=ZPE 56 (1984) pp.93 (A.D.155), from Heraclia, describes a sale of a gateway building (πυλών), two cellars, cow stable and lots for 500 dr. Unfortunately the papyrus does not give us the price of each object separately or the measurements of the lots or how much of the whole property is involved.

P.Ryl.II 162 (A.D.159), from Soknopaiou Nesos, is the sale of 1/2 a house and court for 60 dr. The share was inherited from the seller's mother. So it seems to have been an old house.

³⁵) Naber, *Observatiunculæ ad Papyros Iuridicæ*, *Mnemosyne*, 1925. pp.440/1; Johnson, *op.cit.*p.554, Wallace, *Taxation in Egypt*, p.448 note 60.

P.Lond.334 II p.211 (A.D.166), from Soknopaiou Nesos, describes the sale of $1/42$ and another share of the house $(1/42)^{36} = 1/21$ of the whole house at a price of 21 dr. This sum is paid in two instalments, the first is 14 dr. We may assume that the division here is a nominal division.

SPP XX 10=CPR I 5 (A.D.168), from the Fayum, deals with a sale of $1/2$ of a house at a price of 200 dr. The sellers were two brothers, each brother received 100 dr.

P.Amh.II 97 (A.D.180), from Soknopaiou Nesos, describes an offer to purchase $1/3$ of a house, its court which was not inhabited and oil press which was not in working order at the price of 120 dr. agreed on by valuation with additional payments. In this case the sum of 120 dr. is the minimum sum the authority could accept, and we do not know whether the government accepted that offer or not, maybe there were other offers from other bidders.

P.Petaus 10 (A.D.184), from Ptolemais Hormu, is a liturgical list that records the values of the shares of house properties that belong to the nominee who is to do compulsory service. The values of the properties are as follows: a) $3/4$ of a house property, inner court, courtyard and building land. The determined value is 1700 dr. b) Another $3/4$ of a house property, and inner court. The determined value is 1300 dr. It is probable that the difference between the values of two houses is due to the fact that the first one included building lands.

36) See H.Mähler, Aeg. Trev.P.120.

P.Petaus 11 (A.D.184), from Ptolemais Hormu, is a liturgical document which mentions the value of property belonging to a nominee for compulsory public service. The estimated values of the property were recorded as follows: a) $\frac{43}{240}$ of a house and court for 600 dr. b) $\frac{1}{6}$ of a house and court for 400 dr. c) $\frac{1}{6}$ of a house and court for 700 dr. One notices the variation in the value of the houses of this owner.

BGU II 243 (A.D.186) from Muses Chorion, deals with a sale of $\frac{1}{2}$ of a house for 200 dr.

P.Tebt.II 351 (2nd century A.D.), from Tebtynis, describes a sale of a half share of a house and its price is 600 plus the sale tax 60 dr.

BGU VII 1643 (2nd century A.D.), from Bernikis Aigialou, deals with a sale of a $\frac{1}{3}$ of a small house and court, the price is 170 dr. Although the property is described as a small property, its value seems high compared with some other houses in the villages. One can also assume that the value of the houses of this village is considered high.

P.Strassb.I 31 (2nd/ 3rd century A.D.), from the Fayum, gives us six references which mention the estimated value of shares of houses that had been confiscated by the government. The value of the property is as follows: a) The estimated value of $\frac{1}{2}$ of a house is 308 dr. b) The estimated value of a share of a house is 37 dr. c) The estimated value of $\frac{1}{8}$ of a house is 60 dr. d) the estimated value of $\frac{1}{4}$ of a house and inner court, after

the survey is 8 dr. e) The estimated value of a share of a common court is 4 dr. f) Finally the estimated value of a 1/3 of a two storey house, inner court and courtyard is 18 dr.

As I mentioned above these values are only the minimum values that the government would accept. But if the house was evidently of sufficient value there was competition in bidding to purchase these properties. We also notice that: 1) The value of the shares of houses is higher than that of the whole houses in the same document which was discussed previously. 2) The document is a good illustration of the variations of the value of houses. This variation of the value indicate that there were very small houses that go side by side with middle class houses. 3) Finally the document is the third document that gives us several estimated values of shares of house and dates to the same period³⁷. So it provides a good opportunity to make some comparison between them.

The above references come from several places in the Fayum (Soknopaiou Nesos; Theadelphia; Philadelphia; Karanis; Tebtynis; Heraclia; Ptolemais Hormu; Muses Chorion; Bernikis Aigalou; and finally unknown places).

Concerning the evidence from Soknopaiou Nesos, we conclude that: a) The average prices of whole houses calculated from their shares are higher than the average prices of the whole houses in the same village. b) Some

37) See P.Petaus 10 (A.D.184); 13 (A.D.184/5)

fractions of houses are parts of large houses (e.g. in CPR I 11, BGU 350) and some fractions are parts of very small houses (e.g. in P.Ryl.162, P.Vind.Tand.26) c) The prices of these fractions differ from house to house usually according to their condition rather than the passage of time ³⁸. d) $1/42$ of a house is the smallest share among those mentioned in the papyri and shows the extreme subdivision of houses. It probably represents a nominal division of the property.

From Tebtynis, the table gives us two references. The difference between the prices is very wide. The value of $1/4$ of a house in the first is 2.75 times more than the value of a half house in the second. So it is safe to say that the fourth share was part of a large and well constructed house compared with the second one. Here, too, the prices of the whole houses calculated from their shares are higher than the values of houses: the value of $1/4$ of a house in P.Tebt.580 was four times the value of the whole house in P.Tebt.frag.21,046. In other words, the value of that fourth is 2.66 times the value of two houses together. Obviously therefore, at Tebtynis, too, there were poor or small houses, middle class houses, and rich houses.

For Ptolemais Hormu, the table gives us the value of five shares of houses that were evaluated by the village scribe. Here some questions arise: Was the value of the property estimated according to the registered value of the

38) See fig.1.

property as recorded in the State public archives ? Or was it estimated according to the current prices of the market? If we take a close look at these documents, in examining P.Petaus 11 (A.D.184), we find that the nominee inherited the property from his parents. So if we suppose that they estimated the value of the property according to the original prices that were registered in the records, the value would have been much less than the stated value in the document, besides if the value was taken from records the scribe would have been aware of the debt of the nominee (as in P.Petaus 10) and would have deducted it from the value of the property. But obviously the scribe did not check the records, consequently he nominated a person whose means were not sufficient to undertake the liturgy. So we can discard the first assumption because the recorded information about the property was not up to date. It seems more likely that the estimated value of the property, at least in most cases, represents the current market value. Here some questions arise: How did the evaluation happen ? Was it made by official experts or haphazardly ? We do not know the answer, but the available evidence suggests that sometimes the evaluation of the property was accurate and no complaint was made about it; in P.Petaus 10 the nominee protests not against the evaluation of the property, but because he is in debt, and so he claims to be ineligible.

Sometimes, however, the evaluation is not accurate and is in fact higher than the real value of the property, e.g. in P.Wisconsin 81. This document tells us that the village

scribe compelled a man in the jurisdiction of his village district, who was listed as a poor man to undertake a liturgy, his meager property was confiscated after his flight and sold to meet, or to help to meet the difference. There is no doubt that he had been nominated as liturgist contrary to the existing law on immunity of indigent persons. But after the public sale of the property, the suit for redress was entered against the scribe. The prefect's decision separated the case into two parts. The first was concerned with breaking the law on the immunity of indigent persons. The second was the question of recompense to the plaintiff for the loss of his property. So the village scribe was liable to pay a fine to the fisc, he also had to pay the indigent four times the value of his sold property. This case shows that: a) The government had tried to put an end to this kind of extortion by imposing very heavy penalties on any person who violated the law. b) The nominator had to be careful when he evaluated the property of the nominee. Consequently he either estimated the value of the property accurately or he would give a low value, if he was not sure about the value of the property³⁹.

The following points may be noticed: a) The values of the houses at Ptolemais Hormu are very high compared with prices in other villages, e.g Soknopaiou Nesos. b) The owners have several houses which vary in value. c) This is

39) See P.Strassb.31 in which the committee reevaluated some properties after the scribe's evaluation and left some without change.♦

the first time we have five references which mention the values from one place and the same year. We shall also find this several times in the third century in the Fayum. So we can make a comparison between these values.

P.Strassb.I 31 from an unknown place, gives several valuations of houses, house shares, and vacant lots. These properties were confiscated by the government⁴⁰. The authority either offered them for lease or offered it for sale.

In this case the government decided to offer the properties for sale. Consequently the properties were evaluated in two stages, firstly by the village scribe and secondly by a committee which checked the evaluation of what the government could accept. The papyri⁴¹ give us some offers for purchasing the confiscated property according to the official estimated valuation only without increase, but we do not know whether the government accepted them or not. Another document, P.Petaus 13, tells us that although the properties were offered for sale in several successive years, nobody purchased them. Another document, P.Petaus 14 mentions no income from the property and reports that some one offered to purchase it, but according to the official determined value. So it is not necessary that the offered property should have been a subject of serious competition among the bidders, but that

40) The government offers the property for lease, as in O.Strassb.293, P.Lond.972.

41) P.Amh.II 97, P.Petaus 14.

depended upon the efficient evaluation of the property and economic conditions.

P.Strassb.I 31 gives us ten determined values. We must remember that these values represent only a sample of houses of the town, perhaps there were prices higher or lower than these, but in general the values mentioned are very low.

Finally, from some other villages we have only one reference. Prices in these villages vary between 200 dr. and 1000 dr., but it is impossible to calculate an average price. The smallest sum among the prices that we have is 24 dr. in P.Strassb.I 31.

Next we must look at the value or the price of the vacant lots or building land. The table gives nine references, eight of which mention the price or the value of the property. Four of them give the price as well as the measurements. On the other hand one document mentions the measurements only. The references are as follows:

BGU III 914 (A.D.113), from Ptolemais Euergetis, deals with a sale of a vacant lot. The measurements are 225 cubits = 59.625 sq.metres. The price is 132 dr. So the price per sq. metre would be 2.21 dr.

P.Tebt.II 472 (A.D.120), from Tebtynis, deals with a sale of a vacant lot. The measurements are 5 Bikoi⁴² 36 7/8 cubits. The price is 200 dr. So the price per sq.

42) Bikos=57.4 sq.metre. Thanks to Dr.B.Kramer who kindly gave me the reference (K.Maresch, Papyri römischer und byzantinscher Zeit aus der Kölner Sammlung und Privatbesitz, Diss.Köln 1982 p.59 no.8, P.Nepheros 29 note 5.

metre. would be 0.67 dr.

BGU IV 1047 col.III (A.D.131), from the Fayum, deals with the purchase of 38 Bikoi of vacant lots from confiscated property. The price is 2800 dr. The measurements produce a total of 2181.2 square metres. So the price per metre is 1.28 dr. In any case, the property is very large. Here some questions arise: Is the property in the fields, or at the edge of the town or within the town? Are these lots in one place? From the description as catoecic land (Preisigke, BL.I,P.91.) we suppose that this property was adjacent to the town and in one plot from the price and the standard of measurement Bikoi and not ar. One can also conclude that it is not cultivated land but that it is building land. We do not know whether they are in one plot or not. The value of it will differ from plot to plot according to its location and whether it faces a main street or not. Perhaps the purchaser is either a business man or a wealthy man who wants to build a large house or several houses for his children or if he is a business man he may subdivide it into plots and offer these for sale. Anyway the government offered it for sale after evaluating it, but we do not know whether the price represents the determined value or exceeds it.

BGU I 80 (=446) (A.D.159), from Heraclia, deals with a sale of a 1/2 ar., 1/3 court and other property. The price is 800 dr.

CPR I 206= ZPE 61 (1985) p.85 (A.D.138-161), from Ptolemais Euergetis, deals with a sale of equipment, brick

yard and courts. The measurements are not stated. The price is 600 dr. The price of each object is not given, but only the total price.

P.Prag.I 20 (A.D.159), from Dikaiu Nesos, gives the sum of 1200 dr. as a price of a share of a vacant lot. The measurements are not given.

CPR I 154 (A.D.180), from the Fayum, deals with a sale of vacant lots; the measurements are 3.16 Bikoi = 181.384 sq. metres. The price is 460 dr. So the price per sq. metre would be 2.53 dr.

P.Petaus 11 (A.D.184), from Ptolemais Hormu, is a liturgical list that gives the value of 1/12 of a vacant lot valued at 300 dr. and another 1/12 of a vacant lot valued at 40 dr. The measurements are not stated, but from the two values it seems that the first lot is larger than the second.

BGU I 71 (A.D.189), from Karanis, deals with a sale of a vacant lot. The measurements are not stated. The price is 300(+) dr.

Finally the last document, P.Vind.Tand.25(a)=CPR I 221 (2nd century A.D.), from Soknopaiou Nesos, deals with a sale of building land ; the measurements are 57 cubits but the price is not stated.

In this group we have only four documents which give us the prices as well as the measurements. The values are very low compared with building land in Oxyhrynychus; the available prices vary between 0.67 dr. and 2.53 dr. per square metre. But we must remember that it is hard to

arrive at an average price from these references because the prices differ from place to place in both the villages and the cities and from village to village as well as from city to city.

The evidence comes from several villages and towns (Ptolemais Euergetis; unknown town; Ptolemais Hormu; Karanis and finally Soknopaiou Nesos.), and each gives one reference.

For the third century, the table gives us twenty references to values or prices of houses, but in seven texts the prices are missing. So we have thirteen references to either the values or the prices; three of them are liturgical lists that record 18 values of houses. One can classify this evidence as follows: a) Twenty three references deal with houses. b) Eight references are concerned with portions of houses. c) Four references deal with immovable property.

Let us begin by discussing documents which mention either the value or the price of complete houses. P.Oxy.XVII 2121 (A.D.209-10), from Athena & Anubis, is a liturgical list which records the value of house property as follows: a) Eight house properties; the estimated value for each of them is 800 dr. b) Three house properties; the estimated value for each of them is 1000 dr. c) Two house properties; the estimated value for each of them is 600 dr. So the values of houses vary between 600 dr and 1000 dr. But this is only a sample of houses and of course there are some houses valued higher or lower than these. Anyway the

document gives us a good example of variation in the values of houses in the two villages and this is the fourth document that records several values.

BGU II 362 col.IX (A.D.215), from Arsinoe, states that a debtor had paid through the purchaser of the house the sum of 3000 dr. plus the interest which is 30 dr. to the treasury of the temple (the property was mortgaged). One can assume that the above sum was part of the price of the house and not the whole price. The purchaser pays the money direct to the treasury of the temple to ensure that there is no obligation and that the property is free from any debt, and he deducts the sum from the price.

BGU II 667 (A.D.222), from Phylakitike Nesos, deals with a sale of a house. The price is 800 dr.

P.Ryl.II 90 (early third century A.D.), from Cynopolis & Lysimachis, is a liturgical list which records the estimated value of the house properties as follows: a) One house had been evaluated at 1000 dr. b) Three houses had been evaluated at 600 dr for each of them. As I have mentioned above, these references are only samples but they give us an idea of the variations in the value of houses. The document is the fifth example that gives several values.

P.Ryl.II 91 (early third century A.D.) from Euhemeria, is a liturgical list which records three houses valued at 1000 dr. for each of them.

The texts in this group, from Athena & Anubis, Arsinoe, Phylakitike Nesos, Lysimachis and finally

Euhemeria, give us a good idea about the variation of the value of the houses, they also suggest that there may be similarities between some of them. The values of houses vary between 600 dr. and more than 3030 dr.

We must discuss the references to shares of houses listed in the table. The references which mention the prices are: P.Hamb.I 15 (A.D.209), from Philadelphia, a sale of 2/15 of a house and small court⁴³ for 100 dr. P.Hamb.I 14 (A.D.209-10), from the Fayum, deals with a sale of 2/3 doubled towered house, held in common, to repay two loans. The first of them is 1500 dr. on mortgage of the property, the second is an unsecured loan of 300 dr. The price is 2000 dr. From the description of the house one can infer that the value of the whole house is 3000 dr. P.Strassb.I 14=P.Monac.84 (A.D.211), from Euhemeria, deals with a sale of a festival hall in a house. The price is 100 dr. CPR I 3 (mid-III century A.D.) from the Fayum, deals with a sale of 1/3 of a house and court for 2000 dr. Finally P.Gen.44 (A.D 260), from Fayum , deals with 1/16 of a house as well as another house with two doubled towered chambers and an inner court. The price is 1500 (+) dr. The document does not give the value of each object separately.

One can see that the range of the available prices of shares is higher than the range of prices of whole houses,

43) Philadelphia gives us two references only, the first, P.Hamb.97 A.D.105, is a sale of a half share of a house for 1500 dr. The second, P.Hamb.15, A.D.209, is a sale of 2/15 of a house for 100 dr. So the period between the two contracts is over a hundred years. and if we compare the two prices, we find that the first price is four times the second. The evidence makes us very cautious about increases in house prices. It would be wrong to assume a steady increase.

and this adds weight to our assumption that houses existed at higher prices than those we have.

Finally, the immovable property. The list gives us four references, of which only one gives the price; this document is CPR I 120 (early III century A.D.), from the Fayum. The papyrus is a fragment recording the sale of an immovable property (?). The price is 1300 dr.

If we try to draw up a general average of house prices, we must take into consideration the following factors: 1) Most of the documents which do state the price do not mention the amount of the additional expenses or the sale tax which we have to add to the value of the house, consequently the value of the house would be raised. 2) Although we accept the hypothesis that the value of parts of the same house is varied⁴⁴, but it seems to me, in most cases, that this variation might be due to the improvements that have been made by the owners after the division of the property. I also suppose that most of these modifications would not be very radical in the majority of cases. They would be very limited like opening a new door or window or replastering or redecorating and finally restoring the share, 3) It is natural that these modifications increase the value of the share, but the value will not be very high comparing with the other shares. We are waiting for new evidence that might show the variation of the value of the shares of one house. Anyway if we add to our account the

44)H.J.Drexhage & J.Sünskes, Op.Cit.P.61.

prices of the shares of houses our result will not be precisely accurate, but we will have a rough idea about the average price. It would be preferable to deal only with prices of whole houses, but because of the lack of evidence I will take into consideration the prices of the fractions of houses.

Finally I will try to calculate the average general price of houses from the evidence available from the Fayum. From the first century we have five prices of complete houses. The price varies between 220 dr. (PSI 1319 A.D.76) and 1200 dr. (SB I 5234 A.D.14)⁴⁵, and the average will be 620 dr. after discounting the value of the vacant lots from the two prices in P.Vind.Sal.4.; SB 5234 (including the value of the vacant lots, the average price would be 820 dr.). But the picture from the first century will not be clear if it is based only on the evidence of sales of whole houses, so I shall take into account the prices of shares of houses, and suppose that the shares of houses are equal in their values.⁴⁶

The table lists ten prices of shares of houses which vary between 225 dr. (P.Mich.X 583 A.D.78) and 1200 dr. (P.Mich.V 235 A.D.41)⁴⁷. If we calculate the average price for the fractions only, it will be 528 dr. If we calculate

45) I deducted the price of the vacant lot (300 dr.).

46) I leave out of my account the prices of shares of houses which are not clear to me. BGU 2476 mentions only the price of a share (?). CPR I 220 mentions the price of a fourth of a lodging house. I put aside also seven references that deal with fiduciary sales. This is because the amounts of the sum of loans do not represent the real value of these houses (P.Ryl.160; PSI 908; P.Ryl.dem.45; P.Vind.dem & Greek 6933 ; PSI 910=P.Mich.323; PSI 911=P.Mich.335; BGU 910).

47) I deducted the sale tax (120 dr.).

the average price for the whole houses as well as for the fractions, it will be 549.6 dr. From fig (2) we find that the prices of the first half of the first century are higher than the prices of the second half of it.

For the average price of building land, we have only one reference that gives the price as well as the measurements of a walled court; here the price per sq. metre is 1.47 dr. (P.Lond.154=Mitteis.Chr.255).

For the general average price of the second century, we have sixteen references dealing with complete houses. I leave out of my account three texts because the price there is a total price of several objects.⁴⁸

The level of the prices of the complete houses is between 24 dr. P.Strassb.I 31 (II/III cent A.D.) and 2500 dr. (P.Fay.23a II cent. A.D.). The average price of complete houses from the clear evidence is 607.8 dr.

To calculate the average price of shares of houses, we have twenty five prices.⁴⁹ The prices vary between 32 dr. (P.Strassb.31) and 4200 dr. (P.Petaus 11 A.D.184). So the general average price of the shares is 1153 dr. and if we calculate the general average of the value or the price of the complete houses as well as the shares together, it will be 922.5 dr.

48) P.Mil.Vog.II 98; Strassb.I 31; P.Petaus.14.

49) I do not include two prices in the estimation. The first document, CPR I 11, mentions the difference between the values of shares of two houses without giving the value of each part separately. The second document mentions the price of a gate building; 2 cellars; a stable and some vacant lots, but from the description we do not know how much they would be (SPP XXII 31). Finally, P.Petaus 10 the third document which gives the value of 3/4 of a house as well as vacant lot together.

Concerning the general average price of building land, we have four references that give the price as well as measurements. So the average price is 1.67 dr. per sq.metre

Turning now to the general average price in the third century. The papyri date to the first quarter of the third century. We have twenty one references that give us either the value or the price of houses.⁵⁰ So we have nineteen references. The level of the prices is between 600 dr. and 1000 dr. (P.Oxy.XVII 2121, P.Ryl.II 90-1). The average price or value is 830 dr.

Concerning the portions of houses we have four references. The level of the prices varies between 750 dr. (P.Hamb.I 15 A.D.209) and 6000 dr. (CPR I 3 (III cent.A.D.)). The average price is 3250 dr.

If we calculate the general average price or value of the houses as well as the shares, it will be 1145.65 dr. From fig.(2), we find the level of the prices went up and down during the first three century. We have high prices from the very beginning of the Roman period which go together with very low prices. On the other hand, we have very low prices from the late period which go together with high prices.

Finally if we calculate the general average price or value of houses as well as the shares from the available evidence of the first, second and third centuries, it will

50) I leave out of my account three references. In BGU 362 col.IX we do not know whether the sum paid represents the total price or only part of it. CPR 120 is a fragment. So we do not know whether it concerns a house or part of a house. P.Gen.44 gives the total price of a house as well as 1/16 of another house.

be 1050 dr. Concerning the price of the building land, we have evidence for the first two centuries A.D, and the average price is 1.63 dr. per sq. metre.

After calculating the general average price for the whole nome, let us work out the average price or value of houses in some villages which give us several prices or values. One can see from the table that the evidence from Soknopaiou Nesos and Tebtynis covers the first two centuries, while the evidence from other towns covers only the period of one year or month from a certain year.

In the first two villages one expects to see the development of the prices as well as the variations between them. Two documents from Soknopaiou Nesos are concerned with one and the same house; veranda; inner court and adjacent building land, the purchase price in the first document is 740 dr. (P.Vind.Sal.4.), but three years later another person had offered to purchase the property for 1500 dr. (SB I 5234). As I mentioned before the increase here was due to improvements made by the purchaser. So this unique case gives a glimpse of the development of the price, but it is very hard to follow the development of the prices of the other houses because of the lack of evidence in general.

Starting with Soknopaiou Nesos, this town gives us twenty references to prices of houses or parts of them. To estimate the general average rate of the prices from the

first century⁵¹, let us first look at real values of whole houses. Only Soknopaiou Nesos produces three prices of complete houses and seven prices of portions of houses. The level of the prices is between 220 dr. (PSI XII 1319 A.D.76) and 1200 dr. (SB I 5234 A.D.14). If we calculate the average price of the complete houses separately, it will be 620 dr. The prices of the shares of houses vary between 280 dr. (SPP XX 175 A.D.78) and 1500 dr. (BGU I 350 A.D.102-117), if we estimate the average price of the fractions separately it will be 384 dr. and finally, if one calculates the general average price of the complete houses and the shares, it will be 455 dr. per house.

To evaluate the average price of the second century, we have ten references, four of them concerned with complete houses and the rest with the price of fractions of houses. The level of the prices of the complete houses is between 300 dr. (P.Lond.292 = Aeg.Trev.2, pp.134 A.D.102/117) and 800 dr. (P.Strassb. 543 (first half of the second century A.D.)). If we try to calculate the average price of the whole houses, it will be 480 dr. Concerning the fractions,⁵² the level of the prices varies between 120 (P.Ryl.II 162 A.D.159) and 1500 dr. (BGU I 350 A.D.102/117). The average price of the fractions is 532 dr. and finally the general average price of the whole houses and the fractions is 509 dr. per house.

51) I put aside four references that deal with fiduciary sale (P.Ryl.160; P.Ryl.dem.45; P.Vind.dem & Greek 6933; BGU 910).

52) I leave out of my account CPR I 11. This is because the document mentions the difference between the value of two shares of two houses without giving the value of each part separately.

And if we try to make a comparison between the average of the first two centuries, we notice that the average price of a whole house from the first century is higher than the average of the second century. On the other hand the average price of the fractions of the first century is lower than in the second century. The differences, however, are not very significant, and in any case the available evidence forms a very narrow basis for statistics.

One can also calculate the average price of the first two centuries. For the whole houses, it will be 540 dr. For the fractions, it will be 458 dr. and finally for the complete houses and the fractions together, it will be 499 dr per house (see fig.1).

Unfortunately we do not have from Soknopaiou Nesos any reference that mentions the price of building land. For the average of prices from the available references from Tebtynis, we have three references from the first century, but unfortunately it will be difficult to work out an average from them, because the reading of the first is not certain. Depending on whether one reads that the value of the house is either 13200 dr., or 1320 dr. only (P.Mich.V 235). The other two documents mention the price and describe the object as share ? of a house. So we can not know the total value of the two houses. We have also three references for fiduciary sales from the first century. The prices in these deeds are fictitious. Therefore we can not deduce the average price of the first century.

For the second century, we have two prices of whole

houses and two references for fractions⁵³. The average price of the houses is 300 dr. and for the fractions is perhaps 3800 dr. and the average of house and fractions together is 2050 dr. per house. But if we leave out of account P.Tebt.II 580, the average price would be 600 dr. For the building land we have one document and the price is 0.67 dr. per sq. metre.

The average value of houses at Ptolemais Hormu, may be inferred from two documents dated A.D.184 and record the valuation of the fractions of house properties of the persons who have to undertake liturgical jobs. There are five values but I do not take into account one of them because it records the value of $\frac{3}{4}$ of a house together with a vacant lot. The prices of the other four vary between 1733.33 dr. (P.Petaus 10 A.D.184) and 4200 dr. (P.Petaus 11 (A.D.184/5)). They give an average value of 2920.5 dr. per house. One notes here the high average value of the houses which vary between 1733 dr. and 4200 dr. Anyway these values are only samples and no doubt there are some higher and lower values or prices in this town.

Concerning the general average value of houses at Athena and Anubis, the two villages give us eleven values of houses that are recorded in P.Oxy.XVII 2121 (A.D.209-10). The recorded values vary between 600 dr. and 1000 dr., the average value is 818 dr. per house.

As for the general average value of houses at

53) The price of one of two fractions is not certain (P.Tebt.II 580).

Cynopolis & Lysimachis, the two villages give us four values of houses recorded in P.Ryl.II 90, early third century. The values vary between 600 dr. and 1000 dr., the average will be 700 dr.

For Euhemeria, we have four references, three of which are recorded in P.Ryl.II 91 (early third century) and one in P.Strassb.I 14=IV 314=P.Monac.84 (A.D. 211), but the last one is omitted from my account because we do not know how much the rest of the house is worth. The average value will be 1000 dr.

P.Strassb.I 31 refers to an unknown place; it describes the estimated values of houses as well as shares. The papyrus records ten values, but I leave out of my account three of them. The first one is concerned with a house as well as 78 cubits of vacant land and gives the total value. In the second the amount of the share is missing. The third is concerned with a fourth of a court without giving the size. The level of the values of complete houses is between 24 dr. and 120 dr. The average value is 64.66 dr. per house. The level of the values of fractions varies between 32 dr. and 480 dr., the average for the fractions is 295.5 dr. per house and finally for both of them it is 196.57 dr. Anyway these values are only samples of houses in that town, and no doubt there were higher and lower values here too.

To sum up: 1) there is no doubt that there were houses with prices both higher and lower than we have from the towns of the Fayum nome. 2) From the available evidence the

average of prices varies from town to town in the Nome. 3) From the few prices from Arsinoe, we notice that the level of prices in the city itself is higher than the level of the prices in villages of the Fayum nome. 4) From the cheapness of the house prices, and the small size of some houses, one can say that it was not beyond the means of a poor rural person to own his own house: a) The price of a sq. metre of building land in rural areas was less than the daily wage of a man or even a boy. b) The prices of sun dried brick and the reed as building materials are also very cheap. So after owning the building site, he might start with building one room and covering its ceiling with cheap materials, then complete his house in several stages. This practice also exists nowadays not only in the rural areas but also in the urban areas. It takes sometimes years to complete the house. 5) Because most houses were very small the owners built several storeys. So they can use them for their animals and the whole family can live together even after the marriage of their sons. 6) Finally the average of the third century is higher than of the first two centuries.

The above table and the following fig.1 and 2 also indicate that the low prices went side by side with high prices from the very beginning of the Roman Period. In the table and the fig.1 and 2, there are 25 prices and value less than 500 dr. (8 from the first century, 16 from the second century, and 1 from the third century), 17 prices and values are between 501 and 999 dr. (2 from the first

cent., 3 from the second century, and 12 from the third cent.), 13 are between 1000 and 1500 dr. (3 from the first century, 3 from the second century, and 7 from the third century 3 prices are between 1501-2000 dr. (1 from the second century, and 2 from the third century), one reference from the second century (4200 dr.), and finally 5 prices vary between 3000 and 24000 dr. from the third cent. Some documents give us several values of houses. These values greatly vary and can be used to strengthen my opinion about the difficulty to use the house price to show the steady increase of the prices. However, one can use the prices of the building materials and the wages of the craftsmen in order to indicate that there were steady increases in the prices of houses. Finally, the very high prices of the third century, especially during the second half, indicate that the inflation got out of control.

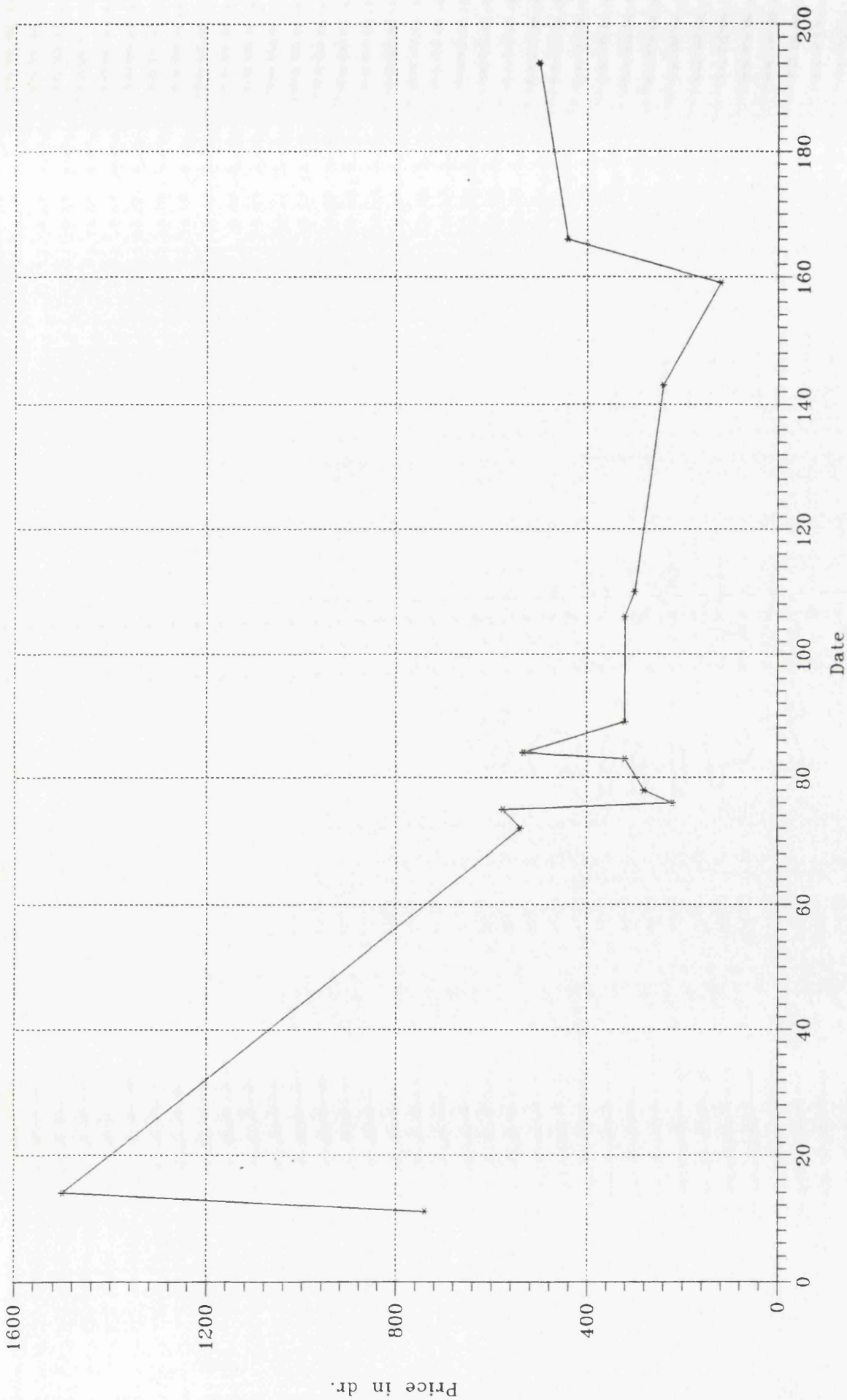


Fig.(1) Houses Price at Soknopaïou Nesos

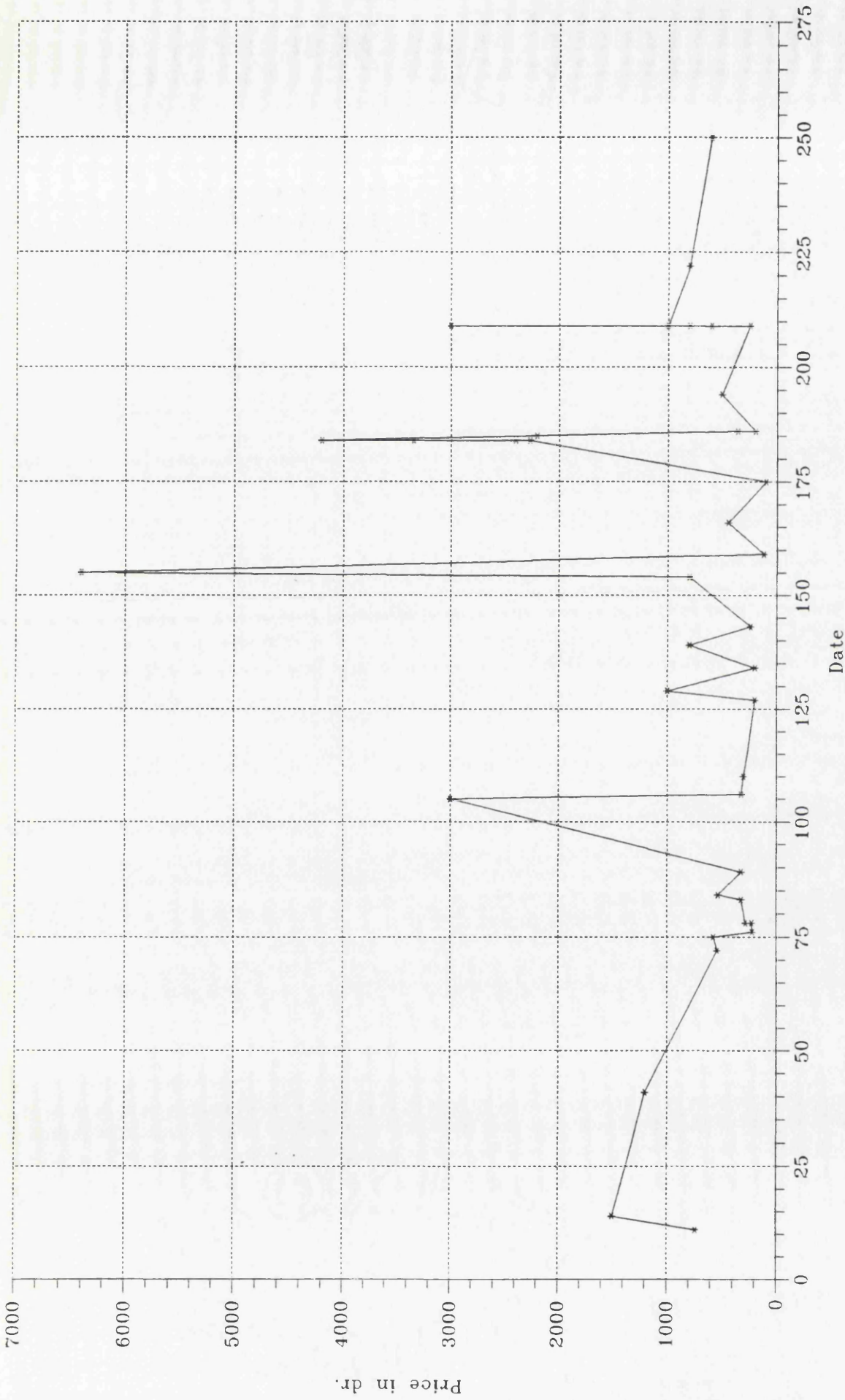


Fig.(2) Houses Price in the Fayum Nome

b) Oxyrhynchus

Date	Place	Price	Object	Document
A.D.41-54	Oxy.	9 talents =120 dr. of silver with additional charges	1/12 of a two storey house under which is a cellar.	P.Oxy.XXXIV 2720
55	„	32 talents of copper	1/2 of three storey house	P.Oxy.I 99 = Aeg.46,pp. 256
60	„	200 dr. part of the price	a house	P.Mich.III 191-2
61	„	200 dr. part of the price	a house	P.Mich.III 194
73	Nemerae	752 dr.	1/2 of a partially fallen down house and bench (mastabah) (προνησιον) ¹	P.Oxy.XLI 2972
77	Oxy.	51 T.5400 copper dr.	some lots	P.Oxy.II 242
77-83	„	240 dr.	1.5 Bikoi of vacant lots (Bikos = 1/48 of ar.)	P.Oxy.II 330
81-83	„	45 T.=600 dr.	a house	P.Oxy.II 334
83	„	30 T.=400 dr.	2/3 of a house	P.Oxy.II 331= CE.56,pp.299
85	„	not stated	1/6 of a house	P.Oxy.II 335 descr.
89	„	52 T.3000 copper dr.	a house	P.Oxy.II 333 descr.
89-100	„	60 dr.	1/2 of a courtyard	P.Oxy.2338

1)G.Husson, CE, 51 (1976) pp.167-8,Idem, OIKIA, p.237.

Date	Place	Price	Object	Document
89-94	Oxy.	not stated	4 Bikoi of vacant lot	P.Oxy.XLVII 3334
92	"	"	vacant lot 24 cubits	P.Rend.Harr. 138. col.3.
98-99	"	13 T.3000 copper dr.	a house	P.Oxy.II 340
I cent.	"	2000 dr.?	1/2 of a house	P.Oxy.XLIX 3468
118	"	15 T.	2/3 of a house	P.Oxy.III 577
133	"	2200 dr.	4 Bikoi of vacant lots	P.Oxy.I 100
139	"	200 dr.	1/8 of a farmstead containing a tower and unfinished dovecots and 1/4 of vacant lot	P.Oxy.LII 3691
160	Nemerae	1000 dr. 800 dr. 700 dr.	house property 1/2 ar.and house property 1/2 ar. and house property	P.Leit.1
179	Oxy.	500 dr.	a court in which is κλιβανov (59 cubits)	P.Oxy.III 505= PSI.IX 1035
182 184	"	600 dr. 1600 dr.	a house and court	P.Oxy.III 513
191	"	800 dr.	a house and court	P.Mich.Inv. 3779=CE. 111, 1986,pp.104
193	"	2000 dr.	1/2 of two houses, one is a two storey house and the other is a house and its inner court	P.Oxy.IV 719
193-198	"	2 talents	house and land ?	P.Lips.31

Date	Place	Price	Object	Document
197	Oxy.	200 dr.	courtyard	P.Oxy.XIV 1696
late II cent.	"	not stated	house property and workshop.	P.Oxy.XIV 1648
222	"	21600 dr.	a stone house, court, with cellar underneath and vacant lot	P.Oxy.XIV 1634
238	Talo	not stated	three storey house, basement and bench	P.Coll.Youtie I 65=P.Oxy. XLVII 3365
242	Oxy.	200 dr.	courtyard	P.Oxy.XIV 1697
247	"	7400 dr.	three houses and 37 13/32	P.Gen.Inv.224 =SB XII 11233
249	"	700 dr.	1/2 of an old house	P.Oxy.X 1276
early III cent.	"	3000 dr.	1/6 of a horse or camel stable	PSI VII 705
"	"	1600 dr.	1/2 of a house	P.Oxy.XIX 2236
240-280	"	4500 dr.	one storey house, yard and vacant lots	P.Oxy.XIV 1699
250	"	3(.)5 dr. 5 1/2 ob.	1/2 of an old house	P.Oxy.X 1284
266	"	120 dr.	lot	P.Oxy.IX 1200
267	"	9700 dr.	two houses, vacant lot and 11 13/16 ar.	P.Oxy.XII 1475
268 ?	"	missing	a house and building land	P.Oxy.XIV 1698
276/82	"	not stated	house property	P.Oxy.XII 1562= ZPE.8 (1971) pp.278
III cent.	"	18000+dr.	house property	P.Oxy.XIV 1701

Date	Place	Price	Object	Document
III cent.	Oxy.	2000 dr. 500 dr. 4000 dr.	house house house	P.Oxy.VI 980
"	"	missing	house,exedra and lot	PSI VIII 946
"	"	-	part of immovable	SB IV 7343
"	"	-	part of a house	P.Oxy.XIV 1703
"	"	1600 dr.	house and site	P.Osl.inv.1626
"	"	2000+ dr.	house	P.Palau.Rib. Inv.148+SP.20, 1981,PP.83
late III	"	12000 dr.	pigeon house, house, court,arable land and vineyard	P.Oxy.XIV 1700

From the above table, we can see that Oxyrhynchus is very generous to scholars. It produces forty six transactions of sales of houses, portions of houses or vacant lots. This evidence fortunately covers the three centuries of the Roman period fairly regularly, beginning in the reign of Claudius to the later part of the third century. There is, therefore, no wide gap between the documents such as we find in other nomes, e.g. Antinoopolis or Hermopolis. This continuity helps us to follow the development of the prices.

In the first century A.D. we have sixteen documents of which fourteen mention the price; most of these prices were paid in Ptolemaic copper drachmas (the ratio of silver: copper is 1:450 dr.) Five papyri deal with the sale of houses and the remainder are concerned with portions of houses or vacant lots (building land).

The prices of houses are as follows: 200 silver dr. as a part of the total price (P.Mich.III 191-2 A.D.60²); 600 silver dr. (P.Oxy.II 334 A.D.81-38); 700 silver dr. (P.Oxy. II 333 A.D.89-100); 180 silver dr. (P.Oxy.II 340 A.D.98-99); 1 talent. (P.Yal.66 second half of the first century A.D.). We are not sure whether the later sum was in copper or silver. If it is in copper (=13.33 silver dr.), it will be the cheapest price of a house that we have from Oxyrhynchus. If it is in silver, one can say that it is very large house and its price is the highest price in Oxyrhynchus from the first century A.D.

These prices give us an idea about the variation of the value of houses which depended on many factors such as the size, the condition, the number of storeys, building materials and, finally, the location of the house.³ Consequently it will be safe to say that we have a small house (180 dr.) when compared for example with the two houses costing 600 dr. or 700 dr. and its value in relation to them is less than one third of the first one and slightly more than one fourth of the value of the second.

Oxyrhynchus also produces six papyri which deal with transactions of shares in houses. The earliest of these, P.Oxy. XXXIV 2720 (A.D.41-54), describes the sale of 1/12 of a two storey house under which is a cellar, located at

2) This sum is the daughter's share in the price of the house and the other unknown share belongs to her mother.

3) See the previous chp.

the Serapeum, and its price is 120 silver dr.

P.Oxy.I 99=Aeg.46, 1966 pp.256 (A.D.55), records the sale of half of a three story house with all its appurtenances, situated by the Serapeum; its price is 426 silver dr.

P.Oxy.XLI 2972 (A.D.73), deals with a sale of a half share of a partially ruined house and bench (mastabah) ($\pi\rho\upsilon\nu\eta\sigma\iota\omicron\nu$) at the village of Nemeræ and its price is 752 silver dr.

P.Oxy.II 331=CE. 56, 1981, pp.299-303 (A.D.83), records the sale of 3/4 of a house for 400 silver dr.

P.Oxy.II 335 (A.D. 85), is concerned with 1/6 portion of a house, but its price is missing.

Finally, P.Oxy.XLIX 3468 (first century A.D.), describes the value of a half portion of a house and its price is 2000 silver dr.

We have three documents dealing with 1/2 shares of houses. We do not know their measurements; one only mentions the location of the house and another records the condition of the house. Although there is no information about these houses to enable us to compare them, we must assume that they differed considerably because their prices vary widely: e.g., the price of the half share of a partially ruined house in the village of Nemeræ is 1.75 times more than the price of half a portion of a three storey house in the city of Oxyrhynchus itself. The question therefore arises, why is the price of the rural

semi-ruined house more than the price of an urban house ? The document does not mention which part of it is ruined, whether in the sold portion or unsold share, or whether the whole property is in ruins, which seems more likely. If the vendee purchased the ruined part, that meant he was paying his money mainly for the building land and any suitable building materials which he could use again. Perhaps after evaluating the building land as well as the building materials, the buyer could repair the house or rebuild it again. As we know that the price of building land in the city is normally higher than in the village⁴, we can assume that the above rural house must have been a very large house.

P.Oxy.XLIX 3468 (first century A.D.), which is a petition to the prefect, concerns a half share of a house. The petitioner claims that the value of his share is at least 2000 dr., and states that his share is mortgaged for 200 dr. of which he owes half, the other half being owed by the creditor's brother, the creditor occupied the share of the house in return for the remaining sum owed. The debtor also states that the creditor ignored the Strategus' orders and "cast covetous eyes" upon his share in the house which both parties owned jointly. This case raises an interesting question: Does the petitioner give the accurate value of his portion ? He is obviously trying to persuade

4) See chp.1 p.8-9

the prefect to act against the creditor who has violated the law, and has taken the opportunity of occupying the property in order to own the whole property. It may be that the petitioner, in order to give weight to his request, exaggerates the value of his share of the house and the discrepancy between that and the small sum he owes. The alternative hypothesis is that the sum of 2000 dr. represents the real value of the property and the debtor was forced to mortgage his share of the house in time of need for only 200 dr., hoping to be able to repay the loan by a fixed date according to the written contract. Furthermore, the petitioner has to be very careful in claiming a value of 2000 dr. for his share because he sent his complaint to the official authorities who could easily discover the real value of the private property, and he would thus risk attracting the attention of the authorities directly. So one day he could be nominated to undertake one of the liturgical jobs according to his private means after emphasising he is not indigent (aporos).

On balance, we can conclude that the petitioner asks the Prefect to stop the joint owner who is at the same time the creditor from occupying the share, on the ground that the value of that share is far in excess of the amount of the loan. The sum of 2000 dr. seems likely to be not very far from the real value of that share.

P.Oxy.II 331 = CE.56,1981, p.299, dated A.D.83, gives us another example of variation in the value of houses.

This papyrus concerns the sale of $2/3$ of a house and the price is 400 dr. less than the value of $1/2$ of house in P.Oxy.I 99 (426 dr.) and in P.Oxy.XLI 2972 (752 dr.).

Oxyrhynchus gives us a unique example of the sale of $1/12$ of a two storey house under which there is a cellar, located at the Serapeum, priced at 9 talents copper = 120 silver dr. The two parties of the contract are relatives and the house is described as undivided and common property, meaning that the division was nominal. This raises the following questions. How did they evaluate this small share ? Did they evaluate the house as a whole and then divide it into shares ? From the description of the ownership of the house as common and undivided property, it seems to me that they evaluated the house at 810.66 dr. and then divided this sum into equal parts as shares. One can say, therefore, that the house's shares were equal in value.

In the table one example is given from the first century A.D. that deals with the sale of the half share of a courtyard. The papyrus gives us the price of 60 dr., but the measurements are not stated. Consequently the document does not tell us the price per cubit. In addition, we have three papyri which are concerned with sales of vacant lots. The first papyrus, P.Oxy.II 242 (A.D.77), deals with registration of the sale of some lots and the price is 51 talents 5400 copper dr.= 692 silver dr. The measurements are not stated. The second document, P.Oxy.II 330 (A.D.77-

83), deals with registration of the sale of 1.5 Bikoi= 86.1 square metres. and the price is 240 dr. The third papyrus, P.Oxy.XLVII 3334 (A.D.89-94), deals with the sale of 4 Bikoi of vacant lots, but the price is not stated.

So there is one document among the above three which mentions the price but not the measurements of the plot; another document which gives us the measurements, but does not state the price, and only one document which gives us both the price and the measurements of the vacant lot. Consequently, it is very hard to know the average price of the cubit or square metre of building land in the first century A.D. It is also worth mentioning that the average price of building land is higher than the price of arable land. This is shown by P.Oxy.II 330 which deals with the sale of 1.5 Bikoi= 86.1 sq.metres of a vacant lot. So the price of the sq. metre is 2.8 dr. and if we calculate the price of an aroura of building land the price is 7680 dr.= 1 talent 1680 dr. However we have to take into consideration that the average price of building land may have varied from place to place, not only between the cities and villages, but also according to its location and type of street whether in the city or the village.

Now it is time discuss the references of the second century A.D. Oxyrhynchus offers us ten documents of transactions of house properties, or parts of them, or vacant lots. One document deals with compulsory service and records the value of some houses. Four papyri deal with the

sale of houses and their appurtenances, but none of them mention the measurements. Let us first look at the prices stated in these documents.

The most interesting document, P.Oxy.III 513 (A.D.184), registers the sale of a house and courtyard by the government twice. The first purchase price is 600 dr. (A.D.182), but two years later the new purchase price is 1800 dr., three times the first price. We do not have the two original contracts of the sale of the house which were made between the government and the two successive purchasers. So this unique papyrus raises the following questions: What was the reason behind this great difference between the two prices ? Is the house worth only 600 dr. in the year A.D.182 or did the government offer it several times for sale by auction and nobody offered a higher bid than the bidder who became the first vendee and possessor of the property ? It is more probable that the government accepted to sell the house after offering it for sale by auction several times, although its value was more than the offered sum, on condition that if someone offered the real price for it within a limited period, the government would have the right to cancel the first sale and consider the first price , the additional payment and the interest on the instalments as a deposit sum. So I assume that the first purchaser took the chance and hoped that he could use the house if no one offered a higher price within a limited period. Consequently, in this case, the two parties - both

the government and the first vendee- made a profit from the situation. So their benefits are as follows: For the bidder: 1) he can pay the price in instalments, 2) he will use directly the house without paying any rent, 3) if the contract is cancelled within a limited period (until he pays the complete price plus 60 days after⁵), he will receive back all his payments (the price, the additional payment, and the interest). For the government: 1) the price and the additional sum and the interest, 2) the government has only given the right of usufruct to the purchaser, 3) the government has the right to cancel the sale when it receives a new higher bid until he pays the full price, even after paying the full price the government might have the right to cancel the sale if it receives higher bids within two months, 4) I also assume that the government made an ad hoc arrangement, in order to encourage investors to purchase the government's properties. Otherwise, the people would hesitate to buy any property confiscated by the government, especially during a period when they would have preferred to purchase private properties. This assumption is supported by, e.g., P.Osl.III 111 (A.D.235), which tells us that some owners had many houses or parts of houses and that these were either empty or not rented. Consequently, we can assume that there were many houses on the market and maybe there

5) See F.Pringsheim, *The Greek sale by auction*, Scritti in onore di C.Ferrini 4 Milano (1949) p.30,p.306,p.316. pp.321-2., P.Mich.inv. 148 V.

was serious competition between the private owners and the government⁶ to sell their properties. Moreover, the government's policy aimed at increasing private properties in order to create a new class of owners who could be employed in public services according to the value of their properties. In conclusion we can say that this type of investment was advantageous for both the government and the purchaser.

Why did the price of the house sharply increase within 26 months? What was the economic situation during the period? Most of the prices of confiscated house properties, which have been offered for sale by auction during that period, were very low and one of them was offered for more than six years and found no taker. It is not the first and the last time we meet such high increases of the house prices, in P.Vind.Sal.4 (A.D.11) the purchaser paid 740 dr. for a house and courtyard and vacant lot. After three years the value of the previous property was 1500 dr. (SB I 5234 A.D.14). One can interpret the increase on the assumption that the purchaser made improvements to the property. In P.Lond.1164c (A.D.212) the purchaser paid 600 dr. as a

6) See P.Petaus 13 (A.D.184-5) which tells us that the government had offered two houses for sale by auction since the nineteenth year of the reign of Commodus (A.D.179) and this means the property was offered for sale for six or seven years and nobody wanted to buy it because of its bad condition, we understand also the government wanted to get rid of it by offering it at a very cheap price, but even so no one wanted to buy it. In P.Petaus 13 the government offered two houses for sale by auction for six or seven years and nobody wanted to buy them because of its bad condition, but unfortunately the price has been lost. In P.Petaus 14 (A.D.184/5), the bidder offers 200 dr. as a price for a new house and 3/4 of two houses. If these houses are similar, the price of each house is 80 dr. In P.Amh.II 97 (A.D.180/192) the bidder offered 120 dr. as a price for 1/3 of a house, court and oil press. In P.Mich.inv.3779 (A.D.191) the bidder offered 800 dr. as a price for a house and court. In P.Srassb.31 the value of houses were estimated and reviewed by a committee. The prices vary between 24 dr. and 480 dr. per house.

price of a half share of a two storey house, cellar and courtyard. After 13 days he sold the share for 700 dr., so he make a profit $1/6$ of the price. The interpretation here could be that the seller was in urgent need of money, therefore he sacrificed and sold the property although he knew its value was higher. On the other hand, we know from P.Petaus 13 (A.D.184) that property was offered for sale for more than six years without any increase. In P.Lond. 1158=Mitteis Ch.256 (A.D 226/7) a third share of a house was sold for 300 dr., and then was resold for 300 dr. without any increase in A.D.231 (P.Lond.1298). In P.Oxy.III 513, it is difficult to give accurate reasons for such high increases.

Moreover, several interesting points emerge from this document (P.Oxy.III 513). The first is that the original purchaser had paid additional expenses which amounted to 37.5 dr. in addition to the original price of 600 dr. This additional sum represented $1/16$ of the price. The second point is that the government allowed the purchasers of public property to pay the price in installments, in return for which the purchaser paid interest on the installment sums. The third point is that the original purchaser had paid the interest in two installments for two successive years. The first installment of the interest was 39 dr.3.5 ob.3 chalci and the second installment is 28 dr. 2.5 ob. The amount of the two installments of the interest totalled 68 dr. 3 chalci. But we do not know whether these two

installments of the interest were for the total sum of the price or only for part of it. If the interest was on the total sum, it represented only a few months of the first year and a few from the second year. However, the period of the first year was longer than that of the second year, and if the interest was on the remaining installment, the purchaser would be paid part of the price and the rest had been paid in two installments. If so, the purchaser paid the price as follows: 1) 271 dr. of the price plus the additional sum, 2) the second installment was 92 dr. plus the interest 39 dr. $3 \frac{1}{2}$ ob. on the sum of 329 dr., 3) he paid the final and last installment of 237 and the interest of 28 dr. $2 \frac{1}{2}$ ob. So we find the first sum of the interest is higher than the second sum, and this is because the interest on the first year is for the entire sum, and the interest of the second year is for the last installment of the price. Thus the interest due on the last installment is lower than the first payment. The fourth point is that the second purchaser had paid to the government not only the sum of 1800 dr. as an original price, but also additional expenses. One can suppose that the rate of these additional expenses was $\frac{1}{16}$ of the price which would make 112.5 dr. So the total sum that had been paid would be 1912.5 dr. The fifth point was that these additional expenses raised the value of the house.

P.Mich.Inv.3779 (A.D.191)= CE.61,1986, pp.104, is an offer to purchase a house and courtyard from the

confiscated properties of the government. The price offered is 800 dr. plus subsequent payments and the price was agreed on by the present valuation of the properties. Although this valuation was done by the official authorities, one can assume that it was only an estimated price, and that the house was to be auctioned. The papyrus records one of the bids to buy this house, but unfortunately we do not know whether this bid was lower than others, nor whether the government accepted this offer or not.

Another document, P.Lips.31 (A.D.193-8), gives us information about the sale of immovable properties (house property and land). The price is 2 talents. We do not know the separate value of each object in these properties, although it seems that every object was evaluated separately and then the price of the objects was estimated together.

Values of houses are referred to in P.Leit.1 (A.D.160), a list of nominations for public offices. The official gives the estimated value of a house valued at 1000 dr., 1/2 a house as well as 1/2 ar. at 800 dr. and, finally, the estimated value of a house property in addition to 1/2 ar. at 700 dr. We do not know how the official assessed the above properties. Did he take these estimates from the official records, or did the estimation of the above properties correspond to the current market value? One can assume that the assessment reflected the

current value. This assumption is supported by P.Petaus 10, in which the petitioner protested against the village scribe as a nominator because he was in debt, though not complaining about the estimation of the properties by a responsible person. Therefore there is no doubt about the value of the house valued at 1000 dr. In the other two cases we do not know the accurate value of the houses because it was added to the value of the land. There was a difference between the two properties, but we do not know the reason behind the differences in price. Was this variation due to the difference between the values of the two houses or was it because of the value of the house itself as well as the value of the land ? It is difficult to answer these questions, we can say only that the value of every object was estimated separately and then added up.

Summarizing our discussion, we have to admit that it will be hardly possible to make comparisons between the available prices because the first two prices are for one house, whereas the second papyrus gives us only an offer. The third document does not state the price of the house separately. The fourth document mentions the value of one of the houses, but the other two cases give us the value of the house properties together with the arable land. So it is hard to know the average prices of the houses. However, in general, the prices of the second century - as we notice from the references stated in the table - were higher than the prices of the first century A.D.

Turning now to the evidence for fractions of houses, there are three references: P.Oxy.III 577 (A.D.118), is a sale of $\frac{2}{3}$ of a house and the price is 15 talents = 200 silver dr. According to our knowledge this is the last reference that mentions the price in Ptolemaic copper drachmas. We can safely say that the house is not large.

P.Oxy. LII 3691 (A.D.139), is a sale of a share of a farmstead containing a tower and unfinished dovecotes and $\frac{1}{4}$ share of a vacant lot. The price is 200 dr., but the papyrus does not give us a separate price of each part of the above mentioned properties. At any rate they seem not to have been large.

The last document, P.Oxy.IV 719 (A.D.193), discusses the sale of half a share of two houses. One is a two storey house and the other is a house and its inner court. The price is 2000 dr. The document does not mention the separate price for each part and, as we have already mentioned above, each part would be evaluated separately and then added together. So we do not know which one had a higher price and consequently which was the larger house.

Neither the measurements of the houses or parts of them are given nor, in many cases, is the condition of the houses mentioned. If we try to make a comparison between the prices of the first and second centuries A.D., we find that the available prices of the fractions of houses during the first century A.D. are higher than the prices of the second century A.D. Conversely, we find the available

prices of houses in the first century A.D. are lower than the prices of the second century A.D. At first glance this is a strange situation. One can assume that this was accidental. We have only the evidence available for the fractions of houses, from the first century A.D.; these are only samples of large and well constructed houses. On the other hand, the samples of the second century A.D. might be small houses, and this will be clear if we look carefully at the variation of the prices of the parts of houses as well as the houses themselves during the first century.

As for the sale of courtyards and building lands from the second century A.D., there are two papyri which deal with the sale of courtyards. The first papyrus, P.Oxy.III 505=PSI IX 1035 (A.D.179), concerns a sale of a courtyard in which is κλιβανον and its measurements are 50 sq. cubits. Its price is 500 dr., thus the price of a cubit was 10 dr. and per sq. metre 38 dr. The second document, P.Oxy.XIV 1696 (A.D.197) deals with a sale of a courtyard. Its measurements are not stated but the price is 200 dr.

We also have one source for the sale of a vacant lot, P.Oxy.I 100 (A.D.133), which deals with a sale of a vacant lot located in the Jewish and Cretan quarter of Oxyrhynchus. The measurements are 4 Bikoi = 229.6 sq. metres, the price is 2200 dr. Consequently the price of the sq. metre is 9.58 dr. If we try to compare the price of P.Oxy.100 (A.D.133) and P.Oxy.III 505= PSI 1035 IX (A.D.179), we notice that the price in the second document

is nearly four times that of the first one. Was that due to the date of the second papyrus being 46 years later, or was it because of the enormous amount of property which was confiscated after the Jewish revolt in A.D.115-117⁷ after which the government offered these properties for sale by auction? We can assume that the demand of the people was less than the properties offered for sale by auction, whether by the government or by private individuals, so the prices were low during that period, and the sale process might take very long in order to take place⁸, we can see that prices were less than those of A.D.179; moreover, one can say that the prices rose slightly if one takes into consideration the period of time between the two transactions as well as the fact that the κλίβανον) as a building was taken into consideration when they estimated the value of the court.

For a comparison between the prices of building land in the first and second century, we have only three documents which give the price and the measurements. One is from the first century and the other two from the second century. But there are other papyri that sometimes give us either the price or the measurements. So for the first century it would be impossible to generalize from one reference, and even for the second century because we have

7) See P.Berl.inv.8143 ABC=7397 recto et Berol.inv.7440 recto (after A.D.188), JJP.18 (1974) pp.242.

8) See the above note.

two references only. However, from what little evidence we have we find that the price per sq. metre is 2.8 dr. in the first century while the price of the sq. metre is 9.58 dr. of the vacant lots (building land) in the second century. That means the price in the first century was nearly one third of the price of the second century. Whether or not this is due to the lapse of time between the two prices over a hundred year period, indicating a steady rise of the prices, is impossible to say on present evidence.

References of the third century A.D. from Oxyhryncus are fairly numerous. We have twenty- one documents, a large number compared with the papyri from the other nomes (e.g. Hermopolis and Antinoopolis).

The price is fortunately mentioned in 12 papyri, while in three documents the price is partly missing , two prices completely missing and in another two they are not stated. There is no information at all about the measurements of the properties.

We can classify this group of documents as follows:

a) Ten papyri deal with the sale of houses and their appurtenances. b) Three papyri discuss the sale of houses and their appurtenances as well as arable land. c) Four papyri describe sales of shares of houses. d) One papyrus deals with the sale of a courtyard. e) One reference contains the sale of a vacant lot. f) Finally, one source deals with the sale of immoveables. Of group (a), the first document, P.Oxy.XIV 1634 (A.D.222), concerns the sale

of a stone house; a courtyard with a cellar underneath and a vacant lot. The price is 21600 dr.=3 talents 3600 dr.

The next document, P.Coll.Youtie 65=P.Oxy.XLVII 3365 (A.D.238), is a copy of a request for registration of the sale of a large amount of land as well as a three storey house under which is a basement and a veranda. The price is not stated.

P.Oxy.XIV 1699 (A.D.240-280) describes the sale of a one storey house, courtyard and vacant lots whose price was 4500 dr.

P.Oxy.XIV 1698 (A.D.268), is concerned with the sale of a house and building land and the price is missing.

P.Oxy.XII 1562 = ZPE.8 ,1971, pp.278 (A.D.276/82), describes the sale of a house property whose price is not mentioned.

P.Oxy.XIV 1701 (III century A.D.), deals with the sale of 1/2 a house and courtyard, as well as a house from two attached houses (απο οἰκιῶν δύο συνηνωμένων ἀλλήλοις)⁹ and another part of a house and the price is more than 18000 dr.=3 talents.

P.Oxy.VI 980 (III century A.D.), is about the sale of three houses and their prices are: 2000 dr.; 500 dr. and 4000 dr.

PSI VIII 946 (III century A.D.), concerns the sale of a house and exedra and building land and the price is

9) G.Husson, Op.Cit.p.204.

missing.

P.Osl.inv.1626 (III century A.D.), deals with the sale of a house and site, the price is 1600 dr.

P.Palau Rib Inv.148 SP.20 (1981) pp.83 (III century A.D.), is concerned with the sale of a house for more than 2000 (+) dr.

The above references suggest that there were some large houses side by side with small ones. We observe, for example, that the price of the stone house and its appurtenances in P.Oxy.1634 is 43.2 times that of one of the three houses mentioned in P.Oxy.VIII 980 at a price of 500 dr. We can conclude that the value of six houses from the above mentioned documents is about two thirds of the stone house, though their dates differ. It is interesting to compare the value of the stone house with the value of five houses as well as 48 $\frac{7}{32}$ ar. of arable land which are mentioned as follows: a) SB XII 11233, which is a sale of 3 houses as well as 37 $\frac{13}{32}$ ar.; the price is 7400 dr. b) P.Oxy.XII 1475, deals with the sale of two houses as well as 11 $\frac{13}{16}$ ar.; the price is 9700 dr. We find that its price is 1.25 times that of the above properties. So why is the price of this house, its appurtenances and vacant lot very high compared with other houses? The document describes it as a stone house with a cellar underneath and courtyard as well as a vacant space. We do not possess any information about its measurements, but one can assume that it was not only a large house but also that it was well

designed and its building materials were very valuable. Moreover the adjacent vacant space might be a large plot. So one can assume that all these factors played a part when the house was valued.

Let us now deal with SB XII 11233, P.Oxy. XII 1475 and P.Oxy.XIV 1700. The first document describes the sale of three houses and $37 \frac{13}{32}$ ar., the price is 7400 dr. = 1 talent 1400 dr. The second papyrus deals with the sale of two houses, a vacant lot as well as $11 \frac{13}{16}$ ar., and the price is 9700 dr. = 1 talent 3700 dr. Finally, the third document is about the sale of a pigeon cote, a house and court and its appurtenances as well as arable land and vineyard. The price is 2 talents 1200 dr.

The papyri do not give us any information about the price of each object separately, but they give us the total price of the houses and the other property together. As I mentioned above, the value of each house was estimated separately either by auction or by experts and then the two parties of the deed estimated the prices together, thus we have only the total price of the whole properties.

When we compare the prices of the properties in SB XII 11233, and P.Oxy.XII 1475, we notice that the value of three houses, and $37 \frac{13}{32}$ ar. is less than the value of two houses, and $11 \frac{13}{16}$ ar. Therefore, this situation raises some questions. Is the difference of the prices due mainly to the value of the houses themselves, or to the value of the land, or to both? One believes that the

variation in prices was mainly due to the value of houses and not to the value of arable land¹⁰.

Finally, discussing P.Oxy.XIV 1700 (late III cent.A.D), the document does not inform us about the number of arourae either for arable land or vineyard, so it is impossible to know the value of each object. But we have to take into account the date of the papyrus and also the inflation of the prices during that period.

Let us compare the price of 18000 dr. mentioned in P.Oxy.XIV 1701 (III cent.A.D.), for 1/2 house, a house from two attached houses and another part of a house, with the price of the stone house and its appurtenances in P.Oxy.XIV 1634 (A.D.222); its price is 3 talents 3600 dr. We notice that the two documents are similar in nature, namely the two deeds are sales to satisfy a loan and the sold properties are mortgaged in return for borrowed money. The purchasers pay the difference between the real price of the property and the loan. P.Oxy.XIV 1634 mentions that the loan is 2 talents and the total price 3 talents 3600 dr. After deducting the loan the balance of the price is 1 talent 3600 dr. We also find this in P.Oxy.XIV 1701, which records a loan of 9100 dr., with the total price being 18000 (+) dr. After discounting the loan, the balance of the price is 8900 dr. We do not know whether the above mentioned loans are the original capital only or also

¹⁰) The price of the land during the third century is between 20 dr. and 1200 dr. The average is 266.66 dr. (See, N.Lewis, Life in Egypt under Roman rule, p.208.

include the accumulated interest. In other words, was the accumulated interest added to the main capital or estimated separately? It is hard to accept Prof. Johnson's opinion when he says that " the loans were made on mortgage. The value of the property was generally a third greater than the amount of the loan"¹¹). This would make sense only on the assumption that the creditor added the accumulated interest of the main capital to the sum of the loan until the end of the term of loan.

If we try to compare the price of the properties which are mentioned in P.Oxy.XIV 1701 with the price of the properties which are mentioned in SB XII 11233 and P.Oxy.XII 1475 together, we find the value of the former is 18000 (+) dr. and the latter 17100 dr. Consequently the value of the first, which consisted of a house plus two half shares of houses, was higher than the second one which consisted of five houses as well as 48 $\frac{7}{32}$ ar.

The variation in prices of houses is illustrated also by P.Oxy.VIII 980 (III cent.A.D), which gives us three house prices as follows: 2000, 500 and 4000 dr. The price of the first house from the above three is four times that of the second house, and that the price of the third is eight times that of the second house.

We can summarize our discussion about the prices of houses in the third century as follows: the average of the

11) Johnson, Op.Cit.,p. 256.

prices is higher than the average in the first two centuries in general, moreover there are great differences among the prices of the third century A.D. itself.

We have some interesting phenomena in the sales of fractions of houses from the third century. The table gives us four references that deal with transactions of shares of houses. The first document, P.Oxy.X 1276 (A.D.249), is concerned with a sale of a half share of an old house, the price is 700 dr. Although this share was described as an old house, we find its value higher than one of the houses mentioned in P.Oxy.VI 980. Consequently, one can assume that this house is smaller than the portion of an old house in P.Oxy.X 1276.

The second document, PSI VII 705 of the early III century A.D., discusses the sale of $1/6$ share of a horse or camel stable and its price is 3000 dr. This stable was described as a common property, consequently the other parts or shares are equal in their conditions and values to this $1/6$ share. So one can assume that the value of the stable was 18000 dr.=3 talents. This high price raises the following questions: why is the value of the stable so high compared to the value of the houses? Is this due to its size, or to its building materials or to its size and building materials together? One can assume that its size is very large and that its building materials are not cheap. For example, its foundations might have been built from stone, walls of burnt bricks or stones and its wood,

used in ceilings and doors and windows, of the best quality.

The third document, P.Oxy.XIX 2236 of the early third century A.D., describes the sale of a half share of a house and its appurtenances and its price is 1600 dr. We do not know the condition of the second half and whether some improvements were made either in the sold part or unsold one, so we cannot be sure that the total value of the house was 3200 dr. This sum would be equal to the value of the house if the two shares of the house were the same. If not, the price would have been either higher or less than the 3200 dr.

The fourth document, P.Oxy.X 1284 (A.D.250), discusses the sale of a half portion of an old house and its appurtenances. Its price is partially missing 3(.)5 dr. and if we try to compare the value of this share to the share in P.Oxy.X 1276, we find that the two shares were described as portions of old houses, but we have no idea about their measurements. So why do their prices differ? Is this due to their size or location or building materials if, indeed, these factors were taken into consideration by the parties of the deeds ? All we can say is that all these factors are involved in the evaluation of these two shares, but the main factor was the measurements of these two shares or the two houses as a whole.

From the four references above we notice that the average of the prices of the parts of houses is higher than

the average in the first two centuries.

Finally the table gives us two transactions of which one, P.Oxy.XIV 1697 (A.D.242), deals with a sale of a court whose price is 200 dr. The second, P.Oxy.IX 1200 (A.D.266), is concerned with a sale of a lot, and its price is 120 dr. The two documents do not give any information about their measurements, so it is difficult to know the price of the cubit or metre of building land during the third century. Consequently we cannot compare the prices of the third century with the prices of the first two centuries.

To estimate the average price of the houses of the first century, we have only three prices of complete houses. The level of the prices is between 180 dr. (P.Oxy.II 340 A.D.98-99) and 700 dr. (P.Oxy.II 333 A.D.89). The average is 493.33 dr. Therefore the picture from the first century or precisely the second half of the first century A.D. will be not clear if we depend only on the evidence of sales of whole houses. So we will take into account the prices of shares of houses, and suppose that the shares of a house are nearly equal in their values (they are between 600 dr. and 4000 dr.) We have five prices of shares and three of the whole houses, the average price will be 1234.6 dr.

To calculate the average price of the second century, we have five references, two of them concerned with the sale of shares and the remainder with the sale of complete houses. The prices vary between 300 dr. (P.Oxy.III 577

A.D.118), and 2000 dr. (P.Oxy.IV 719 A.D.193). The average price will be 1283.33 dr., and if we put aside from our account the value of fractions the average will be 1133.33 dr.

Let us calculate the average price in the third century. I disregarded some prices of shares which are inconclusive because for several objects the documents mention only the total price without giving the detailed price of each object separately. The documents are: SB XII 11233 (A.D.247), which gives the total price of three houses as well as $37 \frac{13}{32}$ ar., P.Oxy.XII 1475 (A.D.267) gives the price of two houses as well as $11 \frac{13}{16}$ ar., P.Oxy.XIV 1701 (III cent.A.D.) records the total price of a house as well as two shares in another two houses, and P.Oxy.XIV 1700 (III cent.A.D.) records the total price of a house and a courtyard as well as pigeon house. besides the arable land and vineyard. In addition to these documents there is another document (P.Oxy.X 1284) in which the price is partially missing. Therefore we will take into consideration only two fractions' prices after calculating their full value, adding them to another seven complete houses. The level of the prices varies between 500 dr. and 21,600 dr. The general average will be 5058.33 dr. while the average price of whole houses will be 4466.33 dr.

If we calculate the general average of the three centuries taking into account the prices of the fractions, it will be 2512 dr., while the average of the complete houses will be 3113.84 dr.

Finally, let us calculate the average price of the building land or the vacant lots. We have three references only, one from the first century and the other two from the second century, but none for the third century. The prices per sq. metre are 2.8 dr., 37.8 dr. and 9.6 dr. So the average price of the first two centuries is 16.73 dr. per sq.metre.

To sum up, almost all the evidence comes from the city itself. We have five prices or values from Nemeræ. The level of prices in Nemeræ is nearly equal to the prices in the city, but if we compare the prices in Soknopiæou Nesos and Oxyrhynchus, we see that the level of the prices in Oxyrhynchus is higher than in Soknopaiou Nesos. If we compare the prices in the Fayum nome and Oxyrhynchus, we find the average price in the first is higher than in the second during the first and second centuries, while during the third century the level of the prices is higher in the second than in the first.

From fig.3 one can easily see that the level of prices is going up and down during the first two centuries A.D. We see higher prices from the first century than the second century, while the curve of the prices went up steeply during the third century, especially during the second half. If we disregard P.Oxy.1634 (A.D.222), which gives us the highest price (21600 dr.), we can see (as in fig. 4) the normal increase in the level of the prices.

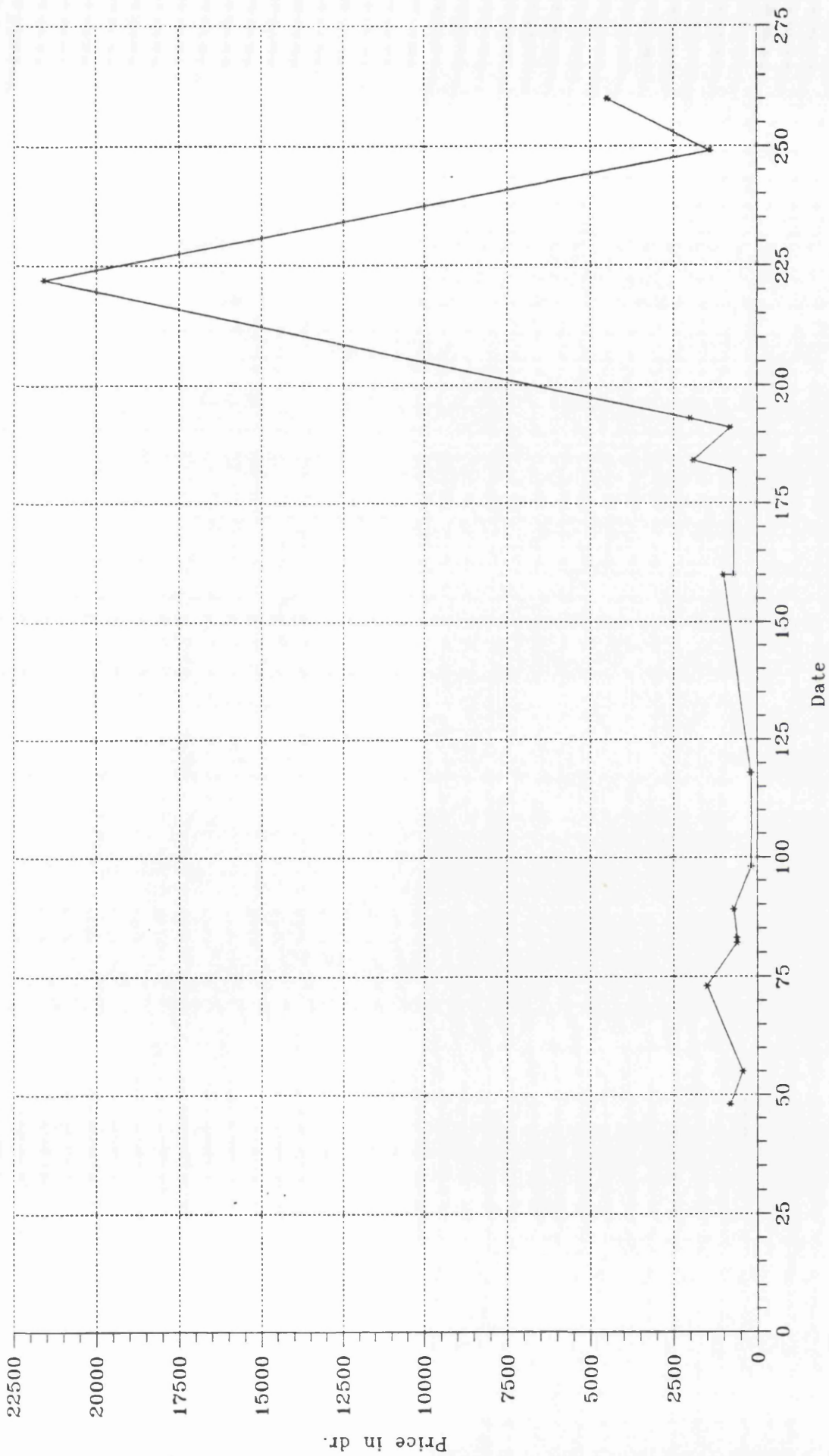


Fig.(3) House Price in Oxyrhynchus including the price of the stone house (P.Oxy.XIV 1634)

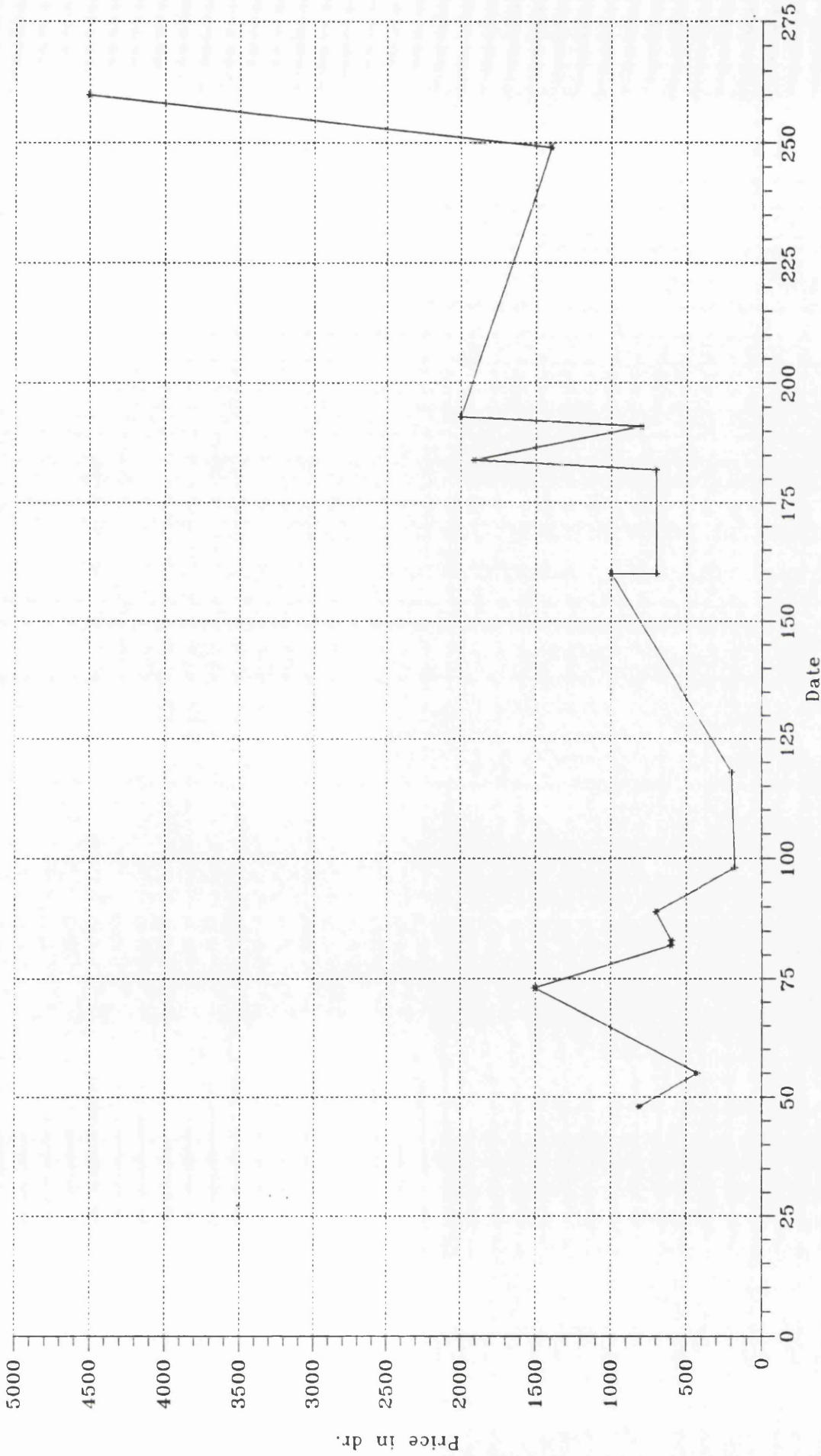


Fig.(4) House Price in Oxyrhynchus
without the price of the stone house (P.Oxy.XIV 1634)

c) Hermopolis

Date	Place	Price	Object	Document
I/II cent.	Herm.	300 dr.	vacant lot	P.Flor.III 324
A.D.153	,,	1000 dr.	1/3 of a house ,1/6 of another house and 10/36 of a house and court at the village of Poampimenis	P.Strassb.VI 585
II cent	Magdol-on Mire	600 (+) dr.	1/3 share of vacant lot	P.Lond. 903 III p.116
213/217	,,	200 dr.	exchange of lot and storeroom for sixth of a house	P.Flor.I 47
226/227	,,	300 dr.	1/3 share of a house and court	P.Lond.III 1158 ¹² =Mitteis, Chr.256
231	,,	300 dr.	1/3 share of a house and court	P.Lond.1298 III p.152
256	,,	500 dr.	house,court and fixture and its entrance & exit through the adjacent house	P.P.Lips.3 = Mitteis Chr.172
266	,,	2000 dr. (offer)	house, outbuilding, lots in state of ruin	SPP V 119.4.
271	,,	7200 dr.	house and court	CPR I 9=SPP XX 72
276	,,	not stated	dove cote and stable	SPP XX 74.

Hermopolis has produced until now ten papyri which deal with sales of house properties, shares of them, and vacant spaces. Four are concerned with the sales of

12) See P.J.Sijpesteijn, Theognostos alas Moros and his family, ZPE 76 (1989) pp.213-218.

houses, the other four deal with shares of houses and finally two contain a sale of a vacant space.

We have only three documents from the first two centuries, and so it is hardly possible to calculate the average of the prices in Hermopolis during the first two centuries A.D. But from the year 213/17 onward Hermopolis gives us fuller information about the value of house properties.

There is no information in our papyri concerning either the measurements of houses or their condition except in one case which we shall discuss later, but fortunately nine of them give the prices, although the price is missing in one.

Firstly we will discuss the references of the sales of house properties.

The first document, P.Lips.3=Mitteis, Chr.172 (A.D.256), is concerned with a sale of a house, court and its fixtures and exit and entrance through an adjacent house and its price is 500 dr.

The second document, SPP V 119 IV (A.D.266), is an offer to the city to purchase a house, out building and lots in a state of ruin and the offered price is 2000 dr. We do not know whether the city accepted the offer or not. Anyway if the bidder evaluated the property and offered 2000 dr., mainly, it seems, for the land of the house property because of its ruined condition.

Finally the third papyrus, CPR I 9=SPP XX 72

(A.D.271), is concerned with a sale of the house and its price is 7200 dr.=1 talent 1200 dr. The seller had been released from a debt of 4200 dr. and had received the balance of the price 3000 dr.

We conclude from the variations in the house prices that the house, which sold for 500 dr. was modest in size and building materials. The one middle class house whose price is 7200 dr. must have been larger. The price of the second house compared with the first is 14.4 times and, finally, with the third 3.6 times. So one can assume that this house was very large and well founded compared with the other houses.

The following papyri are concerned with sales of shares of houses. The first document, P.Strassb. VI 585 (A.D.153), is a sale of 1/3 house as well as a house in the city and 10/36 of a house and courtyard in the village of Poampimenis. The document does not give us any details about the value of each portion, nor their measurements or their condition. One can however, assume that on the one hand the prices of the two urban shares were higher than the price of the rural house and, on the other hand, that the purchaser was perhaps a businessman who invested his money in buying immovable properties. This is suggested by the fact that the purchaser acquired property in shares of houses in different areas not only in the city, but also in the above mentioned village.

The second document, P.Flor.I 47 (A.D.213/7), is a

deed of exchange of a lot of land and a storeroom in return for 1/6 of a house and 200 dr. It seems from the document that the lot and storeroom are larger in size and that perhaps the storeroom is well constructed. The value of 1/6 house is not the equivalent of the value of the other two properties. We also do not know the accurate prices of these two objects, except that the value of the first property was 200 dr. higher than the second. This sum shows that each object was evaluated either by auction or by experts and the result of the auction or inspection was that the value of the lot and storeroom together was 200 dr higher than the 1/6 of a house.

The third document, P.Lond.1158,III p.151, (A.D.226/7), is a sale of 1/3 share of a house and court, and the price is 300 dr. The deed of transaction is between two brothers and the papyrus gives us the location and the quarter. We do not know from the document whether the seller had made some improvement or changes in his share such as rebuilding part of it or renewing it or redecorating it before selling it. If he did not make any improvements, that means the value of the brother's share was equal to the value of his share. In that case one could say that the value of 2/3 house is 600 dr. and, if the joint owners did not improve their shares, the total value of the house could be 900 dr. The purchaser will sell the share on A.D.231 without any increase (P.Lond.III 1298 p.152).

Finally, the fourth document P.Lond.III 1298 (A.D.231) p.152, deals with a sale of 1/3 share of a house and its court and the price is 300 dr. The price of the whole house would be 900. It is worth mentioning that the price of the share of the house did not increase even after four years (see the above discussion for P.Lond.1158 A.D.226/7).

We also have two references for the sale of vacant lots. The first is P.Flor.III 324 (I/II cent.A.D.), which deals with the sale of a vacant lot whose price is 300 dr. The second document, P.Lond.III 903 p.116 (II cent.A.D), deals with a sale of 1/3 share of a vacant lot, the price is 600 (+) dr. The measurements are not stated in either case, therefore it is not easy to assess the price per cubit or square metre of building land in Hermopolis. However, I assume that the parties of the contract knew the size of the lots and they estimated the price according to the measurements.

In conclusion, one can say that Hermopolis gives us information on small houses, middle class houses and large houses.

To calculate the average price in Hermopolis, we have seven references for the prices of houses and parts of them, leaving aside one reference (P.Flor.I 47) where we know only the difference between the values of the two exchanged objects. We also have another document (P.Strassb.VI 585) that gives 1000 dr. as a total price of

three shares from three houses without giving the value of each object separately. So if we suppose the value of these three houses to be the same, the total price of the three houses would be 3857 dr., or 1285.6 dr. per house.

For the third century, we have three prices of whole houses. Their total price is 9700 dr. and the average price is 3233.33 dr. However if we add the price of the shares, the average price goes down to 2300 dr.

The average rate of the prices of the second and third centuries together is 1919.6 dr. per house.

Fig.5 shows us that the level of the price went up and down during the second cent. and first half of the third cent. The level went up steeply during the second half of the third cent.

d) Antinoopolis

Date	Place	Price	Object	Document
A.D.180/ 192	Antin.	3000 dr.	two storey house, inner court, and courtyard	P.Strassb.I 34
212	„	600 dr.	1/2 of a two storey house, cellar and courtyard	P.Lond.1164c III p.157
212	„	600 dr.	1/3 of a house	P.Lond.1164d III p.158
212	„	1700 dr.	1/3 of a three storey house and cellar and 1/4 of a one storey house and courtyard	P.Lond.1164e III p.157
212	„	700 dr.	1/2 of a two storey house, inner court and courtyard.	P.Lond.1164f III p.166
212	„	2000 dr.+ interest	1/3 of a house, court- yard and shop.	P.Lond.1164k III p.166
282/3	„	x talents 1400 dr.	1/3 and 1/12 of three storey house.	P.Corn.12

Antinoopolis according to the above table gives us only seven references for prices of shares of houses or house properties from A.D.180/182 to A.D.282/3. We do not have any information about the period between the foundation of the city and the year A.D.180/2, and there is no reference covering the large gap between A.D.212 and A.D.282/3. This makes it difficult to assess the average of the prices during the third century A.D.

It is surprising that the number of papyri from

Antinoopolis is not larger because we would have expected a lot of sources after Hadrian had founded it and after the flood of immigrants resulting from Hadrian's policy to encourage the people from other nomes to emigrate and settle there¹³. One would imagine that the new citizens were interested in either buying or purchasing the building land to build their new houses, and that as a result of the people's urgent need for houses, the offered houses or shares of them were in demand for sale or lease. Consequently the prices or rents of the properties for several years after the foundation of Antinoopolis might have been very high compared with the other nomes and as a result of this, both prices and rents of houses in other neighbouring nomes may have been affected by the emigration movement from them to Antinoopolis.

The table shows six papyri dealing with sales of shares of houses of $1/12$, $1/4$, $1/3$, $1/2$ shares. Only one papyrus contains the sale of a two storey house and its appurtenances. However none of these documents mention the measurements of the properties. The purchase price of shares of houses varied between 600 dr. and (x) talents 1400 dr.

As for their contents: P.Lond.III 1164 d (A.D.212), is a receipt for payment of 600 dr. in settlement of a debt of 330 dr., with interest and expenses (270 dr.). At the same

13) M.Zahrnt, Antinoopolis: Die hadrianische Gründung und ihre Privelegin in der neuern Forschung, ANRW 10,1 (1988) p.690-701.

time, the creditor had given up a third share of a house and appurtenances which had been assigned as security for the debt. So one can safely say that the value of the share is more than 600 dr.

The other two deeds of transaction are dated A.D.212 and describe the sale of a half share of a house, cellar and courtyard. The first price was 600 dr. and after thirteen days the purchaser had sold the property to a new vendee for 700 dr., making a profit of 100 dr. Consequently we have to ask ourselves why did the price increase by one sixth of the first price? Did the first purchaser buy the share for his private use? Probably not. We may suppose that he wanted to invest his money in purchasing this property, perhaps taking advantage of the vendor's urgent need for the money which forced him to sell his property for less than what it was worth. On the other hand, the vendee probably knew that the object of the transaction was worth more than he had paid. Moreover, P.Lond.III 1164 e (A.D.212) supports our assumption about the urgent need of the vendor (in P.Lond.III 1164 c) for money, because here we find him selling another two portions of his scattered property which consisted of $\frac{1}{3}$ three storey house and cellar as well as $\frac{1}{4}$ of a one storey house in the same year to another purchaser. This transaction shows that the purchaser is one of the investors who invested his money in buying immovable property, this being the most profitable field of investment. On the other hand, P.Lond.III 1164 c

and e add to our information that the vendor is selling three shares in different houses during A.D.212 to two businessmen, perhaps offering all three portions at one time, but selling one of them before the other two. It seems possible that he was compelled to sell the first portion due to an urgent need for money and then waited until he was offered a suitable price for the other two properties. Perhaps the man saw a golden opportunity, so he preferred to sacrifice the first transaction in order not to lose this chance. He used the price to pay a deposit on another property and then waited till somebody offered him a reasonable price for the rest of his property. He might have bought a new property in one unit which he could exploit in an economic way.

If we try to find out the exact value of each part of the two shares in P.Lond.1164 e P.157, it will not be easy. We know neither their measurements nor the conditions of their sites. Although the document states that the first house is a three storey house and the second is a one storey house, it is hard to say which one had the higher price. It is probable that the vendor had offered his property for sale by auction, for which each of the two portions were evaluated separately. What we have is the total price of the two properties. We may also conclude that the price of the above property was not only higher than that of the property in P.Lond.III 1164 (c+e), probably because its building materials were of a better

quality. Furthermore, the prices in P.Lond.III 1164 c, e and f, suggest that the vendor had shares in the small as well as the large houses which he owned through inheritance.

We have another interesting document, P.Lond.III 1164 k, p.166 (A.D.212), which deals with the release of a third share of a house and its appurtenances in settlement of a debt of 2000 dr. plus interest. We cannot estimate the value of this share because the papyrus does not mention the terms of the loan and the rate of interest is unknown. It seems probable that the loan was long outstanding and that the debtor had inherited the property from one of his relatives who had borrowed the 2000 dr. and which was then transferred after his death to his heir. The document does not give the date of the transfer of the property, consequently it is very hard to know the real price or the value of his share. It seems that the house was very large assuming that the other two shares were equal in value to the above share. The price will have been more than one talent which is one of the highest prices recorded in Antinoopolite papyri.

The table shows no references covering the period between A.D.212 and 283/4. There is, therefore, no available information from Antinoopolis about the increase of house prices during the seventy years between A.D. 212 and 283/4. The last example is P.Cornell 12 (A.D.282/4), that deals with a sale of $\frac{1}{3}$ and $\frac{1}{12}$ of a three storey

house. The price is unfortunately partially missing; being (x) talents 1400 dr., which seems very high compared to other prices from Antinoopolis. We must however, bear in mind that creeping inflation gave way to leaping inflation in the last quarter of the third century of the Roman period.

We may conclude our discussion by saying that the evidence from Antinoopolis points to three types of houses: 1) small houses as in P.Lond. 1164 d. 2) middle class houses such as in P.Lond.1164 c & d 3) large houses as in P.Strassb.I 34, P.Lond.1164 e and k and finally P.Cornell 12.

It seems that the average house price in Antinoopolis after its foundation was higher than in the other nomes. Because of the privileges attached to the citizenship of Antinoopolis, people emigrated to the city in great numbers, and it seems probable that their search for houses or building land raised the prices in Antinoopolis.

It is hardly possible to assess the average rate of the prices in Antinoopolis from only seven references: one is the price of a whole house and the rest are prices for fractions of houses. I disregard one document (P.Cornell 12) where the main sum is partially missing, but the word ''talent'' is in the plural and the sum is (x) talents 1400 dr. There is another document, P.Lond.1164 e, that gives us the total price of two shares of two houses which are as follows: 1/3 three storey house and its appurtenances as

well as 1/4 one storey house; their price is 1700 dr. We do not know whether the value of the two houses was equal or not. Supposing it to be equal, the total price of the two houses was 5828.6 dr.

For the second century A.D. we have only one reference where the price is 3000 dr. and it is impossible to know the average from this one figure.

For the third century A.D., all our available references date from A.D.212, so our average price will be for that year 2704.7 dr. Unfortunately we have only this group of references. Antinoopolis is the only city which produces for us the average rate of the prices for one year, but, apart from for one document, P.Cornell 12 (A.D. 282/3) we do not have references to cover the remaining period of the third century. Although the price of P.Cornell 12 is partially missing, it seems to have been very high reflecting an increase in prices or leaping inflation during that period.

So one can assume that the average price during the third century would be higher than 2707.7 dr. Calculating the average of the second and third centuries, it is 3204 dr.

The one reference which deals with the price of a vacant lot, unfortunately does not give the measurements, so we do not know the average price per square metre.

If we compare the prices of A.D.212 in Antinoopolis,

and the values of 209/10 in the Fayum nome¹⁴, we see that the prices in the first vary between 1200 dr., and more than 6000 dr. while in the second they vary between 600 dr., and 1000 dr., so we find the prices of the first are higher than the second. If we compare the values of houses of another town (Ptolemais Hormu) in A.D.184/5¹⁵, we find that the values are between 1733 and 4200 dr. The level of the price and values of houses of both is nearly the same. It seems the houses in Ptolemais Hormu belonged to rich people, and they are only samples. We might have higher and many lower prices from there.

Fig. 6 shows us that the city has middle and rich houses. The curve line of the year of A.D.212 gives us a good indication about higher and lower prices which are due to the conditions, the sizes, the building material, and the need of the sellers.

14) See pp.82-3

15) See p.80.

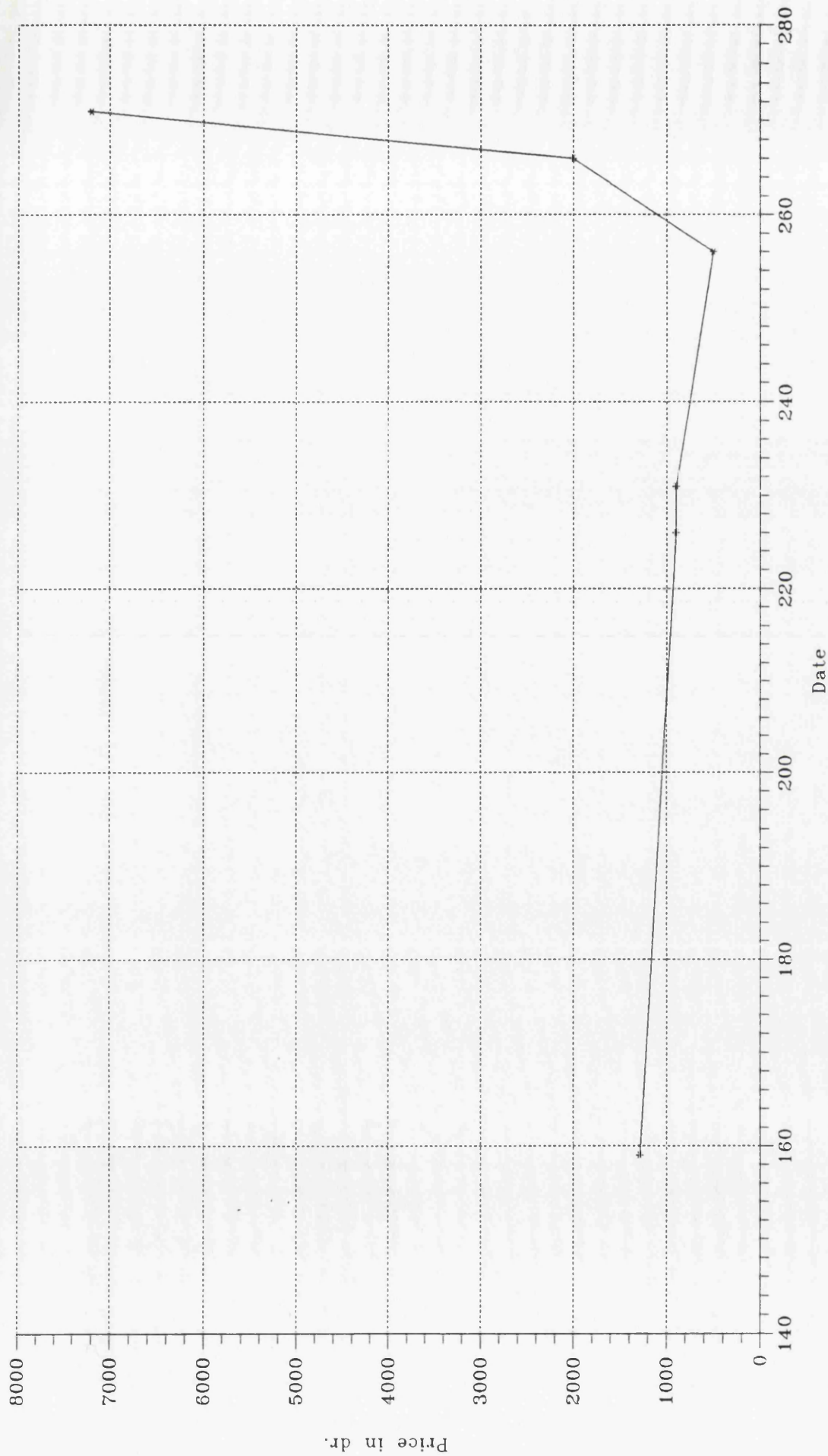


Fig.(5) House Price in Hermopolis

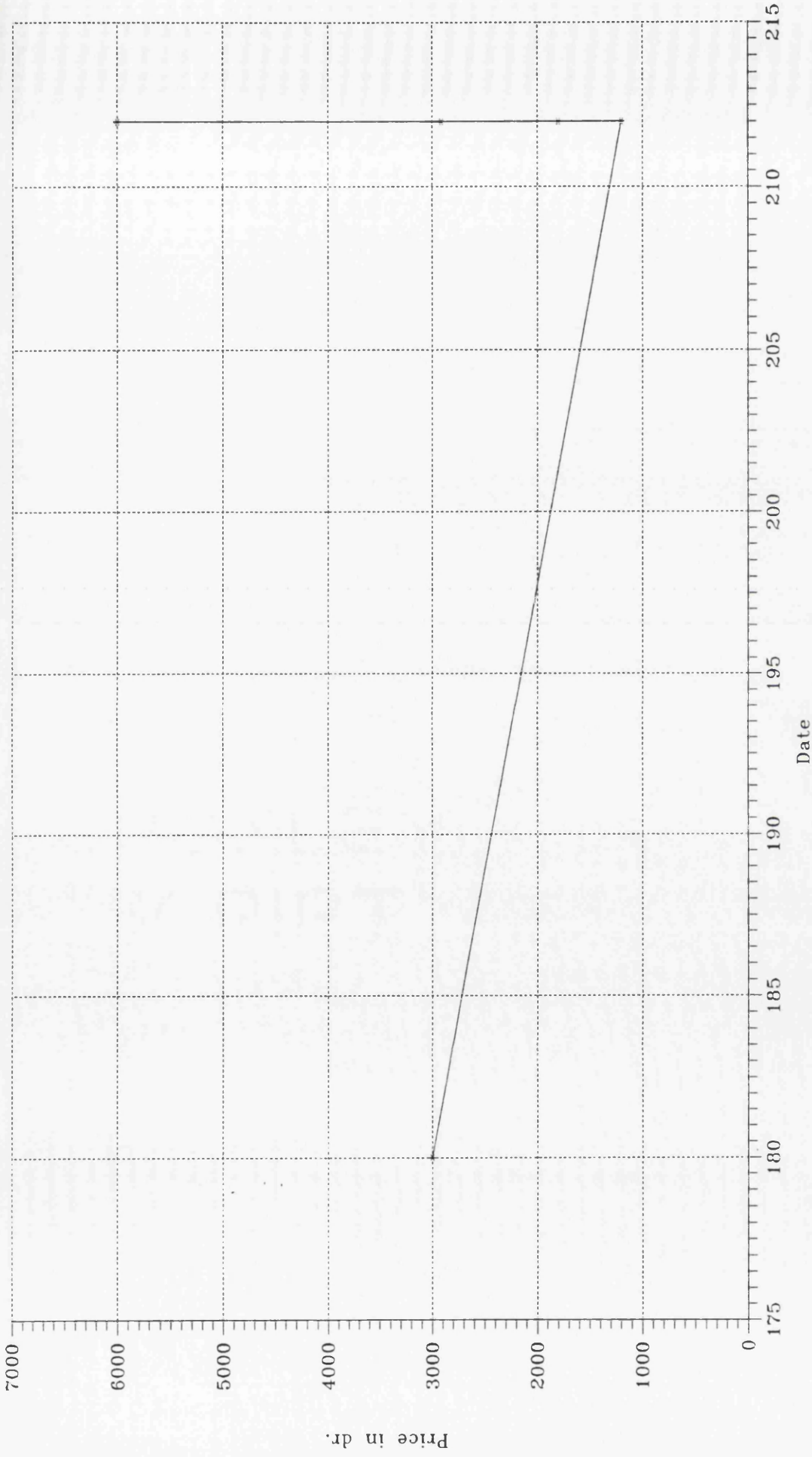


Fig.(6) House Price in Antinooopolis

e) Herakleopolis

Date	Place	Price	Object	Document
I/IIcent	Herak	lost	1/2 house and court	CPR I 120
II cent	„	„	house and courtyard ? fragment	CPR I 54
„	Ankyron- on	„	part of a house and building land	P.Bad.IV 77
II/III	Herak.	300 dr.	3 ar. and small house	CPR I 155
211/17	„	lost	two storey house	CPR I 57
222/235	„	„	part of immovable	CPR I 66
early IIIcent	„	„	a house	CPR I 88
„	„	600+dr.	1/2 of a house	CPR I 147
„	„	3000+dr.	a house and courtyard	CPR I 131

Herakleopolis produced 9 papyri which deal with sale of house properties, shares of houses, and other immoveables. Unfortunately the price is lost in six documents, partially missing two and, finally, the price of small house and 3 ar. (CPR I 155). There is no evidence for any measurements of house property.

The first document, for which we have price, CPR I 155 (II/III cent. A.D.), deals with a sale of a small house and 3 ar., the price of both items is 300 dr. It seems the price of each object was accounted separately, then the price of the two items was accounted together. The price of the two objects seems unusually low compared with the

prices of the houses and land in Herakleopolis, e.g., in SPP XX 29 (A.D.226) the price or the value of the land is as follows: 3 1/2 ar. to replace dowry of 3500 dr.; in CPR I 164 (A.D.227) 9 1/2 ar. catoecic land are transferred for 600 dr. and 4 1/4 ar. of catoecic land for 600 dr. in CPR I 6+SPP XX 47 (A.D.238). House property, too, is more expensive in the other two documents which mention the price of houses. Anyway we do not know whether this transaction is an amicable agreement, or whether it was made under extraordinary circumstances.

The second document, CPR I 131 (beg.III century A.D.), is a sale of a house, a courtyard and ?, the price is 3000 (+) dr.

The third document, CPR I 147 (first half of the third century A.D.), is a sale of a half share of house and appurtenances, the price is 600+ dr.

If we compare the value of the two houses in CPR I 131 and CPR I 147, we find that the value of the first is two times more than the second. The differences may reflect differences in sizes; as one would expect, there seem to be some small houses (CPR I 155), middle class houses (CPR I 147), and large houses (CPR I 131).

As for the average price, we do not have evidence for the first two centuries A.D. For the third century the average could be about 2100 dr. per house.

f) Other names

The following places: Alexandria, Elephantine, Panopolis and one unknown place give one reference each. The evidence deals with the value or the price of house property and therefore it is difficult to know the range of the prices and the average price. We hope that new publications may reveal new information in order to fill this gap.

Date	Place	Price	Object	Document
18 B.C	Alexandria	300 dr. part of the price	goldsmith's shop	BGU IV 1127
A.D.154	Eleph.	28 dr.	1/2 of two cellae	P.Par.17
II	unknown place	2000 dr. 3000 dr. 600 dr.	house property house property house property	W.Chr.392
281	Panopolis	12000 dr.	4/30 of a house and its appurtenances	P.Coll.Yout- ie II 71-72

BGU IV 1127 (18 B.C), from Alexandria, is a transfer of a goldsmith's shop, with the tables built for the trade, and in the inner circle of the square portico on the street (?). An unknown part of the price was paid in advance, the rest of the price is 300 dr. Unfortunately, we do not know the total price of the shop. One would assume that the prices in Alexandria were very high.

P.Par.17 (A.D.154), from Elephantine, gives us the sum

of 28 dr. as a price of half of two cellae. If there is no variation between their sizes and condition, the total price would be 54 dr. We do not know what proportion of the house property these cellae represented. Therefore it is difficult to ascertain the real value of the house property.

W.Chr.392 (II cent.A.D.) comes from an unknown place. It gives us three values of house properties, which are as follows: 2000, 3000, 600 dr. From these values it appears that there are large variations between the values of the houses in that place and one can assume that there were lower and higher values of houses in that place than we have.

Finally, P.Coll.Youtie II 71-2 (A.D.281, from Panopolis), is a sale of $\frac{4}{30}$ of a house and its appurtenances and one ar. for 2 talents. The document does not give the price of each object separately, but it is certain that the price was paid mainly for the share of the house and this is a good example for sharp increases of the prices. The papyrus tells us that ownership of this property changed three times within a short period between the year 280 and 282. We do not know the reason behind these changes in three successive years. It is probable that the parties of the first two transactions made some profit while the last purchaser bought them for her own private use(A.D.281-289). in A.D.289 the purchaser registered it.

To sum up our discussion, the Fayum nome and Oxyrhynchos are the only nomes which give us lists of prices covering the three centuries. Hermopolis and Antinoopolis give mainly references from the second and third centuries, but they are few. Other nomes give us very meager evidence.

In all three centuries the prices are mostly less than 1000 dr. In many cases, the prices of houses are less than the prices of slaves, camels, donkeys, and even sometimes the prices of goats, sheeps, and pigs¹⁶.

From the cheapness of the building land in rural areas, and the cheap building materials (mud brick and reed), one can say that it is not beyond the means of a poor rural person to own his own humble house. Some prices are only equal to the wage of one or two months¹⁷.

The prices of the houses and building lands are usually higher in the cities than in the villages. However, some rural house prices are higher or equal to the prices of the urban houses. The tables and fig.7,8,9,10 show that the prices go up and down during the first two centuries and even during the first half of the third centuries. From fig.7, which deals with the

16) Johnson, *Op.Cit.* pp.230-1, pp.279-80, O.Montevecchi, *Aeg.* 19 (1939) pp.11, pp.33-36, pp.49-50, I.Biezunska-Malowist, *L'esclavage dans l'Égypte greco-romaine*, II (1977) pp.165, H.J.Drexhage, *Eselpreise im römischen Ägypten ein Beiträge zum Binnenhandel*, *Münstersche Beiträge Antiken Handelsgeschichte* 6 (1986) pp.34-48, Idem, *Eigentumsdelikte im römischen Ägypten*, *ANRW* 10,1 (1988) pp.985, J.A.Straus, *Le prix des esclaves dans les papyrus d'epoque romaine trouves en Égypte*, *ZPE* 11 (1973) pp.289-295, Idem, *L'esclavage dans l'Égypte romaine*, *ANRW* 10,1 (1988) pp.906-911, P.Vindob.Worp.9 (camels prices), P.Rainer.Cent.62 (prices of cattles).

17) Johnson, *Op.Cit.* pp.306-10.

prices of the first century, we see that: 1) All the prices are less than 1000 dr. except two prices which are over. 2) The prices are mostly less than 600 dr. 3) The high prices go side by side with low prices. From fig.8, which deals with the prices of the second century, we find that: 1) the prices are mostly less than 1000 dr. and go side by side with some scattered high prices (those come mostly from Ptolemais Hormu A.D.184/5). 2) the highest price dates from the first half of the century. I devoted the fig.9 and 10 to the prices of the third century. I disregarded in no.9 the price (21600 dr.) of the stone house (P.Oxy.XIV 1634), while I took it into account in no.10. We see from them the following: 1) The high prices¹⁸ are much commoner than the lower prices¹⁹. 2) The high prices started from the second half of the century. 3) The high prices go side by side with low prices. 4) in fig.no.10 the price of the stone house turned completely the curve of the prices. Finally, fig.11 and 12 show the prices of the first two centuries and the period until the year A.D.284. I disregarded in no.11 the price of the stone house, while I took it into account in no.12. The curve goes up and down during the first 250 years, but from the second half of the third cent., it always goes up. It is time now to discuss the rent of the houses and business premises.

18) 11 are higher than 1000 dr.

19) 5 prices are less than 1000 dr.

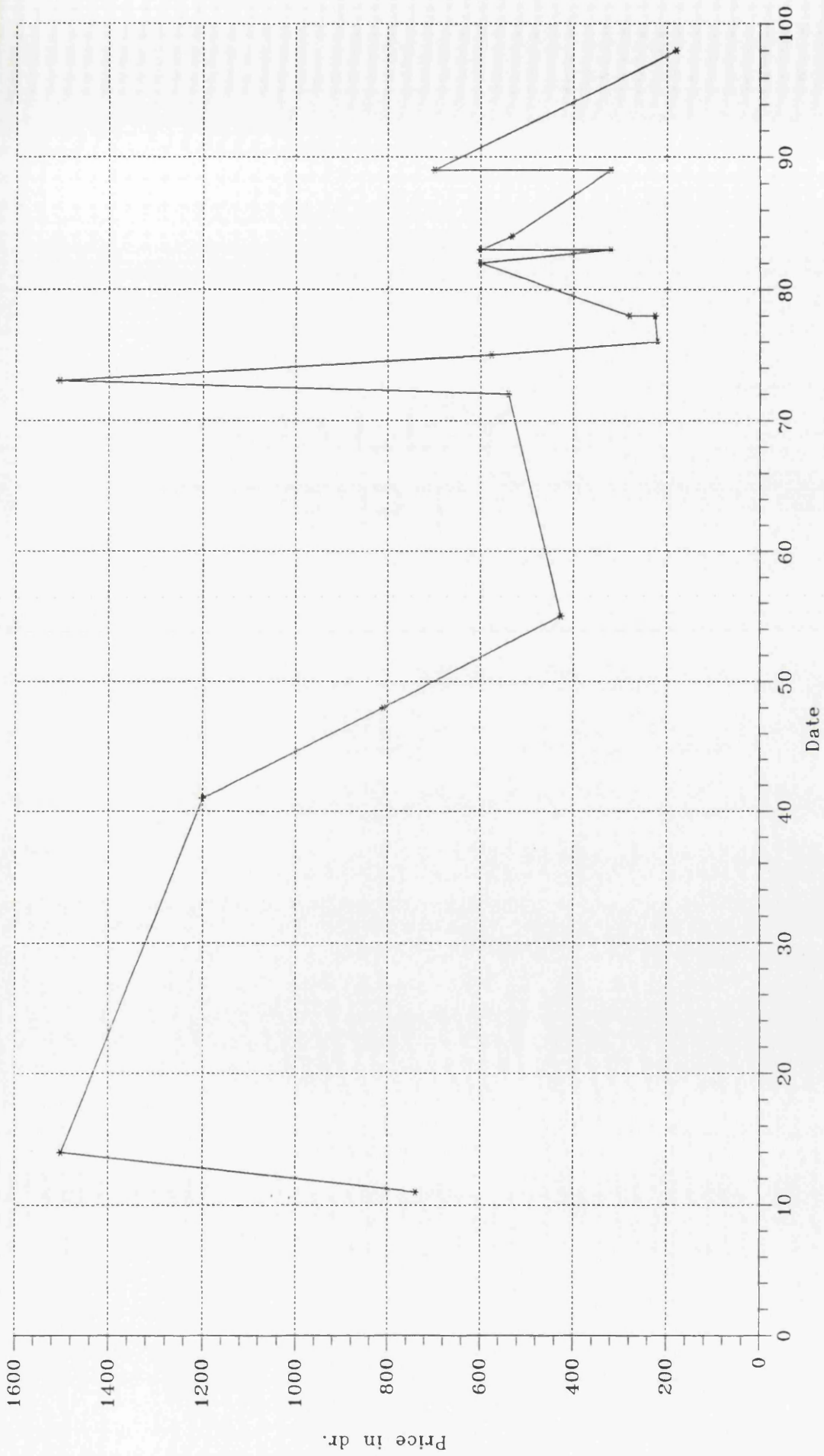


Fig.(7) House Price in Roman Egypt

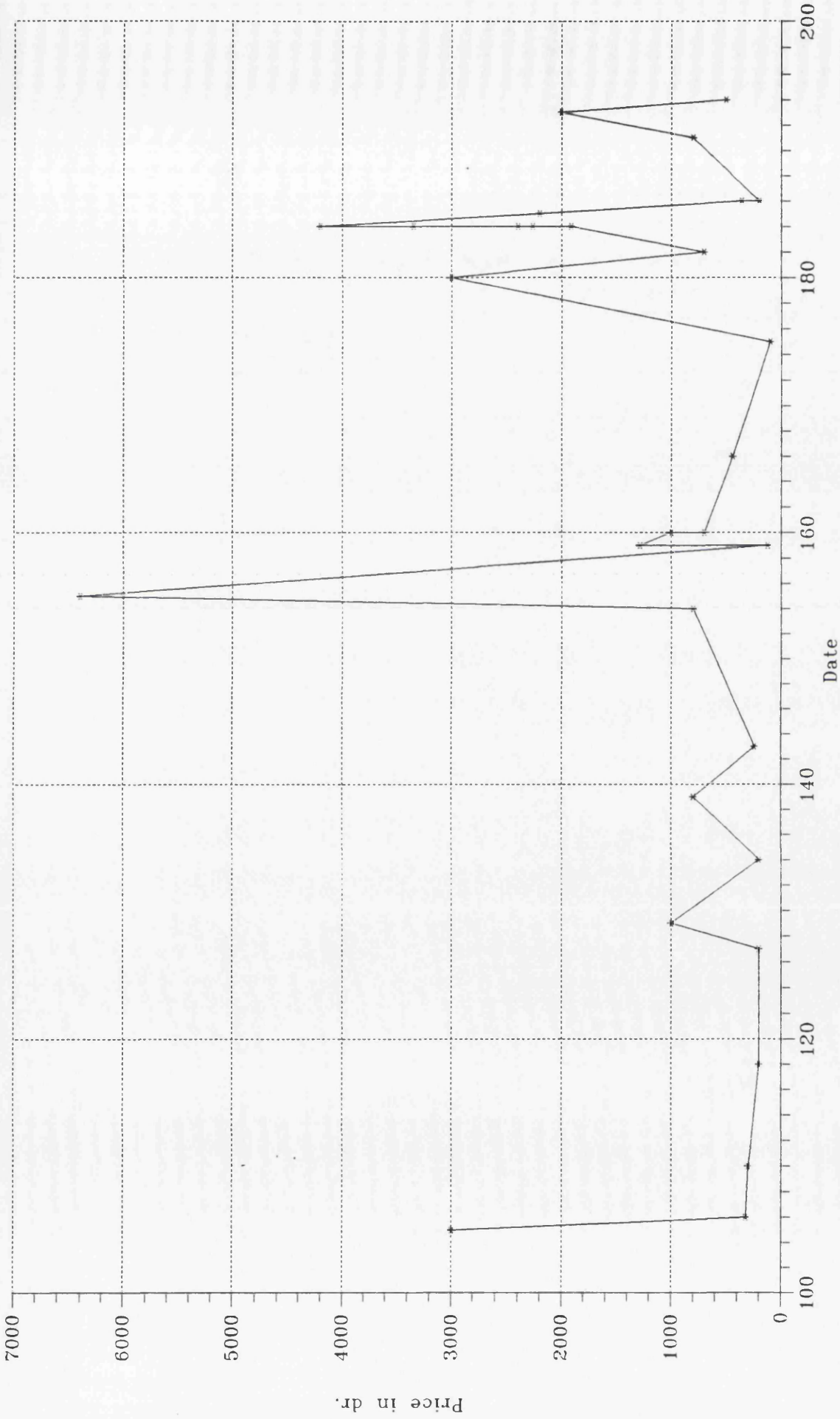


Fig.(8) House Price in Roman Egypt

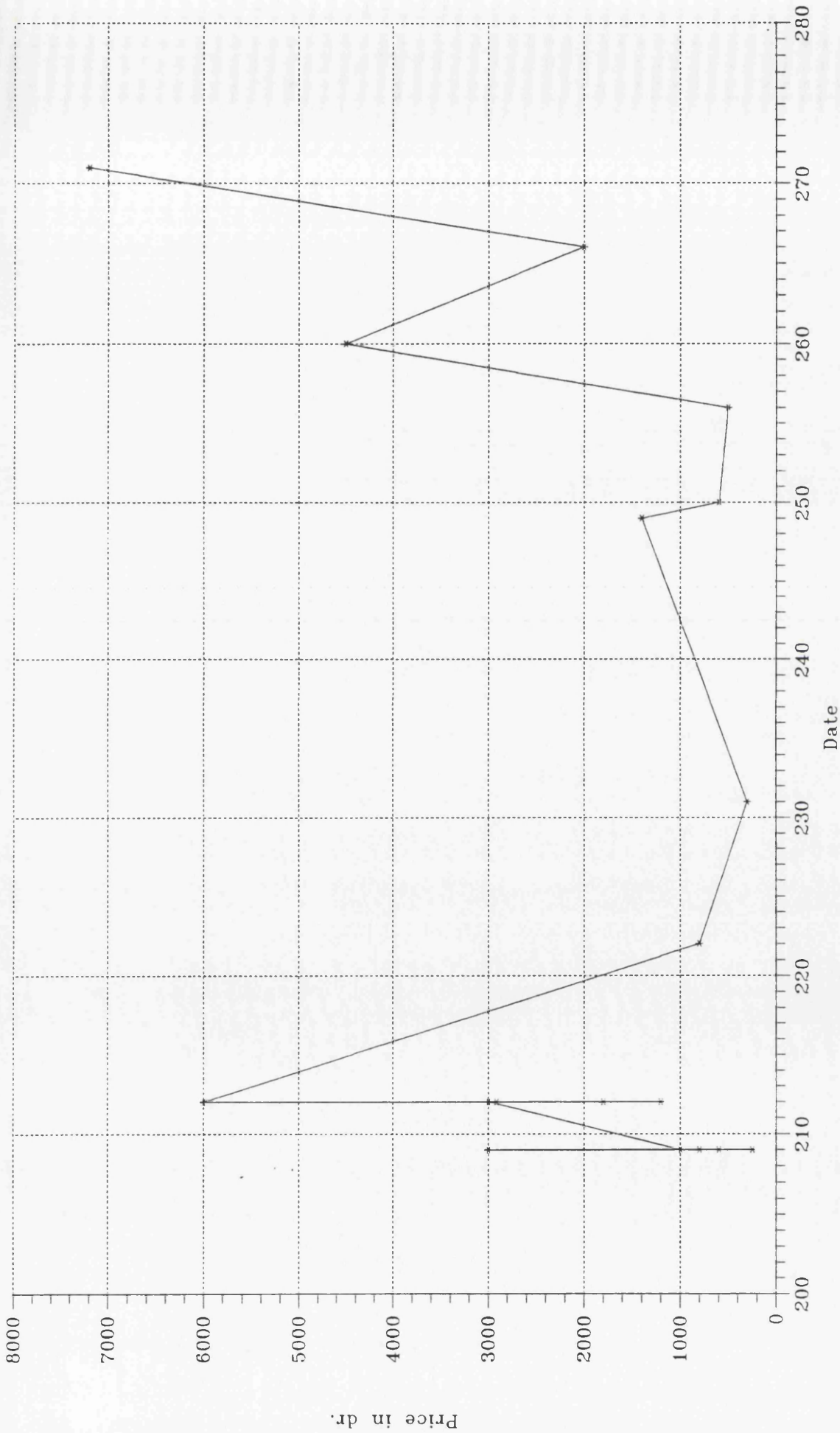


Fig.(9) House Price in Roman Egypt

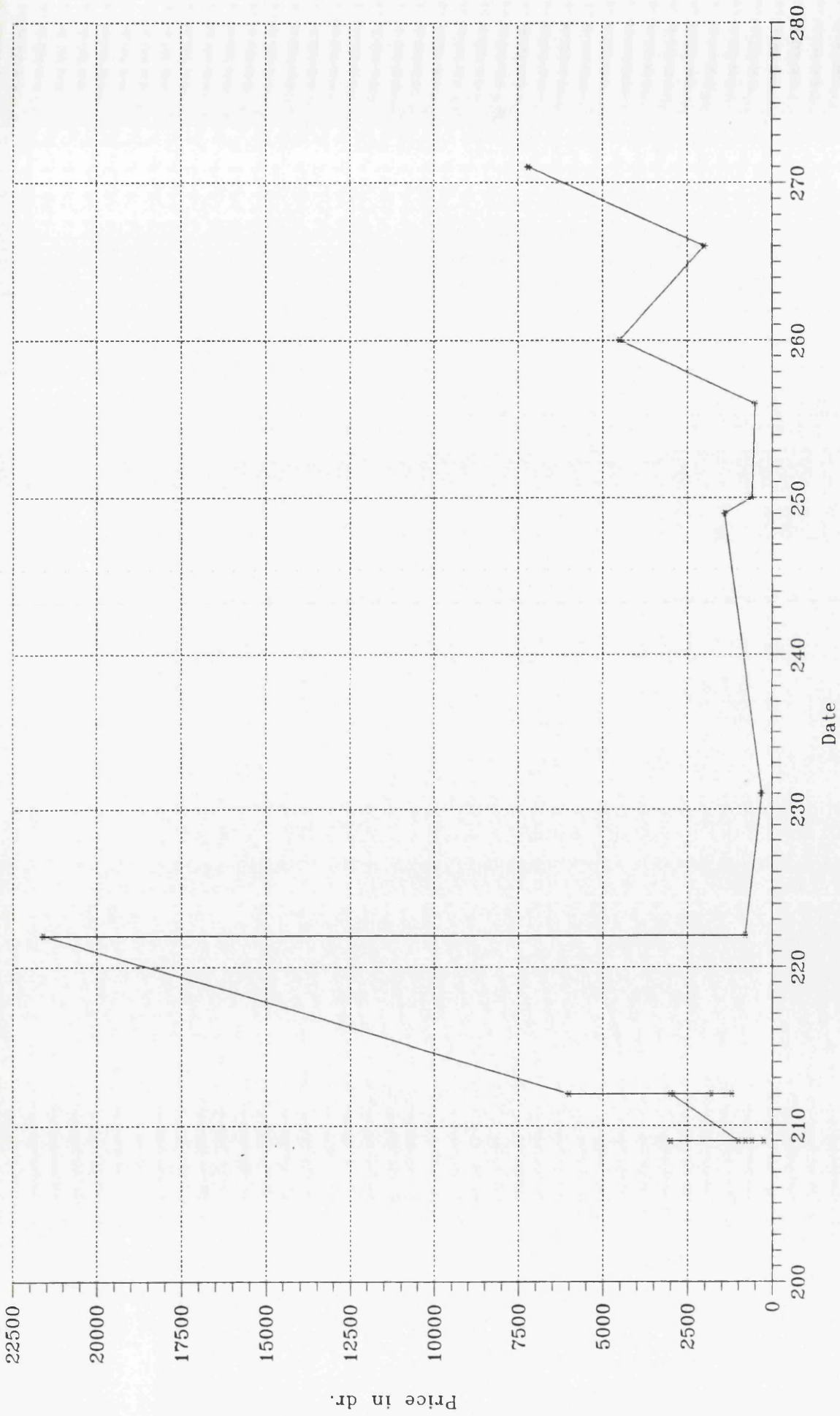


Fig.(10) House Price in Roman Egypt

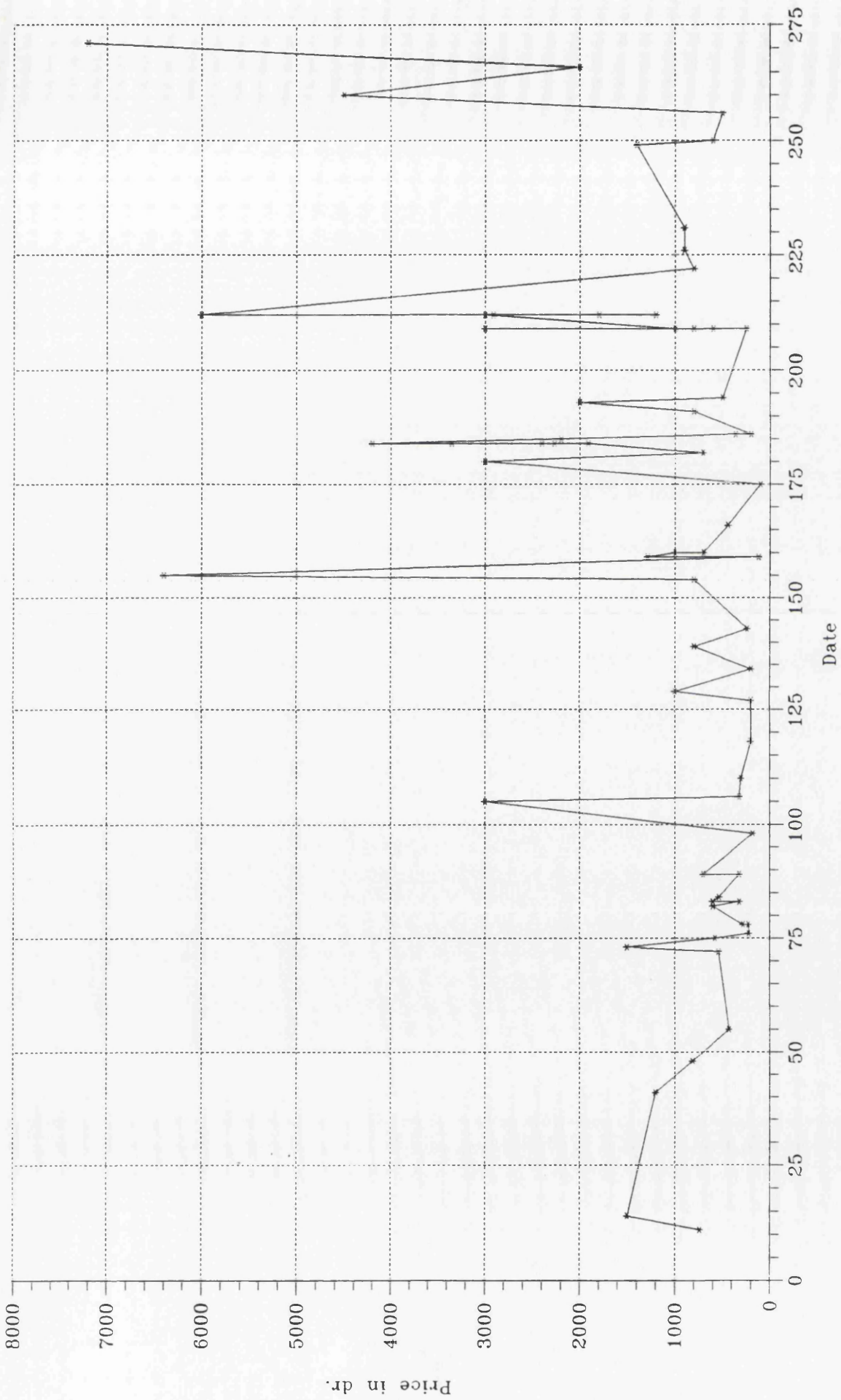


Fig.(11) House Price in Roman Egypt

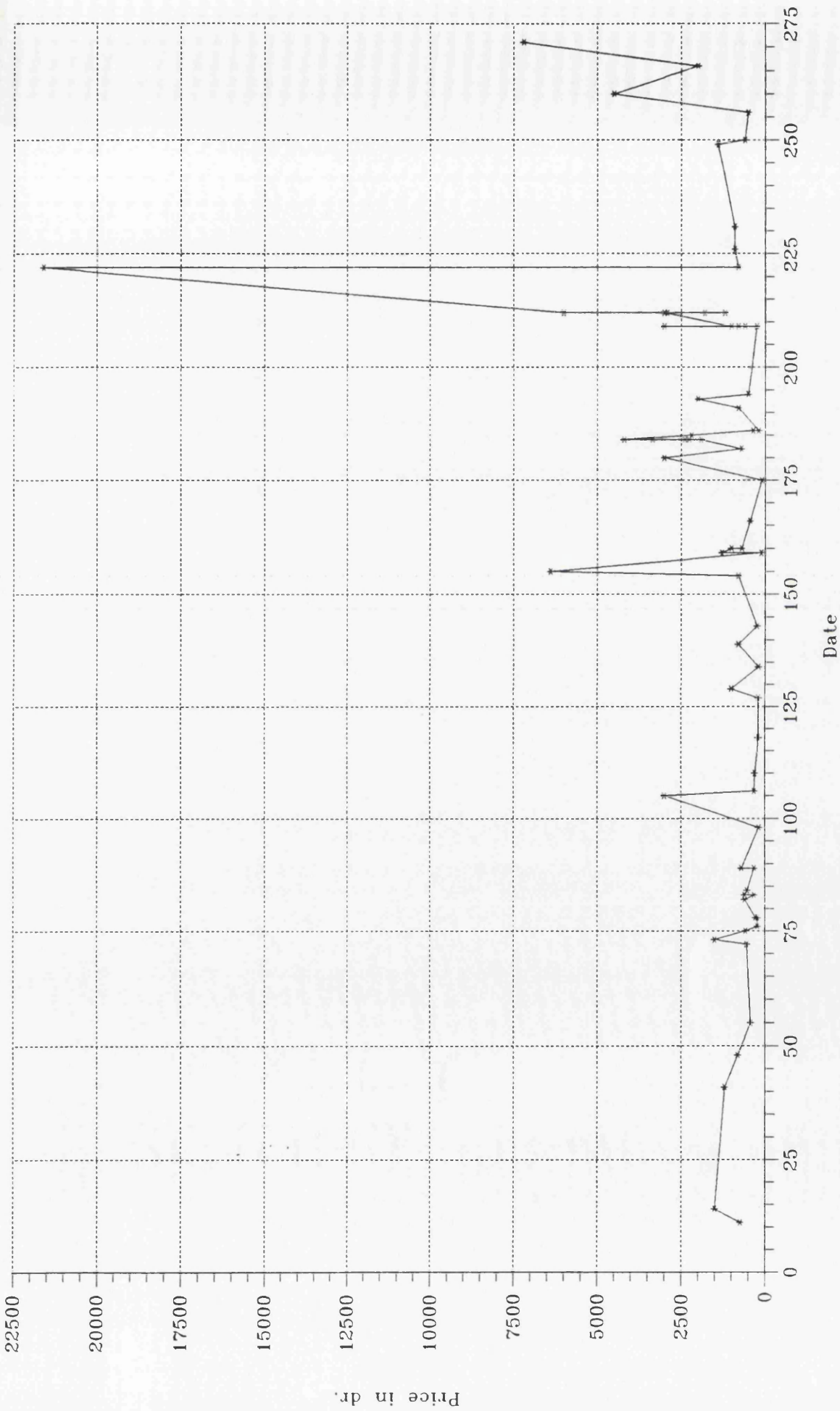


Fig.(12) House Price in Roman Egypt

III

**The rent of houses and the business
and industrial premises**

The Ptolemaic sources for the rent of houses, in both the demotic¹ and greek papyri², are very scarce. There are several factors which may account for this scarcity of lease contracts: 1) As scholars rightly assume, there was no rental market because all the members of the family usually lived together even after the marriage of their children. 2) The scarcity of evidence is partly due to the billeting system³ (σταθμος), especially during the early Ptolemaic period. The first Ptolemies confiscated a lot of private houses or shares of houses and gave them to their soldiers, as a result of which the rental market was very meager. 3) Finally the royal decrees⁴, which prevented the soldiers from offering their quarters for lease, account for the scarcity of written contracts, so the soldiers

1) We have only three demotic papyri which deal with the lease of house property from the Ptolemaic period. P.Philadelphia, 12 (277 B.C.) from Thebes, is a lease of a house for a period of one year and strangely enough it is dated just one year prior to the beginning of the period of validity. The rent was paid in advance. P.Turin 17 (112 B.C.) from Deir el Medineh, is a lease of a share of house for one year; the tenant pays the rent monthly. P.Turin 25B (108 B.C.) from Deir el Medineh, is a lease of a share of house for one year. The tenant pays the rent monthly. The amount of the rent in these contracts is not stated. The demotic papyri produce a large number of sales of houses, while for the rent they give us only the above documents. See G.R.Hughes, Notes on Demotic Egyptian Leases of Property, JNES.32 (1973), pp.158-9, M.El Amir, Family Archive, pp.53-55.

2) See Berger, Wohnungsmiete und Verwandtes in den gräko-ägyptischen Papyri, ZVglRWiss 29(1913) pp.323; H.Müller, Op.Cit. pp.11; P.Petr.III 73, BGU VI 1280 (III cent.B.C), SB V 7569 (III cent B.C.) = P.Hamb.II 190, CPR XIII 4,5,12 gives a large numbers of tenants (See H.Harrauer, CPR XIII pp.174-5).

3) See M.San Nicolo, Stathmouchos, RE.2 Reihe, III 2, (1929) coll.2178-82, Launey, Recherches sur les Armees Hellenistiques, II pp.694., R.Taubenschlag, Law of Greco-Roman Egypt in the light of the papyri 332 B.C.-A.D.640, 1955, p.238 and the notes, M.T.Lenger, C.Ord.Ptol. no 5-10 and the notes, W.Dahlmann, H Bta , im Recht der Papyri, Diss.Köln 1968 pp.31-7

4) M.T.Lenger, Op.Cit.no 5-10.

might have adopted either the oral agreement or they wrote a contract secretly for fear of the royal financial fines. Anyway, one can infer from the royal decrees that some settlers already leased their lodgings to others, so these decrees were issued to stop these illegal transactions. But did the settlers obey these decrees? From the meager evidence we know that some settlers not only ignored them, but also dared to let their lodgings according to a written agreement, and not for a short period but for a very long period (20 years) (P.Strass.II 92). From P.Petr.8 we know that some soldiers illegally occupied some royal quarters before they were assigned to them by the royal administration, and that the authorities decided to collect rents from the occupants from the time of the illegal occupation of the royal premises. Thus one can say that leases of houses existed during the Ptolemaic period both officially and unofficially. Fortunately this is indicated by some inhabitants and tax lists give a large number of tenants. CPR XIII 4 (3rd cent.B.C.) which records 55 tenants. CPR XIII 5 (3rd century B.C.) gives 15 tenants, CPR XIII 12 (3rd century B.C) records 5 tenants. Finally CPR XIII 20 (3rd century B.C.) gives only one tenant.

From the Ptolemaic documents, we also know that some members of both rural and urban families travelled on private business, religious trips, as tourists, or seeking

justice or to improve their standard of living.⁵ Those travellers or immigrants, of course, were in need of accommodation whether for a short period or longer. Whether these accommodations were in private houses or in rest houses or hotels or temple premises⁶, we are waiting for new evidence which will throw light on the leases of houses during the Ptolemaic period.

The bulk of our evidence comes from the Roman period. The papyri give us plenty of information about leases of houses. The period between 30 B.C. and A.D. 20 does not give us sources except three Alexandrian references which date to 13 B.C. We shall also see that there is no balance between the sources of the various nomes: Fayum gives 75 documents, Oxyrhynchus gives 40 documents, Hermopolis gives 8 documents, Alexandria gives 3 documents, Antinoopolis gives 1 document, Heracleopolis gives 2 documents, Thebes gives 18 documents and finally 1 document from an unknown place.

We draw our information from several types of documents which provide the evidence for the rental of

5) J.G.Milne, *Greek and Roman Tourists in Egypt*, JEA 3 (1916) pp.76, M.Rostovtzeff, *Greek sightseers in Egypt*, JEA.14 pp.13, W.Hellebrand, *Arbeitsrechtliches in den Zenon-Papyri*, Fest. P.Koschaker, Vol.III 1939, pp.240; S.Polzien, *The Origin and Competence of the Praktor Xenikon*, JJP.5, 1951, pp.217, Peremans, *Le Commerce et l' Industrie, le Transport sur Terre et la Flotte.*, Stud.Hellenistica, 5 (196), L.Casson, *Travel in the Ancient World*, pp.257, J.Bataille, *Les Memnonia*, pp.153, Braunert, *Op. Cit.* pp.41-2, 62 ; 52; 72-3, P.M.Fraser, *Ptolemaic Alexandria*, 1972, H.Heinen, *Sur le Régime du Travail dans l'Égypte Ptolémaïque*, *Hommages C.Préaux*, Bruxelles (1975) pp.656-662.

6) Bouché-Leclercq, *Histoire des Lagides*, III p.206, J.P.Mahaffy, *Empire*, p.259, I. Noshy, *Egypt under the Ptolemies*, II p.43 (arabic), G.Husson, *Op. Cit.* pp.133 D.J.Thompson, *Memphis under the Ptolemies*, 1988, pp.12, 57, 87, 257.; UPZ I 120.

houses and other premises: offers for lease or lease contracts, antichretic loans with the right of habitation, rent receipts, accounts, private letters, lists of absentee tax-payers who live in other places whether in the nome itself or in other nomes, lists of the individuals who do not live in their legal domicile, census declarations, petitions, public and private archives, and, finally, testaments.

It has been claimed by some scholars that there was virtually no rental market for housing in the Egyptian villages during the early Roman period, owing to the cheapness of houses⁷. Drexhage also assumes that the rents of houses were very rare during the Roman period⁸. This view can be dismissed if one uses the available evidence which can directly and indirectly give us some indications about the existence of a rental market in villages from the very early Roman era. In P.Oxy.X 1321 (A.D.48-9) there is a rent receipt. The archives of Tebtynis also contain many entries which deal with antichretic loans with the right of habitation⁹. These entries attest a demand for the rental of housing in the villages from the early Roman period. The

7) See Berger, *Op.Cit.*p.326, O.Montevecchi, *Dai Papiri della Raccolta Milanese*, No.7 pp.287; *La Papirologia*, pp.217, D.W.Hobson, *Op.Cit.*p.224.

8) H.J.Drexhage (*Op.Cit.*p.108) tries to interpret the high level of the rents by giving two possibilities: 1) the house properties offered for lease were very few during the Roman period, 2) there is no need for renting houses.

9) These entries go side by side with the entries of loans and mortgages.see Hobson, *Op.Cit.*pp.226-7, for the entries of loans with the right of habitation see the tables of this chap.

of housing in the villages from the early Roman period. The lists of absentee tax-payers and the lists of alien residents in some villages also throw light on the continuous movement of population not only between the villages of the nome itself but also between the other nomes. The traveller or the immigrant needed accommodation either for a short or long period. In P.Cornell 22, from Philadelphia, there is a list of 125 residents of Philadelphia whose legal domicile was in other villages which are as follows: 1) Nestou Epoikion, Tanis, Bakchias, Andrianton, Kirke, and Hephaistus which are in the Heraclides division as is Philadelphia, 2) Hermopolis is in the division of Themistes, 3) Sobthis in the Heracleopolite nome, 4) residents from unknown places. The greatest number of alien residents (56 out of the total 125) are from Nestou Epoikion. The next largest number of 29 are from Sobthis. The effect on Philadelphia of such immigration in the other direction can be seen from P.Ryl.IV 595 which gives us a list of 105 of Philadelphian absentee tax-payers who are living elsewhere (P.Graux.1= SB III 7416, P.Princ.8, P.Cornell 24).

In P.Tebt.II 400, from Tebtynis, there is a list of 117 alien residents in Tebtynis, of whom 65 are from the same meris as Tebtynis. The next largest number, 41, are from other divisions of the nome and 11 outsider residents from other nomes. The effect on Tebtynis of such immigration in the other direction can be seen from

P.Tebt.II 391 which tells us that four tax collectors divided up their work, with two responsible for those residing in the village and the other two collecting from the residents of Tebtynis living elsewhere. Therefore one can say that the result of this large movement of people from one village to another, whether in the same nome or in others, might have created a large rental market for letting or subletting houses or shares of houses for the outsiders whether for a short or a long period.

The private letters also indicate the existence of the lease market for housing both in villages and in cities:

- 1) They give some information about collecting the rents of houses, as does P.Princ.II 70 (= H.Youtie, *Scriptiunculae* II.pp.80-4).
- 2) They tell us that the tenants and lessors sometimes make oral agreements. In P.Mich.inv.1355V (III century A.D.)¹⁰ the tenant complains with some bitterness that he is being threatened with eviction from the house which he holds in lease from his correspondent. The tenant alleges that there is an oral agreement covering a year's tenancy. He also implies that he has already paid the rent due for the first six months and has no obligation to pay the second payment until the end of the current semester.
- 3) They also tell us that some members of a family lived in another village or city where they had good chances of finding work to improve their economic situations

10) H.C.Youtie, *ZPE* 30 (1978) pp.191-2.

(P.Flor.III 322, PSI III 162, P.Oxy.IV 744)¹¹ or receive education (P.Oxy.XVIII 2190)¹². Some of those migrants may have stayed temporarily¹³ or permanently in the new home; they either buy or lease a house or share of a house (SB VI 9636, P.Yal.inv.1533= AJP.92 (1971) pp.655). 3) They also tell us that some members of the family went to another village or city on business trips¹⁴ (P.Oxy.XVI 1678, P.Oxy.II 283), seeking justice, religious¹⁵ and entertainment¹⁶ trips (P.Tebt.II 416= W.Chr.98). Those travellers and the immigrants, of course, were in need of accommodation. Where did the stranger live when he moved to another place? Did he live with relatives or friends? Or did he lease a place whether a room or share of house or a house to live in? The papyri tell us that, as nowadays, the people, before moving to another area whether a village or a town, tried to have recommendation letters to some

11) See Braunert, *Op.Cit.* pp.208,210, E.G.Huzer, *Alexandria ad Aegyptum in the Julio-Claudian Age*, ANRW,10,1 (1988) pp.646.

12) See Braunert, *Op.Cit.* p.209 and notes, Morris, *Op.Cit.* pp.55, E.G.Huzer, *Op.Cit.* pp.642.

13) Westermann, *The Castanet Dancers of Arsinoe*, JEA 10 (1924) p.134, *idem*, *Entertainment in villages of the Greco-Roman period*, JEA 18 (1932) pp.16; Bell, *A Musician's contract*, JEA 10 (1924) pp.145, *idem*, *A Happy Family*, *Fest.W.Schubart zum 75 Geburtstag 1953* pp.38; C.H.Roberts, *An Army Doctor in Alexandria*, *Fest.W.Schubart zum 75 Geburtstag*, pp.113.; L.Bringmann, *Die Frau im Ptolemäisch-Kaiserlichen Ägypten*.1939, pp.119

14) See Braunert *Op.Cit.* pp.207 and its notes, pp.225; S.E.Sidebotham, *Op. Cit.* pp.82, D.Bonneau, *Aperçu sur l'Origine des Villes Antiques en Égypte d'après la Documentation Papyrologique*, *L'Origine des Richesses Dépensées dans la Ville Antique*, 1985 p.236.

15) See Braunert, *Op.Cit.* p.205, P.Oxy.118=H.C.Youtie, *TAPA 94* (1963) p.341, mentions a guest house in a temple, P.Oxy.VI 923 is a petition, addressed to Zeus Helios, the Great, Serapis, to prevent the departure of a certain person to Alexandria for the purposes of sacrifice, and to cause him to sacrifice instead at Oxyrhynchite Sarapeum.

16) P.Oxy.XXXIV 2726 is a letter concerning some business matters (inquiry about the price of a share of a house) and also the letter is interesting because it mentions a planned holiday trip out of the town since the weather is already getting hot.

friends in the area¹⁷, where they wanted to stay, asking to help them to find accommodation when they arrived in that area. They might stay with relatives or friends¹⁸ and, if not, then in private rest houses or hotels. P.Mich inv.340=ZPE 36 (1979) pp.70-3 tells us that a son sends his mother a letter; he lives in Thallou in the Hermopolite nome while his mother lives in Oxyhrynychus. He asks her to give the key of the room in the gate building to the workers who are coming from the Hermopolite nome to work off an inescapable obligation imposed on them. They may stay there until they obtain lodging from the owner of the estate. SB VI 9636 (A.D.136) is another example for a recommendation letter. This letter tells us that a veteran plans before his retirement to stay in Karanis and he leases a house for two years. Finally SB X 10278 (II century A.D.), is a letter which contains some information about the lease of dining rooms and rooms which might be used as stores or bedrooms. The sender is reporting that no one came to dine or to sleep. This gives us a strong indication about the existence of the rest houses or hotels¹⁹.

17) C.H.Kim, Form and Structure of the Familiar Greek Letter of Recommendation.pp.193.

18) G.Husson, L'Habitat Monastique en Égypte, Hommages à la Memoire de S.Sauneron, 1979, pp.206.

19) See note 6, and CPR I 220.

The census declarations of persons and property²⁰ also give us some valuable information about the existence of a rental market for housing from early period²¹: 1) They give some indications about the leases of houses in some nomes from which we have no direct evidence, e.g. Memphis²². 2) They help us to know the ratio of inhabited and uninhabited houses and the ratio of the houses leased and not leased (P.Oslo.III 111). 3) They also show that some tenants leased the premises for a long period. In P.Cornell, 16 (A.D.146-7) a tenant successively leased from the same family two shares in two different houses in different quarters. In the first share he lived with his wife (sister), his mother, a sister and his aunt during the year A.D.117-8. In the second share he lived with his wife (sister) and their five children during the year A.D.131-2. Here one can draw the following conclusion: some people preferred to lease a house or share of a house rather than buying a house or a share of a house, especially if we take into consideration the level of the monthly rent and the monthly salary of the workers 4) They also tell us that some owners owned several houses or

20) See M.Hombert & C.Préaux, *Recherches sur le Recensement dans l'Égypte Romaine*, 1952, H.Braunert, *IÄIA*, *Studien zur Bevölkerungsgeschichte des ptolemäischen und römischen Ägypten*, JJP.9/10 (1955/6) pp.211.

21) In P.Oxy.Hels.10 (A.D.34) census return in which the owner swears that there is neither alien nor Roman nor Egyptian nor Alexandrian or any other living with him. In P.Oxy.III 480 (A.D.132) a census return, in which the declarant swears by the Emperor that neither stranger nor Roman nor Alexandrian nor Egyptian nor freedman nor any one else dwells or is registered in his uninhabited house.

22) M.Hombert & C.Préaux, *Op.Cit.*pp.57, BGU III 833, P.Lond.915 III p.26, 919b III p.28.

shares of houses and some of them were leased and others not leased. (P.Osl.III 111; BGU XI 2092; P.Cornell 17). 5) From some declarations one can infer the number of the residents of a house or share of a house²³.

The libelli of the Decian persecution²⁴ illustrate the continuous migration movement, even though the authorities tried to stop or to put some restrictions upon the free movement (P.Lond.904 = W.Chr.202)²⁵. The libelli indicate frequent changes of domicile. Ten of those certified had moved to Theadelphia from the neighbouring Arsinoite villages of Philagris (two alien families), Apias (one alien family), Theoxenis three alien families), Arabis (one alien family), Dinnis (one alien family), and Euhemeria (one alien family), and finally one family from Alexandria²⁶.

The imperial and prefectorial edicts, which are concerned with ordering all persons to return back to their legal domicile, give us a strong indication about the existence of a rental market everywhere whether in cities or villages.²⁷

23) Hombert & Préaux, *Op.Cit.*p.154, Hopkins, Brother and sister marriage, *CSSH.22*,pp.328, D.Hobson, House and household in Roman Egypt, *YCS 28* (1985) pp.211.

24) P.Meyer, *Die Libelli aus der decianischen Christenverfolgung*, Berlin 1910, J.R.Knipfing, *The Libelli of the decian persecution*, *Harv.Theol.Rev.*16 (1923) pp.345-390.(no. 5, 10, 18, 20, 21, 22, 28, 30, 32, 45,); Braunert.*Op.Cit.* pp.190-1, p.226.

25) J.D.Thomas, *A Petition of the Prefect and Related imperial Edicts*, *JEA 61* (1975) pp.201, *PSI XII 1248* (A.D.235); P.Westminster College 3 (A.D.200-1) introd. *JEA 55*,1969 pp.188-9.

26) D.Delia, *Roman Alexandria: Studies in its Social History*, Vol.I/II, Appendix 10,pp.286.

27) J.D.Thomas, *Op.Cit.**JEA.*(1975) pp.212-221, P.Cattaoui 11=SB I 4284 ; P.Giss 40 II 16-29= *W.Ch.22* = *Sel.Pap.II 215*.

Finally the administrative documents (tax lists, lists and reports of fugitives²⁸ and notices of removal²⁹ etc.) give a strong indication about the existence of the rental market in the rural and urban areas as well (eg.P.Graux 1=SB IV 7461).

Thus one can safely say that our documentation mentioned above strongly indicates the existence of the rental market for housing in both villages and cities from the very beginning of the Roman period.

Why does someone lease a house or part of a house? There are several reasons that could lie behind this: 1) When someone wants to study in another city in which he can find a good teacher³⁰: P.Oxy.XVIII 2190 tells us that two brothers, who studied in Alexandria, sent their father a letter about their wish to move from a small rented room to another spacious rented room in a private house. 2) When someone wants to improve his economic situation, he may move to another more prosperous area whether it is a village or a city; P.Cornell 22 is a list of 125 alien residents in Philadelphia. The profession of some of them is sometimes mentioned, like for example, potter, crusher (stone crusher ?), donkey drivers, flageolet players,

28) In P.Oxy.XXIII 2669 (A.D.41-54) the owners on oath said that their tenant has abandoned his domicile and has no property. (The fugitive is an artisan).

29) L.R.Morris, Op.Cit.p.28,pp.82-85.

30) See Bell, Some Private Letters of the Roman Period, Rev.Egypt.I (1919) pp.199.

bronze worker, embalmers, vegetable dealer, dyer, water guard, bag maker, water wheel tender, cobbler, brickmaker, butcher, sword bearer, priest, shepherd, carpenter and finally dealer in mustard. 3) Some businessmen or private individuals, who are seeking justice (P.Coll.Youtie,I 53, SB IV 7367)³¹, travel from place to place to do their own business or to sort out their legal and administrative problems. P.Brem.48 A.D.118 gives us some information about the agent of Apollonius who travelled to Oxyrhynchus in order to buy the wood needed for the new house of his master. 4) Some tourists³² who travel around the country, whether to Alexandria or to the other sites in Egypt. As I mentioned before, those tourists might stay in rest houses or hotels. 5) The soldiers before their discharge either search for a new home or return back to their home. Those who plan to stay in a new home, may search in the last year or two years before their discharge from the service either to lease or to buy a house. It is probable that most of this group temporarily leased accommodation until they

31) See also Wilcken, *Der Ägyptische Konvent*, APF.4,1908,pp.366, E.Kühn, *Antinoopolis*, pp.161,S.Reinmuth, *The Prefect of Egypt*,pp.78, H.Kupiszewski, *Iuridicus Alexandriae*, JJP.7/8 (1954) pp.194, R.W.Davies, *The investigation of some crimes in Roman Egypt*, *Ancient Society*, 4 p.204, Seidl, *Rechtsgeschichte Ägyptens als römischer Provinz*,1973,pp.103-14,E.C.Baade, *Jurisdictions in Roman Egypt*, *Diss Yale*.1975, P.D.MacDearmon Witt, *The Judicial Function of the Strategus in Roman Period*, *Diss.Duke Univ*.1977, R.Katzoff, *Sources of Law in Roman Egypt*.ANRW.13,1980 pp.802-844., J.D.Thomas, *The epistrategos in Ptolemaic and Roman Egypt*. II pp.111, G.F.Talamanca, *Ricerche sul Processo nell' Egitto Greco-Romano*, Vol.I. 1974, O.Montevecchi, *L'Amministrazione dell'Egitto*, ANRW.II 10,1,1988,pp.412, Whitehorne, *The Strategi of Roman Egypt*, ANRW.II 10,1,1988,pp.599.

32) L.Friedländer, *Roman life and manners under the early Empire*, translated by L.A.Magnus (1965) I pp.349-367,U.Kahrstedt, *Kulturgeschichte der römischen Kaiserzeit*, 1958 pp.220-221, K.A.D.Smelikand E.A.Hemelrijk, *Egyptian Animal Worship in Antiquity*, ANRW.17,4, pp.1983, See also note 5.; N.Hohlwein, *Deplacements et tourisme dans l'Égypte romaine*,CE.15,1940,pp.253, A.Bernand, *Les Inscriptions Grecques et Latines du Colosse de Memnon*, 1960, G.Wagner, *les Oasis d'Égypte a l'époque grecque, romaine byzantine d' après les documents Grecq*, 1987 pp.316-321.

purchased or built their own houses. 6) Sometimes the economic crises obliged all or part of the inhabitants of some areas to move to other more prosperous areas³³. In this case the great demand for accommodation might exceed the houses offered for lease. Finally, some tenants let a house or a share of a house in order to make profit by subletting it to others (BGU IV 1116).

Let us turn to discuss the factors which play a part in increasing or decreasing the rents. The parties of the contract take into account several factors when they estimate the rent of the premises. These factors are:

1) The size of the premises. Although the documents do not give us any direct information about the size of the premises offered for lease or leased, one can assume that the parties of the contract took into consideration the size of the property when they estimated its rent. For instance, in P.Ross.Georg.II 35 we find the rents of the rooms as follows: 22, 26, 30, 22 dr., in P.Mich.XI 620 the rent of the double room is 156 dr. while the rent of the single room is 108 dr.

2) The location of the premises. From the available sources, one can see that: 1) The rents generally are higher in the cities than in the villages. In BGU IV 1115 (13 B.C) from Alexandria the annual rental of a room is about 54 dr., while in P.Ross.Georg.II 35 (from Arsinoe)

33) See pp 12 ff.

the annual rental is: 22, 26, 30 dr. 2) Occasionally, however, the rents are higher in the villages than in the cities. In P.Mich.XI 620 the monthly rental of the single room is 9 dr. and the monthly rental of the double room is 11 dr., while in P.Ross.Georg.II 35 ,from Arsinoe, we find the monthly rental of a room is: 1.83 dr., 2.16 dr., and 2.5 dr. How does one account for this variation? is this due to the economic condition of the area or due to the condition and building materials of the property? It goes without saying that the parties of the contract took into account the local economic condition and the other factors which play a part in increasing or decreasing the rents. 3) The rents also vary from city to city. In BGU IV 1116 (13 B.C) from Alexandria the annual rental of a house is 720 dr. while in P.Oxy.XIV 1694 (A.D.280) the annual rental of a house is 1000 dr. Although the period between the two papyri is nearly three centuries, we find that the level of the rent of the Alexandrian house is 0.72 of the rent of the Oxyrhynchite house. If we take into account the very high rate of inflation in the second half of the third century , the rent of the Oxyrhynchite house seems low compared with the rent of the Alexandrian house. Moreover the rent of the Alexandrian house is higher than that of several houses in the other nomes³⁴.

34) See pp.302-34.

3) The condition and building materials: The papyri do not normally accurately describe the premises in any detail. Fortunately we have two papyri which deal with offers for lease of the same object (a store house), but the description of the property varies in the two documents (P.Lond.216=W.Chr.192, BGU XI 2033). The papyri do not give us the number of the rooms nor, in most cases, the condition of the property. When we are given the number of the storeys, we do not know the number of the rooms of the house. The lease contracts do not mention anything about the value of the building materials except P.Vind.Sal.11 which mentions the value of a door being 12 dr. What we do, however, know from the lease contracts is that the tenant has to deliver the house leased with its doors and windows and keys.

4) The method of payment of the rent: The papyri tell us that the tenant pays the rent either in money or in kind or both in money and in kind. The documents also demonstrate that the tenant pays the rent either in advance or daily or every ten days or every month or every three months or four months or six months or, finally, annually³⁵. The annual payments are the most frequent. We do not know whether the needs of one of the parties or the customs and traditions of the area played a part in determining the way and the method of payment.

35) H.Müller, *Op.Cit.*pp.205, Berger, *Op.Cit.*pp.385.

As for the rent paid in advance, 4) I share the opinion of some scholars who believe that the payments in advance are not loans but real rents³⁶. The following papyri support our view: In P.Tebt.II 372 the tenant pays the whole rent in advance for the period of 6 years. In P.Rein 43 the tenant pays the whole rent of the period of 13 months within the first two months. In SB VI 9636 the tenant pays the rent of two years in advance. In P.Mich.V 312 the lessee pays the whole rent in kind for the period of 3 years within the first rental year from the period between Payni and Mesore.

When the tenant pays the rent per day or per ten days or per month, the lessor here is in a better situation than when he receives the rent every four months or six months or at the end of the rental year. Here, if the tenant does not pay the rent in the specified time, the losses of the lessor could not be very high. But when the tenant pays the rent at the end of the rental year, his position is stronger than that of the lessor who tries to protect his rights by inserting some clauses like the right of execution upon the tenant and his property. In that case, if the tenant refuses to pay the rent the loss of the lessor is higher. In PSI.940 (A.D.266) the lessor

³⁶) Berger, Op.Cit.pp.386, G.Mickwitz, Geld und wirtschaft im römischen Reich, p.124, V.Geginat, Prodoma in den Papyri aus dem ptolemäischen-römischen Ägypten, Diss.Köln, 1964 p.60, note 1, H.Müller, Op.Cit.pp.207

complained to the strategos that the tenant did not pay the rent for 12 years.

5) The period of the lease. If the lessor has several houses or shares of houses or commercial buildings, it is natural that he tries to let his property for as long as he can, especially during the economic crises, in order to guarantee a permanent income from the property (P.Cornell 16). From P.Strassb.VI 569 we know that the fish shop and its appurtenances was leased for a period of 62 days. The period of lease might here cover only the season of catching the fish. One might accordingly assume that the rents of some premises varied from season to season, and the lessor here prefers to let his property per season.

6) Finally the local or the general economic condition. This factor plays the main role in increasing or decreasing the rent of the premises. As I mentioned before, it would be wrong to say that there was always a steady increase in the price of the houses all over the country. This also applies to the rents of house property. The decline of some villages or towns generally means that the smaller the village or the town the faster the decline³⁷. One expects in this case that the rents of the properties sharply decrease or become worthless. Here a question arises: what was the reaction of the tenants who leased

37) See on depopulation P.Thmouis I pp.25-31., MacMullen, Nationalism in Roman Egypt, Aegyptus 44 (1964) pp.189-90.

houses or shares of houses for long periods ? Did they ask for a reduction of the rental payments as the farmers did? One can assume that the lessors were obliged either to reduce the rents or to delay collecting the rents in order to continue the lease. It is probable that some tenants accepted to revise the level of the rents and stayed but when the decline was severe, the tenants left their leaseholds and moved or fled to a more prosperous area or to an unknown area, and thus the provisions of the lease contracts became worthless. On the other hand, in the prosperous areas the situation could become very difficult for the immigrants who were searching for accommodation. The premises offered for lease might be fewer than the increased demand of the people. Here the landlords had golden chances to increase the rents of their premises. The prosperous areas sometimes suffered from troubles. For example, Alexandria, as the capital of Egypt, remained an attraction for the countryside people. The flood of the travellers or immigrants, who went to the city, included businessmen, those seeking the prefect's justice, tourists, pilgrims and those needed by the Alexandrian industry. Even in normal times, there was a great need of accommodation both for short and long periods. In the case of Alexandria, one expects that the rents steadily went up, but when the city faced some temporary troubles the rents probably went down. In the troubles during the Jewish war (A.D.115-117)

the city lost a large number of its population especially the Jews. The result might have been a lot of empty houses, so the houses offered for lease exceeded demand of the people³⁸. Consequently, the rents ought to have gone down. Also after the edict of Caracalla (P.Giss.40 II 16-29 = W.Chr.22, A.D.215) in which the emperor ordered all the Egyptians to leave the city except the traders in pigs, rivermen, those who bring down reeds for heating the baths, the tourists and pilgrims, the rents of the houses in the city ought to have gone down. We do not know what happened between the lessors and their tenants who had to leave the city. Did they have to pay the rent for the whole term of the lease, or were they allowed to leave the city without paying the rent for the whole period ? We can not answer these questions now and we are waiting for new evidence. Finally, during the reign of Gallienus (A.D.253-268), the city lost one third of its population as a result of the civil war and disease³⁹. Therefore there must have been many empty houses, and rents may have gone down. The situation of the owners of houses was worse in the areas which were either partially or completely deserted. The houses in those areas became worthless and there was virtually no rental market at all. From P.Oslo.III 111 (A.D.235) from Oxyrhynchus, we know that a large number of

38) See pp.12 ff.

39) Milne, A history of Egypt under Roman Rule, p.78, Appendix XVI pp.223.

houses were uninhabited. In the Goose Keepers' quarter the rate of houses inhabited and uninhabited is about 7-5, while in the Western District of the Hermaion quarter the rate is 22 to 27. There are two possibilities behind the empty houses: 1) It may be that some of the rich owners did not offer their premises for lease and preferred to keep them empty. Here one expects that the level of the rent remained steady. 2) Or the number of the houses offered for lease in the rental market exceeded demand. Here one would expect that the level of the rents went down, thus giving a chance for the tenants to lease a large house for a low rent.

7) The need of one of the parties of the contract may play a part in increasing or decreasing the rents during the normal period. (P.Mich.XII 635=SB XII 10779)

These are the factors which the parties of the contract always took into account when they estimated the rents of the houses, but sometimes one of these factors played the major role in determining the rent.

One may wonder whether every tenant had to pay rent or not. The papyri tell us that the right to dwell rent free can be given to a stranger (P.Mich.inv.340 (III century A.D.)= ZPE.36 1979 pp.70), freedmen or freedwomen (P.Oxy.III 634), some members of the family: 1) a husband or a wife gives after his or her death the right to dwell rent free to the other partner during his or her lifetime,

as in P.Oxy.I 104 (A.D.96)⁴⁰ P.Ryl.II 153 A.D.138-160; P.Oxy.III 494 (A.D.156), 489 (A.D.177), CPR I 24=M.Chr.288 (A.D.136). 2) One of the parents sometimes gave one of the children the right of ownership of house property, and at the same time, giving the right to dwell rent free in the same property to another child during his or her life time (P.Oxy.I 104 (A.D.96), I 75 (A.D.129)). 3) Sometimes the testator gave the right of dwelling to his friends and his relatives during their life time (P.Ryl.II 153). 4) In P.Oxy.LXIX 3491 (A.D.157/8) a mother gave her daughter (bride) and her husband (groom) as long as he lives with her the right of occupation and if they let the house and the court, they will have the rent, but the couple had no power to mortgage or apportion to others. 5) Finally in P.Lond.1164f A.D.212 (III pp.160) we find that three brothers bought a half share of a two storey house and gave their mother the right of habitation without paying rent during her lifetime.

40) The scholars say that this document contains an antichretic loan with the right of habitation. The document is a will through which an illegitimate son will inherit the property of his mother but after her death he has to give her husband 40 dr. annually up to a total 300 dr. But if he dies before receiving the sum, the son gives the money to his sister, moreover, the wife put her son under obligation to permit her husband after her death to occupy the house without payment of rent and to collect such rents as may be obtained there from, she also obligates the son to give his sister living space for the rest of her life in the property in case she separated from her husband. In the document there are three interesting points: 1) The payment of loan (300 dr.) needs seven year after the mother's death. 2) The husband has the right to live in the house without paying rent and has the right to offer it for rent and to collect its rents. 3) The sister has the right to live in her mother's house, if she separates from her husband. From these three points, it seems to me that it is not an antichretic loan, because the husband has the right to occupy the house even after paying the sum of 300 dr. and also the sister has the right to have living space in her mother's property if she separated from her husband. We do not know the circumstances under which the will was written. We know that the husband has the right to inherit from his wife. Instead of the inheritance the man might accept to receive 300 dr. plus the right for himself and his daughter to live in the house. Cf. Taubenschlag, Op. Cit. pp.288; H.Kupiszewski, Antichrese und Nutzpfund in den Papyri, Festgabe für M.Kaser 1988, p.143.

From the papyri we know that the tenants sometimes lease the whole house, a share of a house, or a room in a house⁴¹. Some tenants lease houses which contain several flats in order to sublet them to others (BGU IV 1116, P.Yal.69). The tenants sometimes are from the same village or city as the lessors and other times are from a different village or city (P.Tebt.II 613 (A.D.154), CPR VII 9 (A.D.159)).

The papyri give detailed descriptions of the parties of the contracts: their social and economic status, men or women, one tenant or more, one lessor or more, and finally their trades or professions⁴².

In most cases, the documents also give us facts about the period of the lease, whether a limited or unlimited period, about the renewing of the leases and time⁴³ and also about the method of payments and whether it was in money or in kind or both⁴⁴.

I shall classify the documents according to the nomes. We will see that some nomes yield a lot of papyri while others produce few references or a single piece of evidence only. I shall try to follow the development of the rents and make comparison between the rents where it is

41) See the tables of the nomes, Müller Op.Cit.pp.142, Berger, Op.Cit.p.356;pp.360.

42) See Müller, Op.Cit.pp.84-124,pp.168, Berger, Op.Cit.pp.355.

43) Müller,Op.Cit.pp.178.

44) Ibid.pp.196., Berger,Op.Cit.pp.369.

possible, but we have to take into consideration that the evidence of some nomes only represents samples which we can not depend upon to make a real comparison between the nomes possible. Let us now deal with the sources of each nome separately.

a) **The Fayum nome**

Date	Period	Rent	Object	Place	Document
A.D.20/ 21	-	interest on 84 dr.	premises	Tebt.	SB XII 11041
30	2 years	80 dr. per annum	bakery, theban millstone with nether mill- stones, grind- ing handle, 1 oven and 1 mortar	,,	P.Mich.X 586
30	-	40 dr.	oil press	Euhem.	P.Ryl.II 128
34	3 years	265 art.of wheat paid during the period from Payni-Mesore from the first year plus lessor receives immunity from bath fees for 10 men	bath, three bronze vessels	Talei	P.Mich.V 312
39	2 years	160 dr.per year plus 1/2 art.of bread and 1 cock	flour mill, three theban mills, handles, nether-stones 2 mortars, and the other accessories	Euhem.	P.Ryl.II 167
40	7 months	40 dr. for the whole period plus providing lumber for repairs	oil press	Soc.Nes	SPP XXII 173

Date	Rent	Period	Object	Place	Document
42	1 year	50 art. of barley, 2 cocks worth 4 dr., 1 art of barley at festival of Amesysia and paying wages of white washing	granary, its gate building and a stable	Kerk-soucha-Orous	P.Mich.II 121 R.III/V
"	-	interest on 20 dr.	premises ?	Tebt.	P.Mich.II 121 R.II
"	2 years	interest on 40 dr.	house and courtyard	"	P.Mich.II 121 R.IV IX
"	1 "	interest on 28 dr.	1/2 house and courtyard	"	P.Mich.II 121 R.IV XI
"	- 2 years 1 year - - - - - - -	interest on: 40 dr. 20 dr. 40 dr. 28 dr. 60 dr. 60 dr. 40 dr. 100 dr. 128 dr. 7 (?) dr. 48 dr. 60 dr.	premises ? " house and courtyard 1/2 house and courtyard premises ? " " " " " " " "	"	P.Mich.II 121V I.8 I.12 III 15 = R. IV.IX III 17= R. IV.XI III.20 III.21 IV.4 V.9 V.15 X.13 XI.10 XII.17

Date	Period	Rent	Object	Place	Document
42	-	interest on:		Tebt.	P.Mich.II 123R
	-	24 dr.	premises		II.42
	-	140 dr.	''		V.33
	-	120 dr.	''		VI.29
	-	80 dr.	''		VII.20-21
	-	120 dr.	''		VII.37-39
	-	100 dr.	''		VII.41
	-	120 dr.	''		VIII.4
	-	80 dr.	''		VIII.11
	-	32 dr.	''		VIII.19
	-	48 dr.	''		VIII.38
	-	-	''		X.2
	-	40 dr.	''		X.33
	-	28 dr.	''		X.35
	-	12 dr.	''		X.36
	-	7 measures	oil press		XI.11
	-	of oil			
	-	interest on:			
	-	46 dr.	premises		XI.23
	-	104 dr.	''		XI.37
	-	156 dr.	''		XII.9
	-	48 dr.	''		XII.44
	-	28 dr.	''		XII.45-6
	-	52 dr.	''		XIII.36
	-	120 dr.	''		XIV.19
	-	240 dr.	''		XV.9
	-	20 dr.	''		XV.21
	-	40 dr.	''		XV.35
	-	40 dr.	''		XVI.2
	-	340 dr.	''		XVII.15
	-	124 dr.	''		XVII.21-22
	-	12 dr.	''		XVIII.16
	-	80 dr.	1/3 house and court premises		XVIII.18-9
-	29 dr.	''		XVIII.29	
-	372 dr.	''		XIX.19-20	
-	46 dr.	''		XIX.23	
-	300 dr.	''		XXI.27	
-	-	''		XXI.50	
-	-	''		XXII.9	
46-9	-	interest on:	''	''	P.Mich.II 124R.
	-	28 dr.			I
	-	124 dr.			II

Date	Period	Rent	Object	Place	Document
46-9	-	interest on: 100 dr.	''	''	P.Mich.II 126
''	-	interest on: 64 dr. 20 dr. 200 dr. 56 dr. 60 dr.	premises '' '' '' ''	Tebt.	P.Mich.II 128 I (b) '' '' III III
46	-	interest on: 200 dr. 20 dr. 156 dr. 28 dr. 100 dr. 24 dr. 100 dr. 100 dr. pottery stone 120 dr. 28 dr. 28 dr. 200 dr. 100 dr. 24 dr. 124 dr. 456 dr.	''	''	P.Mich. V 238 I.12 I.46 II.60 II.71 II.85 II.106 III.108 III.117 III.143 III.160 IV.163 IV.170 IV.172 IV.180 IV.185 206 210
46-7	-	interest on: 56 dr. 60 dr. 64 dr. 20 dr. 200 dr.	''	''	P.Mich. V 240 I.19 I.47 II.66 II.67 II.69
54	1 year	partially lost	oil press	Dionys- ias	P.Aberd.181
54-68	1 year	interest on 232 ? dr.	pastophorion	Tebt.	SB XVI 12263

Date	Period	Rent	Object	Place	Document
54-69	more than 3 years	200 dr.+3 choes of oil yearly	oil press	Fayum	W.Chr.176= Sel.Pap.280
55	-	-	oil press	Heracl.	P.Lond.280= W.Chr.312
69	3 years	1 art.of wheat	storeroom	Philop.	BGU II 644
70	-	-	premises	Soc.Nes	P.Strass.IX 824
79	-	interest on 40 dr.+3 art.of barely	living quarter	Tebt.	P.Fouad I 56 =ZPE 20 1976 p.108
79	5 years	interest on 200 dr.	1/9 house and court	Bacchias	P.Mich.XII 635=SB XII 10779
86-96	3 years	8 dr. per year	1/2 house	Thead.	P.Sot.26
87	1 year	interest on 60 dr.	1/27 house	Bacch.	P.Mich.X 585
88	1 year	240 dr.per year	fuller's factory	Fayum	P.Lond.286, II p.183
89	5 years	interest on 600 dr.	1/2 house, vacant lot..	Philad.	P.Hamb.I 30
90	-	600 dr.	rent receipt	Fayum	BGU I 260
94	1 year	45 art. of wheat	storehouse, court, storage jars...	Soc.Nes	BGU XI 2033= P.Lond.216, II P.186
95	1 year	124(+) dr.	oil press	Euhem.	P.Giss.95
96	1 year	+ 2 metres of oil	oil press	Heracl.	P.Prag.I 38
I/II	-	-	oil press	Fayum	P.Lond.361 II p.164

Date	Period	Rent	Object	Place	Document
early II cent	-	interest on 200 dr.	4/27 of a house	Bacch.	P.Mich.inv. 138=Mich.XI 605 introd.
101/2	2 years	180 dr. per year and other pay- ments	flour mill, 5 theban mill	Thead.	BGU IV 1067
102	1 year	40 dr.per year	a flat	Ibion	P.Rein.43
104/5	3 years	220 dr. per year plus 1 keramion of raphanus and 12 xestae of oil	oil press..	Thead.	SB XVI 12518
104/5	5 years	interest on (x) hundreds	house, court and adjacent area of 59 sq.cubits	Karanis	P.Mich.IX 570
108/9	1 year	interest on 140 dr.	1/2 house	Euhem.	SPP IV PP. 116-118
109	-	interest on 100 dr.	small house court	Thead.	P.Warren 9
111/2	-	interest on 400 dr.	a small one storey house	Euhem.	P.Osl.III 118
117	-	interest on 60 dr.	4/27 house	Bacch.	P.Mich.XI 605
120	-	interest on 300 dr.	a house	,,	P.Mich.III 188
121	-	interest on 300 dr.	a house	,,	P.Mich.XI 625
122/3	-	40 dr.	chicken stable	Fayum	P.Strassb. VII 706
123	-	-	rent receipt	Euhem.	P.Fay.98

Date	Period	Rent	Object	Place	Document
123	-	interest on 60 dr.	4/27 house	Bacch.	P.Mich.III 189
132	-	12 dr. 4 dr.	house+ court 1/3 house..	Oxyrhyn- cha	P.Oxy.VI 986
136	2 years	60 dr.for 2 years	house	Karanis	SB VI 9636
137	2 years 7 months	100 dr.for the first 7 months, 200 dr.per year...	oil press	Soc.Nes	SPP XXII 177
138	4 years	20 dr.per year	1/2 house+ court	Tebt.	P.Lips.16
141	6 years	152 dr.for the whole period in advance	house	Tebt.	P.Tebt.II 372
143	-	5 measures oil	oil press	Thead.	P.Fay.96
144	6 years	60 dr. per year	house + court	Arsinoe	SB XVI 13005
144	1 year	48 dr. per year	house	"	SB XVI 130011
147	-	84 3/8 art. of wheat 84 3/8 art. of wheat + 6 art.of barley	storehouse	Hera Nesos	P.Bour.42
147/8	2 years	80 dr.per year plus 1 cock	house	Tebt.	P.Mil.Vogl. III 143
148/50	-	12 dr.	premises ?	Fay.	BGU I 293
mid.II cent.	-	-	workshop	Arsinoe	P.Osl.III 139
152/3	1 year	200 dr.per year	flour mill	Tebt.	P.Mil.Vogl. II 53

Date	Period	Rent	Object	Place	Document
159	7 ?	78or88 dr.	premises	Boubast os	CPR VIII 9
162	-	20 dr.per year	house	Karanis	SB VI 9427
162	62 days	740 dr.plus additional payment	fish shop...	Fayum	P.Strass.VI 569
166/7	+5 years	120 dr.per year plus additional payment	oil mill and mortar ?	Heraclia	P.Lond.335= W.Chr.323
168	4 years	160 dr.per year in previous term and now 200 dr. +additional payments	flour mill..	Fayum	PSI VII 787
168	4 years	40 dr. per year	camel stable	Dionys- ias	BGU II 393
174	6 years	160 dr.per year plus additional payment.	geese stable, 100 chickens, 7 geese and eggs	Tebt.	P.Mil.Vogl. III 145
181	1 year	7 ceramia of raphanus oil plus additional payments	oil press	Heraclia	P.Amh.II 93
192	4 months - - - - -	100 dr. 60+dr. 80 dr. 20 dr. 40 dr. 100 dr.	pigeoncotes	Karanis	P.Goodsp.30 col.13,15 col.21,10 col.21,13 col.23,19 col.23,115 col.33,14
194	-	5 dr.	cellar	Philot- eris	SB XIV 11400
199	-	100 dr.per month	premises	Soc.Nes	BGU I 41

Date	Period	Rent	Object	Place	Document
II	4 years	3 measures of olive and raphanus oil plus additional payments	oil press	Dionysias	P.Fay.95
II	6 months	11 dr. 13 dr. 15 dr. 11 dr. 192 dr.	room " " " ?"	Arsinoe	P.Ros.Georg. II.35 Frag. C.1/15
II	-	257 dr.	premises	Pharbeta	P.Fay.42(a) col.II
II/III	-	36 dr.	premises	Fay.	BGU I 150
early III	-	interest on 200 dr.	1/2 house		P.Princ.III 144
early III	-	(+)hundreds 200-400 dr. per month	house+ court	"	BGU XI 2034
207/8	-	100 dr.per year	premises	Soc.Nes	BGU I 216
207/8	-	lost	premises	"	BGU II 652
207/8	-	300 dr.	premises	"	BGU II 653
215	6 months - -	16 dr.4 ob. 10 dr. 100 dr.	flat house ?"	Fay.	BGU II 362 Pag.9,13,14, 16
239/40		free rent not stated	Farmstead (a) gatebulidung with porter's lodging weaver's work-shop with 6 rooms		P.Mich.XI 620 1.9 1.10-13

Date	Period	Rent	Object	Place	Document
	6 months	unrented not stated 20 dr.+ 12 workmen+1/2 pig 20 dr.+24 workmen+1/2 pig 20 dr.+1/2 pig lost	3 collapsed rooms collapsed room storeroom 12 single rooms 4 double rooms 2 rooms 3 rooms ?		P.Mich.620 1.14,15,20 1.39 1.41 1.16-7,21-2, 27-8,30,33, 44. 1.18-9,29,31 1.34,42. 1.24,25,26
		Farmstead (b) not stated unrented 20 dr.+1/2 pig free rent	weaver's work shop 2 collapsed rooms 2 rooms room		1.46 1.51-2 1.48,53 1.50
	6 months	Farmstead (c) not stated not stated " " " " unused free rent 20 dr.+12 workmen+1/2 pig 20 dr.+1/2 pig not stated	weaver's work shop winepress beershop oil press 4 rooms room +huts 19 single rooms 2 rooms		1.94 1.96 1.109 1.111 1.56,122 1.59-60,62, 64-5,70,73, 76,82,84,87, 88,91,100-1, 103,105-6. 1.63,68,71, 79. 1.85,92
244/9	2 years	100 dr. per month	share of a house,court, dinning-room, and bedroom	Fay.	BGU I 253

Date	Period	Rent	Object	Place	Document
249/50 or 253/4	3 years	400 dr.per year	2 pigeon cotes and storeroom	Fay.	P.Flor.I 10
270	3 years	80 dr.per month	house and 5 workshops	Arsinoe	P.Turner 37
III	-	48 dr.	house	Fay.	P.Flor.III 340
III	1 year	-	dining-room	Philad.	BGU VII 1646
III	-	-	premises	Bacch.	CPR VII 35
III	+11 years	8 dr.per month each 16 dr.per month	3 storerooms 1 storeroom	Fay.?	P.Köln IV 196

The above table lists 90 documents which deal with leases of houses, shares of houses, other premises such as stores, stables, pigeon cotes...etc., and industrial premises such as bakeries, oil presses, workshops, and flower mills ...etc. The information about the rent is drawn from lease contracts, rent receipts, tax receipts, accounts, letters and finally antichretic loans with the right of habitation

From the year A.D.20/21 onward, there is regular documentation until the end of the Roman period. There is, however, a gap of 50 years between 30 B.C. and A.D.20

I shall classify our documents into several groups according to their objects:

The first group is concerned with lease of houses and shares of houses. Fortunately the documentation of the lease of houses covers more than two centuries and a half.

The table lists 56 documents, 18 of them from the first century A.D., 26 from the second century A.D. and finally 12 date from the third century A.D.

The evidence comes from: Tebtynis, Euhemeria, Bakchias, Philadelphia, Ibion, Karanis, Oxyrhyncha, Bubastos, unknown places, and Arsinoe itself.

In the first century two references deal directly with the lease of house property. The rest of the references are antichretic loans with the right of habitation.

The first document, P.Soter.26 (A.D.86-96) from Theadelphia, is an offer to lease a half share of a house for the period of 3 years at an annual rent of 8 dr. The rent will be paid at the end of the rental year. The monthly rent is 4 ob. The total rent of the house is 16 dr. and the monthly rent is 1 dr. 2 ob.

The second document, BGU I 260 (A.D.90) from Fayum, is a rent receipt. The paid sum is 600 dr. The document does not mention anything about the property or whether it is a house or several houses, or shares of houses, nor do we know whether it is the annual rent or just an instalment. It is, however, a large sum for renting a house, therefore it probably represents a rent of several houses or shares of houses.

Because of the scarcity of the direct leases of houses, I will use the evidence of antichretic loans in order to illustrate the variations in the rents. This type of deed covers more or less a 200 year period which starts

in A.D. 20/1 (SB XII 11041) and ends in the early third century A.D. (P.Princ.III144). The table lists 22 documents, 14 of them from the first century and 7 from the period between A.D. 105/6 and 123. and finally one from the early third century. The Tebtynis graphion shows a large number of entries which record the registration of antichretic loans with the right of habitation during the period between A.D 42-47.

Our evidence comes from Tebtynis, Karanis, Bakchias, Theadelphia, and finally Philadelphia.

Before discussing the economic significance of these contracts let us try to discover the reason behind inserting or omitting the praxis rights or mortgage and security rights of the creditor upon the debtor's property in these contracts⁴⁵. Three factors may be behind inserting or omitting the above clauses: 1) The value of the property of the debtor may be higher than the loan. 2) The debtor may need the money. 3) The creditor may need accommodation. If the value of the premises is higher than the loan and the borrower needs the money urgently, this puts the lender in a strong position. Therefore, he can impose his wishes by inserting one of the above two provisions or both of them in order to secure his money. But if the value of the premises is less than the loan, it

45) A.Manigk, Gläubigerbefriedigung durch Nutzung, (1910), Levy, Beitrage.zur Erl.d. deutschen Rechts LVI.810, Mitteis, Grundz.p.152, J.P.Partsch, APF. V 1913 pp.113, P.Meyer, Jur.Pap.p.127; P.Hamb.I 30 introd., Partsch,AP.5 (1913) p.511, Schönbauer,S2.53,1933,pp.422 Taubenschlag.Law.pp.286, Samuel.JJP.13, 1961 p.33, H.Kupiszewski, JJP.18 (1974) p.229; Id., Antichrese und Nutzpfund in den Papyri, pp.131 Festgabe fuer Max Kaser zum 80 Geburtstag.1986,pp.143, H.A.Rupprecht, Zur Entwicklung und den Räumlich-Zeitlichen Varianten einer Urkundsklausel in den Gräco-Ägyptischen Papyri, Studi in Onore di C.Sanfilippo,III 1983,pp.616-7.

is preferable for him to insert the praxis rights upon the whole of the debtor's properties. On the other hand, when the creditor needs the accommodation urgently, he might agree to have only the right of habitation upon the property, regardless of whether the value is higher or lower than the loan. For example, SB XII 10779 = P.Mich.XII 635 (A.D.71) a creditor-co-owner lends three sisters-co-owners 200 dr. In place of interest thereon they granted him the right to occupy their own 1/9 share of the common house for a period of 5 years. We know from P.Mich.X 583 (A.D.78) that the same lender bought this share, but unfortunately, we do not know its price. Anyway P.Mich.583 tells us that the creditor sells his inherited third share plus the ninth purchased share for 100 dr. Here we have two interesting points from the above two documents: 1) The lender gives 200 dr. Instead of the interest thereon, he has the right to inhabit the 1/9 share of the common house which has a value, according to P.Mich.X 583, of 25 dr.⁴⁶ This sum is nearly equal to the yearly interest on the capital (200 dr.), if we assume the rate of interest to be 12% per year. Moreover if we reckon the total interest, it is 120 dr. This sum is just over half the total value of the house. 2) Because of the creditor's urgent need, we do not have either the praxis rights or security or mortgage's rights upon the property of the borrowers. Therefore one can say that these legal provisions were inserted in the contracts

46) Cf. D.W. Hobson, *Op Cit*, YCS.28, 1986, p.227

when the lender is in a stronger economic position than the debtor who is in a great need of money.

There is another point which needs to be clarified now. Was the rate of interest 1% per month or did this type of deed hide behind it a higher or a lower rate than the normal rate? We have only two documents which mention the rate of interest. P.Lips.10 (A.D.40) states that the rate of interest is 12%. P.Fouad 44 (A.D.44) states that if the debtor fails to repay the loan after the expiring of the term of the contract, the interest will be 12% per year. The remainder of our references do not mention it. Although we cannot tell the reason behind omitting it, there are two possibilities:

1) The standard rate of interest is 12% annually, so there is no need to mention it. In this case the interest of the antichretic loan is either equal to the rent or lower or higher than it. In BGU IV 1115 (13 B.C.) the creditor-tenant lends the borrower-lessor 100 dr. In lieu of interest thereon, the lender has the right to occupy a room in the debtor's flat. Here the interest is less than the rent, so the creditor pays 3 dr.3 ob. monthly. The monthly interest is less than one fourth of the monthly rent. the monthly rent is 4 dr. 3 ob.and the yearly rent is 54 dr. Here both parties have an equal position and each of them has some advantages. The borrower's benefits are: a) receiving his rent monthly. b) exploiting his empty property by letting it. c) using the loan either for buying something which he needs for his daily use or paying his

public or private obligations whether they are taxes or public arrears (rents-taxes) or private debts or rents ...etc. The creditor's benefits are: a) he invests his money without amortizing it. b) he will use the property directly when he lives in it or indirectly by subletting it to another subtenant.

2) The rate is higher or lower than the official rate, therefore, they avoid mentioning the interest rate for fear of official punishment In BGU V 1210⁴⁷ a paragraph no.105 tells us that if money is loaned at more than a drachma (per mina per month) half the estate is confiscated, and a fourth of the estate of the borrowers. When the rate is higher than the normal rate that means that the tenant-creditor is in a better position than the lessor-debtor whose urgent need obliged him to grant the right of habitation to the creditor although he knows that the real rent is higher than the amount of interest upon the loan. On the other hand, when the creditor-tenant is in a weaker position than the debtor-landlord, it is probable that the interest of the loan is higher than the actual rent of the premises. Here the lessor-debtor exploits the urgent need of his tenant-creditor who is obliged to give the loan with its interest higher than the real rent (SB XII 10779). In

47) For the interest, see A.Segre, *Il mutuo e il tasso d'interesse nell'Egitto greco-romano*, Atene e Roma, 5 (1927) pp.119-138, G.Mckwitz, *Op.Cit.* pp.207-217, Johnson, *Op.Cit.* pp.450, H.Kuhnert, *Zum Kreditgeschaefte in den hellenistischen Papyri Ägyptens bis Diokletian*, 1965, pp.40-1, T.Reinach, *Un code fiscal de l'Egypte romaine: le Gnomon de l'idiolgue*, *Nouv.Rev.de Droit francais et etrang.* 44 1920, pp.85-7, G.Ukkull-Gyllenband, *Der Gnomon des Idios Logos* 1934, p.103, S.Riccobono, *Il Gnomon dell'Idios Logos*, 1954, p.245; *Idem*, *Das römische Reichrecht und der Gnomon des Idios Logos*, 1957, p.33, R.Taubenschlag, *Op.Cit.* p.342, H.E.Finkh, *Das Zinsricht der gräko-ägyptischen Papyri* 1962, pp.27, M.Lauria, *Il Gnomon dell'Idios Logos*, *AAN.* 75 (1964) pp.146, H.D.Schmitz, *To ἔθoς und verwandte Begriffe in den Papyri Köln*.1970, pp.53-4.

other words, the rate of interest is less than the official interest.

Let us deal with the volume of the interest (rent) in these contracts: The first document, SB XII 11040 (A.D.20/1) from Tebtynis is an antichretic loan of 84 dr. In place of interest thereon, the creditor-tenant was granted the right to inhabit a share of a house of the debtor-lessor. Assuming an annual interest of 12%, the annual rent is about 10 dr. 1 ob. But unfortunately we do not know what proportion this share is, therefore we cannot know the approximate total rent of the complete house.

The second document, P.Mich.II 121 R.(A.D.42) from Tebtynis contains two abstracts which are concerned with the antichretic loans. The first one (IV.IX =P.Mich.II 121 V.III.L.15) deals with an antichretic loan of 40 dr. In lieu of interest thereon, the lender-tenant was granted the right to inhabit a house and stable for his asses in the court of the house. If we reckon the monthly interest at 1%, the yearly rent is nearly 5 dr. The monthly rent is 2.5 ob.

The second one (IV.XI.= P.Mich.II 121 V.III.L.17) gives us an antichretic loan of 28 dr. Instead of interest thereon, the creditor-tenant has the right to occupy a half share of a house and courtyard of the borrower-lessor. the annual rental is about 3 dr. 2 ob. and the rent of the whole house is 6 dr.4 ob.

The third document, P.Mich.II 121 V.(A.D.42) from Tebtynis, contains 12 entries which are concerned with

antichretic loans with the right of habitation, but the nature of the property is not stated. The loans vary between 7 dr. and 128 dr. Five loans are less than 50 dr., three loans are 60 dr., one is 100 dr. and finally one is 128 dr., so here the majority are less than 100 dr.

The fourth reference, P.Mich.II 123 R.(A.D.45-7) from Tebtynis, gives us 35 entries which are dealing with antichretic loans with the right of habitation, but the nature of the property is not recorded. The loans vary between 12 dr. and 372 dr. Eighteen loans are less than 100 dr., eight are less than 200 dr., and the rest is more than 200 dr., so here more than half of the loans is less than 100 dr.

The fifth papyrus, P.Mich.II 124 R.(A.D.46-9) from Tebtynis, records 4 entries which concern antichretic loans with the right of habitatio, but the nature of the property is not stated. Two loans are lost and the other two are: 28 dr. and 124 dr.

The sixth document, P.Mich.II 126 (A.D.46-9) from Tebtynis, registers two entries antichretic loans with the right of habitation, but the nature of the premises is not stated. One of them is lost while the other is 100 dr.

The seventh document, P.Mich.II 128 (A.D.46-7) from Tebtynis, records 5 entries which are concerned with the antichretic loans with the right of habitatio, the nature of the property is not mentioned. The loans vary between 20 dr. and 200 dr. Four loans are less than 100 dr. and one is 200 dr. The majority are less than 100 dr.

The eighth papyrus, P.Mich. V 238 (A.D.46) from Tebtynis, records 17 entries for antichretic loans with the right of habitation, but the nature of the premises is not recorded. The loans vary between 20 dr. and 456 dr. Eleven loans are between 20 dr. and 100 dr., four are between 101 dr. and 200 dr. and finally one is 456 dr. Here the majority are less than 100 dr.

The ninth document, P.Mich. V 240 (A.D.46-7) from Tebtynis, records 5 entries concerning antichretic loans with the right of habitation, but the nature of the property is not mentioned. The loans vary between 20 dr. and 200 dr. Four loans are less than 100 dr. and one is 200 dr.

From the above references one can see that all the entries, which deal with antichretic loans do not mention the nature of the properties - which will be inhabited by the creditors-tenants- except for three entries which give us the description of the premises.

It is difficult to know from the amount of the loans the nature of the properties, whether it is a house or a share of a house or just a room in a house, e.g. we find that a 1/3 share of a house and courtyard was granted to the creditor in place of interest upon a loan of 80 dr., while a 1/2 share of a house was granted to the lender-tenant in lieu of interest upon a loan of 28 dr. and finally a complete house was granted to the creditor-tenant instead of interest upon a loan of 40 dr. And what are we

to make of a property which was leased in place of interest upon a loan of 7 dr. or 12 dr.?

The rents of houses differ greatly, consequently there seems to be a great variation in the value of houses, but the rent of a majority of the houses seem to have been very small. This assumption is supported by Toepel's tables⁴⁸⁾ which concern the dowries which vary between 11 dr. and 1600 dr. These dowries reflect the economic ability of the people of Tebtynis who can be divided into: poor class, middle class and upper class. The same huge differences in wealth are reflected in the antichretic loans. If someone from the first group rents his house or part of a house, in place of interest of an antichretic loan of 7 dr. or 12 dr., his income from the first is less than 1 dr. and from the second is about 1 dr.3 ob.

This type of contract was used by the people of Tebtynis on a large scale. This proves that leases of house property are not rare in the villages, even though they are phrased as loan agreements.

The loan is either in money or in kind. P.Mich. V 238 III L.143 is an antichretic loan of a stone used in the manufacture of pottery. Instead of the interest thereon, the creditor has the right to occupy premises ? of the debtor.

48) See Toepel.Op.Cit.pp.37, from the tables one can see that: 33 entries record dowries between 11 and 99 dr., 24 entries record dowries between 100 to 500 dr., 3 entries record dowries between 501 and 1000 dr. and finally one entry records a dowry of 1600 dr.

A slightly later document, P.Tebt.II 543 =SB XVI 12263 (A.D.54-68) from Tebtynis, gives us an antichretic loan which is partially lost x+32 dr. It might be between 232 and 932 dr. In lieu of interest thereon, the creditor enjoyed the right to occupy a Pastophorion for a period of one year. If the loan is 232 dr. the interest is about 27.84 dr. per year. This rent is very high compared with the available prices of this type of premises.

P.Mich.X 585 (A.D.87) from Bakchias, is an antichretic loan of 60 dr. In exchange of its interest, the borrower grants the creditor the right to inhabit his 1/27 share of a house (or roomed property) for a period of one year. If the creditor had been allowed to occupy the house as a whole, the sum of the loan might have been 1620 dr. At the usual interest rate of 12%, the annual interest would have been 194 dr. or 16 dr.1 ob. per month. This amount, which is relatively high, might point to a large house.

P.Fouad 56=ZPE 20 (1976) p.108 (A.D.79) from Tebtynis, is a receipt for repayment of an antichretic loan of 40 dr. and 3 art. of barley by the 4 choenix measure of the granary of Tebtynis. In place of interest thereon, the borrower granted the creditor the right to occupy living quarters. The annual rent in money is 4 dr. 4 ob. plus the interest on the 3 art. of barley. If we account the interest as 50% of the barley⁴⁹, the rent is 1.5 art. It is difficult to estimate accurately the price per art. of

49) Johnson, Op.Cit.p.460.

barley because the prices vary from week to week sometimes from month to month, from season to season and finally from year to year, moreover we have to take into account the variation of the measurements. However the price of barley from the available evidence-irrespective of the type of measure-from the period is roughly about 4 dr., so the price of 1.5 art. is more or less about 6 dr. The rent in money and in kind is roughly about 10 dr.4 ob. This is the only evidence of an antichretic loan payable partly in kind and partially in money.

If we compare the rents of houses from the documents listed above,, we find that they vary between about 5 dr. per year and 194 dr. The rents vary from place to place within the village: nearly all the texts are from Tebtynis.

For the second century, the table lists 22 documents, 9 of them deal with antichretic loans and the remainder with either offers for lease of houses or shares of houses and rent receipts. We have one normal lease contract of a flat from A.D.102, the evidence of the period between A.D.105 and 123 concerns nine antichretic loans, and the rest of the sources are normal leases. I shall deal with the antichretic loans first:

P.Mich.XI 570 (A.D.105/6) from Karanis, is an antichretic loan of (x) hundreds dr. Instead of the interest the borrower grants the lender the right to inhabit a house, court, and an adjacent area of 59

sq.cubits. Unfortunately the sum is missing, therefore we cannot know the rent.

SPP IV pp.116-118 (A.D.108/9) from Euhemeria, is an antichretic loan of 140 dr. In lieu of interest upon it, the creditor-tenant received from two borrower-lessors the right to occupy a half share of a house. The rent of the whole house could be 2.8 per month, and 33.6 dr. per year.

P.Warren.9 (A.D.109) from Theadelphia, is an antichretic loan of 100 dr. In place of interest thereon, the creditor enjoyed the right to occupy the small house of the debtor. The rent could be 1 dr. per month and 12 dr. per year.

P.Osl.III 118 (A.D.111/2) from Euhemeria, deals with an antichretic loan of 400 dr. In lieu of interest upon it, the creditor received from the debtor the right to occupy his small house. The monthly rent could be 4 dr., and the annual rental 48 dr. Although in the above two documents the properties were described as small houses, we cannot know the circumstances which are behind the variation of the amount of the loans. As the two papyri come from two different villages, this might be due to the level of the rent in the two villages, or could be due to the need of one of the parties of the contract? We shall have to wait for more texts of this kind before we can answer this question.

P.Mich.XI 605 (A.D.117) from Bakchias, is an antichretic loan of 300 dr. In place of interest upon it, the lender was granted the right to occupy a $\frac{4}{27}$ share of

a house. The annual rent could be 36 dr. corresponding to 243 dr. for the whole house or 20 dr. monthly. We do not know whether the house is large or not, and also whether the need of one of the parties of the contract played a part or not.

P.Mich.III 188 (A.D.120) from Bakchias, is an antichretic loan of 300 dr. In lieu of the interest upon it, the creditor-tenant received from the debtor-lessor the right of habitation of his house property. The monthly rent could be 3 dr. and the annual rental 36 dr. If we compare the amount of the loans and the properties in the above two documents, we find that: 1) the amount of the loan is the same, 2) the property differs in description (in the first it was described as a 4/27 share of a house while in the second it was described as a house property). We do not know why the income of the properties is the same. Is this due to the size and condition of the property, or due to the need of one of the parties of the contract?

P.Mich.XI 625 (A.D.121) from Bakchias, is a tax receipt for renewal of an antichretic loan of 300 dr. In place of interest thereon, the creditor enjoyed the right to occupy the debtor's house property. The monthly rent could be 3 dr. and annual rent 36 dr., but we do not know the period of the previous term or the new term of lease.

P.Mich.III 189 (A.D.123) from Bakchias, deals with an antichretic loan of 60 dr. Instead of interest thereon, the lender is enjoying the right to occupy a 4/27 share of a house. If we compare between P.Mich.XI 605 and III 189, we

find that: 1) the loan in the first is 300 dr., while in the second is 60 dr. 2) in both the properties are $\frac{4}{27}$ shares of houses. Why is this variation? We do not know why one rent (=interest on loan) was five times higher than the other.

Comparing P.Mich.III 188 (A.D.120) and III 189 (A.D.123) we find that: 1) the creditor is the same in both documents, while the debtors are different, 2) the period between the two contracts is 3 $\frac{1}{2}$ years, 3) the property concerned is the same as its boundaries show, but in the first deed the lender has the right to occupy the whole house, while in the second a $\frac{4}{27}$ share of the house only, 4) it seems that the occupancy of the whole premises or part of this premises is desirable to the lender, but we do not know whether the creditor inhabited the property herself or she let it to others. From the provision of the two contracts which says that the creditor has the right to use the property herself or her heir or sublet it to others, one can imagine that the lender drew an income from the property by subletting it, 5) the rent is 36 dr. in the first document while it is 48 dr.3 ob. in the second, this increase might be because the creditor leased a part of the house only.

P.Mich.inv.138 (early second century A.D.) from Bakchias, is a tax receipt for renewal of an antichretic loan of 200 dr. Instead of interest, the lender has the right to inhabit $\frac{4}{27}$ share of a house. The annual rent could be 24 dr., and if we calculate the rent of the whole

property, it would be 324 dr. which is interest upon the sum of 2700 dr. But we have to bear in mind that: 1) perhaps the level of the rent of the share is proportionately higher than the level of the rent of the whole house, 2) perhaps the borrower exploits the need of the lender as seems to be the case in P.Mich.X 585.

To sum up, the evidence of the antichretic leases covers several places in the Fayum: Tebtynis, Bakchias, Euhemeria, Philadelphia, Theadelphia, and finally Karanis. Tebtynis produced eleven references, Bakchias gave five documents and the remainder gave one document each only. The antichretic loans vary between 7 dr. and 600 dr. generally: in Tebtynis between 7 dr. and 456 dr., in Bakchias between 60 dr. and 300 dr., in Euhemeria 400 dr., in Philadelphia 600 dr., and finally in Theadelphia 100 dr. It is difficult to estimate the rents of the premises or whether they are houses or shares of houses or rooms because most of the sources, especially those from Tebtynis, do not describe the property. Nor do we know in all cases whether the rate of interest was 12% or higher or lower than the official rate, and whether the need of one of the parties played a part in increasing or decreasing the rate of interest. Therefore, it is not easy to follow the development of the rents of houses from this type of contracts. However, this type of document does give us a clear idea about the existence on a large scale of the leases of houses in the country side, and if we assume the rate of interest to be 12% upon the antichretic loans, the

interest on some of these loans will be equal to, or even higher than, the value of some houses in Soknopaiou Nesos, and Tebtynis. Moreover, we shall see that the interest (rent) is nearly equal to the level of the normal rents.

In addition to the antichretic loans, we have a number of other (direct) sources of the second century A.D.:

P.Rein.43 (A.D.102) from Ibion, is a lease of a flat for a period of thirteen months at a rental of 40 dr. The tenant pays 20 dr. for the first month and the other 20 dr. for the following months. The monthly rent is slightly more than 3 dr. We do not know what kind of building it was and whether it contained several flats or not, or how large the flat was.

P.Oxy.VI 986 (A.D.132) from Oxyrhyncha, gives us two entries for rent paid for confiscated houses: 12 dr. for a house and court and 4 dr. for 1/3 share of a house and inner court. We do not know whether these sums are monthly rental or interval instalments or the annual rental. We can say only that the income from the two houses is equal.

SB VI 9636 (A.D.136) from Karanis, is a very interesting letter from a soldier who stays near Alexandria to his brother who lives at Karanis, informing him that his discharged colleague, who brings him the letter, is a man of means and desirous of residing at Karanis, and he urges him to lease his house and his field. The veteran will pay as rent of the house for two years 60 dr. and for the field 60 dr. as well. The sender asks his brother to use 120 dr. for buying two...and two couches and two pillows (?) with

their stuffing and...? from the linen merchant. From the letter one can see that: 1) It is not stated whether the two parties wrote a lease contract or not. From the wording of the letter, it seems that they did not in fact write a lease contract, so they may have made an oral agreement. 2) The tenant pays the rent in advance. 3) We can not tell whether the level of this rent is lower or higher than the current level of rent in the town, or equal to it. However, the language of the letter suggests that the two parties are friends, so the tenant may know very well the private affairs of the lessor and also the economic condition in Karanis, therefore one can assume that the parties took into account that the rent would be paid in advance and the lessor would not exploit the urgent need of the prospective tenant. 4) Finally the letter throws some light on how the veterans began their life in a new home after their discharge from military service. Here the first step of the veteran is to lease temporarily a house and a field until he can buy a house or plot of building land upon which he can build his own private house after his own design, having invested his money in purchasing agricultural land.

P.Lips.16 (A.D.138) from Tebtynis, is an offer to lease half a share of a house, inner court and courtyard for a term of 4 years at an annual rent of 20 dr. So for whole house it would be 40 dr. per year, or 1 dr.3 ob. a month.

P.Tebt.II 372 (A.D.141) from Tebtynis, tells us that the lessors tell the tenant that they want to give him their house and court for a period of 6 years at a total rent of 152 dr. which he will pay in advance. The amount paid already is lower than the level of the current rent in the rental market. Here the parties of the contract might take into account the rent was payable in advance. They might already add the interest there on to the rent paid. Here the parties of the contract are in equal position but the tenant inserts the clause of guarantee to protect himself and his rights. So one can say that: 1) the tenant deducted the interest of the sum paid in advance from the rent, 2) the rent could be equal to the current rent or more than the current rent in the rental market. The position of the lessor here is better than that of the tenant. That means that the first exploits the need of the second and obliged him to pay the whole rent in advance. 3) the rent could be less than the real rent even if we add the interest. That means that the tenant exploit the urgent need of the lessor who was obliged to accept the lower rent. Anyway we can not tell whether one of them exploited the urgent need of the other or not.

SB XVI 13005 (A.D.144) from Arsinoe, is an offer to lease a house and court for a term of 6 years at an annual rent of 60 dr., payable in two instalments. The lessee offers to carry out some repairs at his own expense, but unfortunately we do not know how much the repairs cost. In

any case, the monthly rent is more than 5 dr. because the tenant will carry out some repairs.

SB XVI 130011 (A.D.144) from Arsinoe, is an offer to lease a house which had partly collapsed. The tenant offers to share with the lessor the expenses of rebuilding. The term of the rent is one year at an annual rent of 48 dr., payable in three instalments. It is certain that the tenant accounted the costs of the repairs and deducted them from the rent, so the sum offered represents part of the rent only. Therefore the monthly rent is more than 4 dr.

P.Mil.Vogl.III 143 (A.D.147/8) from Tebtynis, is an offer to lease a house for a period of 2 years at an annual rental of 80 dr. plus a gift (*θαλλός*⁵⁰) of one cock.⁵¹ If we add the value of the bird to the rent the annual rent is more or less about 84 dr. and the monthly rent is about 7 dr.

BGU I 293 (A.D.148/50) from the Fayum, is a receipt for the rent of sequestrated premises. The annual rent payments are 16 dr. and 8 dr.

50) S.Eitrem, *Symb.Osl.*17, pp.41, J.Hermann, *Studi in onore di E.Volterra*.Vol.3,pp.135, Müller, *Op.Cit.*pp.212

51) It is difficult to evaluate the price of the chicken. People may have estimated its value according to its size and its weight. The price of a chicken is in P.Mich.II 121 (A.D.42) 2 dr., SB VI 9482 (A.D.117/8) 4 dr., P.Mil.Vogl.II 104 (A.D.127/8) 4 dr., I 83 (A.D.134) 4 dr., SB IV 9480 (A.D.141) 4 dr., PSI X 1124 (A.D.151) 2 dr., P.Mil.Vogl.II 107 (A.D.153/4) 4 dr., P.Lond.335 (A.D.169 or 199) 4 dr., SB VIII 9649 (II cent. A.D.) 2 dr., P.Ross.Georg.II 41 (II cent A.D.) 6 dr. and 8 dr., and finally P.Oxy.XVII 2129 (II/III cent. A.D.) 2 1/2 dr. So the price varies between 2 dr. and 8 dr. The average price is about 4 dr. Before trying to discuss the value of the additional payments I would like to mention that the evidence for the price of commodities is very scarce and some sources make it clear that the prices vary not only from one place to another, but also the sudden price changes in part even daily were part of everyday life in some places in Roman Egypt, therefore my estimation for the value of some goods will be not very accurate. Anyway my main aim is to try to estimate their value in order to have a rough idea about the total rent of the premises. For price changes see R.P.Duncan-Jones, *Chiron*.6 (1976) pp.241, H.J.Drexhage, ...*Scimus, quam varia sint pretia rerum per singulas civitates regionesque...* zu den Preisvariationen im römischen Ägypten, *Münstersche Beiträge zur Antiken Handelsgeschichte*, 7 (1988) pp.1-11.

CPR VIII 9 (A.D.159) from Bubastos, is an offer for the lease of premises ? for a period of 7 (?) years at an annual rent of 78 or 88 dr.? and additional payment (θαλλος) of one artaba of bread.⁵² If we add the value of the bread, the annual rent is more or less about 91 dr.4 ob. or 101 dr. 4 ob., but unfortunately we do not know whether the premises is a house or a share of a house.

SB VI 9427 (A.D.162) from Karanis, is a receipt of rent for a sequestrated house property. The annual rent is 20 dr.

SB XIV 11400 (A.D.194) from Philoteris, is a receipt for rent of a cellar for 5 dr. We do not know whether it is the whole annual rent or an instalment.

P.Ross.Georg.II 35 frag.C 11.1-15 (II century A.D.) from Arsinoe, gives us the rent of four different rooms and unspecified premises. The lessor receives semi annual rent of the rooms: 11 dr., 13 dr., 15 dr., and 11 dr. and the rent of unspecified premises is 192 dr. From the variation of the rents one can conclude that there are variations in the size and the condition of the rooms. From the total annual rent of 100 dr. for the four rooms, one can say that the unspecified property is either a large house or more than one house. The monthly rents of rooms are: 0.73 dr., 0.86 dr. and 1 dr.

⁵²) It is difficult to know the price of the bread from the meager evidence. The prices are: 1/2 ob., 1 ob.1 dr.(den.) and 10 1/2 dr. per art. See Johnson, Op.Cit.p.316. From some documents we know that the cost of grinding an art. of wheat is 3 ob. and 4 ob.per art. (P.Oxy.IV 736 A.D. 1) and the wages of the bakers is 10 ob. for milling and selling the bread and other expenses. (P.Oxy.XII 1454 A.D.117). If we take the average price of an artaba of wheat 12 dr. (R.P.Duncan-Jones, Op.Cit.p.246.) and add the expenses of grinding and baking and fire materials at 10 ob., the price of an artaba of bread could be 13 dr.4 ob. But we have to mention that the prices of the bread might also vary according to the variation of the value of grain itself.

BGU I 41 (A.D.199) from Soknopaiou Nesos, records the rent of sequestrated premises. The monthly rent is 100 dr.

P.Fay.42 (a) (late II century A.D.) from Pharbetha, is a list of arrears among which is an entry which deals with the rent of sequestrated premises. The amount is 257 dr.

BGU I 150 (II/III century A.D.) from Fayum, is a receipt for 36 dr. we do not know whether it is a monthly payment or an instalment or the total annual payment. The nature of the property is not known.

To sum up our discussion of the 2nd century documents, one can say that the rents of the houses vary from village to village and from town to town and even in the village or the city itself. For example, in Tebtynis the rents are 25 dr., 40 dr. 80 dr. while in Arsinoe 60 dr. and 48 dr. and in Boubastos the rent is either 91 dr.4 ob. or 101 dr.4 ob. The rents are sometimes higher in villages than in cities. From the variation of the rents of the rooms (in P.Ross.Georg.II 35), one can assume that the parties of the transaction took into account the size and the condition of the rooms of the house leased. Finally the rent of some houses in Tebtynis is equal to or more than the value of some houses in the village itself.

For the third century A.D., the table lists 11 references. One of them is an antichretic loan with the right of habitation while the others are normal leases.

P.Princ.III 144 (early III century A.D.) from Philadelphia, is an antichretic loan of 200 dr., instead of the interest the creditor has the right to inhabit the half

share of the debtor's house. The monthly income (rent) could be 2 dr. and the annual income (rent) 24 dr.

BGU XI 2034 (early III century A.D.) from Arsinoe polis, is a lease of a house. The monthly rent is missing, but we have hundreds of drachmas per month. From the level of the rents during that period, one can assume that it is not more than 200 dr.⁵³ and the annual rent is 2400 dr. This is the highest rent which the papyri record. The papyrus does not give a description of the house except it is an urban house. It seems that it is a large well founded house.

BGU II 653 (A.D.206/7) from Soknopaiou Nesos, records a rent payment for sequestered premises. The amount is 300 dr.

BGU I 216 (A.D.207/8) from Soknopaiou Nesos, is a receipt of the rent of the sequestered premises. The annual rental is 100 dr.

BGU II 362 Pag.IX, XIII, XIV, XVI (A.D.215) from Arsinoe, gives us some information about houses which are temple property. Unfortunately some entries of rent payments are lost, we have only three rental payments: 1) 10 dr. for the rent of a house. The account does not mention whether it is a monthly payment or an instalment or the total annual payment, (Pag.IX.), 2) 16 dr.4 ob. as a semi annual payment for the rent of a flat. The annual rent of the tenement is 33 dr. 2 ob. The monthly rent is 2.77

53) cf Müller, Op.Cit.p.249.

dr. 3) 100 dr. for unspecified premises, but we do not know whether it is a monthly rent or an instalment or the total annual rent. The document shows that the temple had different houses and derived income from letting them. If we compare between the rents of the flats in P.Rein.43 (A.D.102) and BGU II 362 (A.D.215), we find that the rent of the first is higher than the second, although the period between them is over a century. This gives us a strong indication about the great variation of the level of the rents which might be due to the size and the condition of the premises and the economic situation.

P.Mich.XI 620 (A.D.239/40) from Theadelphia, gives us very interesting information about the exploitation of the buildings of two farmsteads. The document mentions several labourers who are involved in agricultural operations, and some labourers who are practising their professions like weavers, millers, wine-makers. Some of the workers are exempted from the rent, such as, porters, weavers, millers, a wine maker, a gardener, a bull driver, and some foremen. Why were some workers exempted completely or partially from paying rents? 1) in the case of the porter, it is natural that he was exempted from paying the rent because he has to watch and guard the entrance of the farmstead. So the natural place for him is in the building of the gateway, 2) the weavers, we find them using the workshop in which there are six rooms, but unfortunately we do not know whether they used the factory according to a lease contract or they worked according to labour contract. In either

case, we do not have the deed which can show us the reason behind their exemption, however one can assume that they had to give the landlord part of their production or that they had to do some work for the landlord. This assumption can also be applicable to the wine-makers and the millers, 3) some foremen, the gardener, the bull driver and some other agricultural labourers were also exempted from paying the rent. In this case there may be two explanations: either the landlord deducted the ratio of the rent from their salary or they had to work for their exemption from paying the rent. 4) some foremen and other workers have the exemption of 12 days work. The explanation for this is not difficult: they are already performing and supervising the agricultural operations during the term of the lease, so they pay only the 20 dr. and 1/2 pig. 5) the majority of the tenants had to pay the rent (for six months) which is 20 dr., 12 work days, and 1/2 pig. for the single rooms or 20 dr., 24 work days and 1/2 pig. for the double rooms. We do not know the provisions between the landlord and the tenants and whether the tenants have to work the 12 days or 24 days work successively or separately according to the need and the wish of the owner. Although the document gives the wages of the workmen as 2 dr. per day, it is probable that the landlord used them in high work seasons, such as harvest season, sowing or planting period. Here he can save some money and at the same time he is not worried about the performance of the agricultural operations. We do not know

how the tenants managed to provide 1/2 pig each. Did they buy them ? Or did they themselves raise them? If they raised them, where did they keep them? The account does not contain any information about the lease of land or stables, therefore it is probable that they bought the pigs on the free market. Another question arises here: Did the tenants deliver the meat at one time or in instalments? If the meat was delivered at one time by the tenants that means that the landlord had to find a way to get rid of this large quantity by offering it for sale. If so, the labourer of the farmstead might be the consumers of this quantity, but it is probable that the payments of the meat were made in several instalments in different periods according to the wish of the landlord. These questions could be answered if only we had the lease contracts, but who knows if the parties wrote a contract or not. 6) the account gives us the rent of 29 single rooms, the rent of each room is for every six months 20 dr., 12 days work and 1/2 pig with a value of 10 dr. The total half annual rent is 54 dr. and the annual rent is 108 dr. The monthly rent is 9 dr. The account also registers the rent of 4 double rooms; the half annual rent is 20 dr., 24 workmen (the wages= 48 dr.), and 1/2 pig with a value of 10 dr. The total half annual rent is 78 dr. and the annual rent is 154 dr. so the monthly rent is 12.83 dr. Finally the account records the rent of 8 single and double rooms; the rent is 20 dr. and 1/2 pig with a value of 10 dr. The semi annual rent is 30 dr. so the annual rent is 60 dr. The monthly rent is 5 dr. The

landlord here gives some privileges to his employees. The rent of some rooms is not given but we do not know the reason for that. The total cash value of the income from the rents on the third farmstead is 1146 dr. per six months. The rent of the first farmstead which can be restored with certainty totals 972 dr. per six months. The minimum total rent for both estates is 2118 dr. per six months. We do not know whether those tenants were alien residents or local residents. It is more probable that some of them are alien residents who came to the area for the sake of earning money and securing regular income from the permanent work on the farmsteads.

BGU I 253 (A.D.244/9) from the Fayum, is an offer for lease of a part of a house, courtyard, dining room and bedroom. The monthly rent is 100 dr. The annual income is 1200 dr. Here it seems that the rent is very high but we have to take into consideration that the properties contain a dining room (συμπόσιον) and a bedroom (κοιτών); the tenant might have let the bedroom to travellers.

P.Turner 37 (A.D.270) from Arsinoe, is an offer to lease a house with five shops, three of which faced the main street and the other two a small street. The period of the rent is 3 years at a monthly rental of 80 dr. so the annual rental is 960 dr. Unfortunately the document does not tell us the rent of every object separately. The parties of the contract may have estimated the rents of the shops and the house separately. We also do not know whether there is a variation in the size and the condition of the

shops or not. Anyway the rents of the shops increased the rent a lot. If we compare between the rents in BGU XI 2034 (early III century A.D.) and P.Turner 37, we see that a) the rent of the former is at least 2.5 times of the latter, b) if we take into account the course of the time and the depreciation of the currency, we can say that the latter is much lower than the former.

Finally there is an undated papyrus, P.Flor.III 340 (III century A.D.) from Eleusis, a receipt which records the sum of 48 dr. as annual rent of a house.

To sum up our discussion, we find that the rents vary not only in the villages but also in the cities. They also vary from village to village and from city to city. Sometimes the rents in rural areas are higher than the rents in the urban areas. Finally fig. nos. 13 and 14 show us that the rents go up and down during the first two century. This indicates the great differences between the houses. Fig 14 indicates that the rent reaches its maximum top during the second half of the third century. However one can say that the gradual increases of the prices of commodities and wages also applied to the rents of houses during the first two and half centuries of the Roman period, but the level of the rents sharply increased in the second half of the third century.

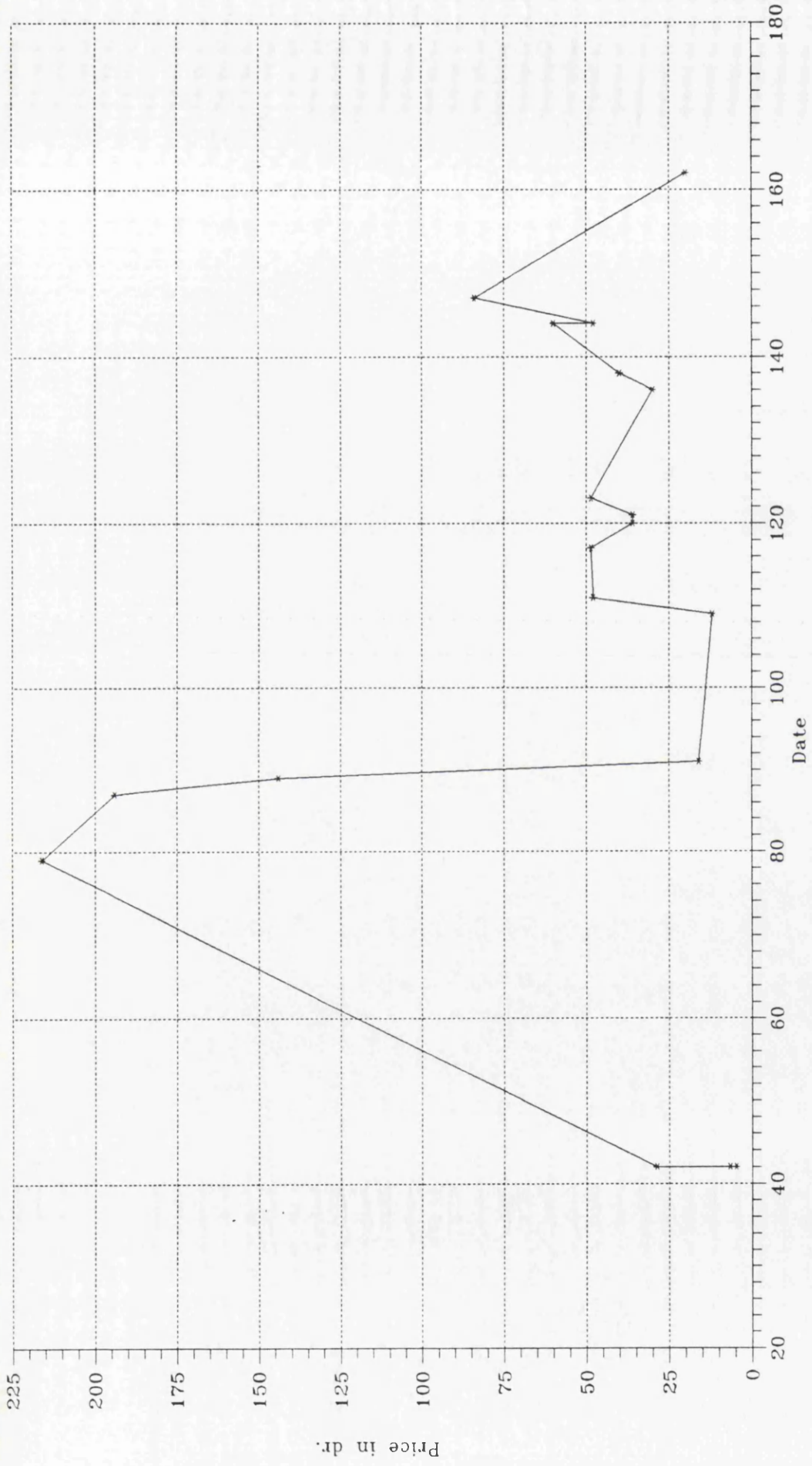


Fig.(13) House Rent in the Fayum Nome

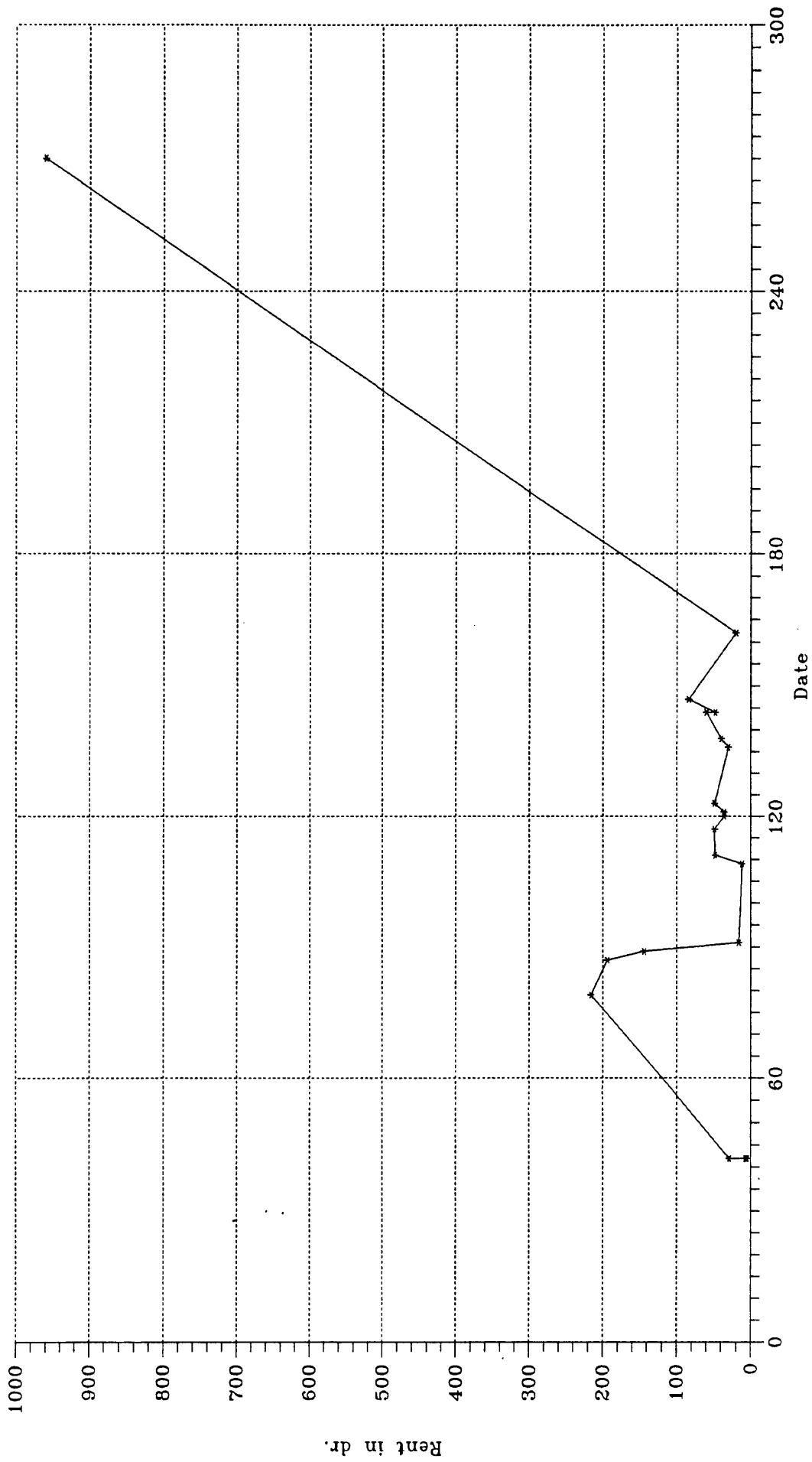


Fig.(14) House Rent in the Fayum Nome

The store houses and the magazines

There are many store houses attested in the documents: private stores, imperial and public stores and temple stores⁵⁴. The excavations give us some idea about the granaries and their appurtenances such as mills, and bakeries⁵⁵.

The table includes seven texts which deal with the lease of store houses and magazines; two of them concern two offers for subleasing a granary in Soknopaiou Nesos. The evidence covers the period between A.D.37 and the second half of the third century. The sources come from Tebtynis, Soknopaiou Nesos, and an unknown place. The rents are paid either in kind or in money.

The first reference, P.Mich.V 226 (A.D.37) from Tebtynis, is a petition which tells us about a lease of a granary belonging to the temple and which had been leased to a woman and her son and his wife, but the petition does not state the period or the amount of the rent.

The second document, BGU VII 1660 (A.D.40) from Philadelphia, is a receipt of the last portion of rent of a chaff store. The paid sum is 8 dr. We can not tell how many instalments the lessee had to pay.

The third document, P.Mich.II 121 R.III/V (A.D.42) from Tebtynis, deals with a lease of a granary and its gate

54) E.M.Husselman, *The granaries of Karanis*, TAPA 1952, pp.66; Calderini, *Op.Cit.* pp.41-5, G.Husson, *Op.Cit.* pp.91-3.

55) E.M.Husselman, *Op.Cit.* p.68.

building (φυλών) in which there was a storeroom for wheat, and the stable in front of the granary, for a period of one year at an annual rent of 50 art. of barley and an additional payment (θαλλός) of two choice cocks worth 4 dr., and at Amesysia's festival, 1 art. of barley. The lessee pays the wages of the labourer who will do the white washing of the wall. In this document the rent is to be paid in kind. There are three objects: the granary, the storeroom in the gate building, and the stable. We do not know either the size of the granary or the stable, and we do not know the rent of each object separately. If we try to estimate in money the value of the barley, the average price is more or less 4 dr. per art., the total rent in money is about 208 dr. plus the wages of the labourer for the white washing.

The fourth papyrus, BGU II 644 (A.D.69) from Philopator, is a lease of 20 ar. of catocic land and a storehouse (θησαυρός) for three years. The annual rent of the storeroom is 1 art. of wheat. The store seems to be very small: its capacity is about 200 art.⁵⁶ The average price of wheat is 8.4 dr. per art.

The fifth piece of evidence is BGU XI 2033 (20 th Pharmuthi A.D.94) and P.Lond.216 = W.Chr.192 (6 th Pachon A.D.94) from Soknopaiou Nesos; we have here two offers for subleasing a granary in which is a tower, courtyard, five

⁵⁶ In P.Tebt.II 520 A.D.15 the rent is about 1/2 % the rent on the amount of 798 1/3 art. is 4 art. See. Kalén P.Berl.Leih.I pp.296-7,299-300, Preisigke Girowesen,pp.114, Johnson, Op.Cit.p.509, Wallace, Op.Cit.p.40

chambers together with a noubis⁵⁷, storage pits, and all remaining appurtenances for one year. Although the property is the same in both papyri, there are some differences in the description of the property. In BGU XI 2033, 11.9-12..
 θησαυρῶν Σοκονοπαίου θεοῦ μεγάλου μεγαλου, ἐν ᾧ ταμίᾳ
 πέντε, καὶ τὰ τοῦ[το]υ, χρηστήρια πάντα σὺν τῷ ὄντι ἀπό
 βορρᾶ τούτου πύργωι καὶ αὐλῆι.....

while in P.Lond.216=W.Chr.192, 11.9-12..θησαυρὸν ἐνεργὸς
 στεγνόν καὶ τεθυρομένον, ἐν ᾧ πύργος καὶ τοῖς λοιποῖς
 χρηστηρίοις πᾶσι.....

The two papyri contain some interesting points: 1) the description of the property slightly varies in the two documents. 2) the two documents are offers to sublet the premises which belong to the temple. 3) the first sublessee is from Heraclia and he wants to lease from the 20th of Pharmuthi (BGU XI 2033) while the second sublessee is from Soknopaiou Nesos and wants to lease from the 6th of Phachon. The period between the two offers is 16 days. The following questions arise here: did the lessors announce in a public place their wish to offer the granary for lease? How did the lessee, who comes from Heraclia, know about the property offered for lease? There are two possibilities: The lessee has either some relatives in Soknopaiou Nesos who told him about the property or the lessors offered the property for lease at public auction. We do not know whether the lessors accepted one of the two offers or not

57) G.Husson.Op.Cit.p.178; CE.50 (1975) pp.212-14.

and also whether there were other offers. Unfortunately there are many gaps in BGU XI 2033, where the rent and some other clauses are lost; P.Lond.216 is nearly complete. We do not know whether the rent offered and all other clauses were the same in both texts. In P.Lond.216, the lessee offers to give 45 artabas of wheat and he will furnish to the lessors a storeroom in the granary without rent or tax and pays for plastering and the guarding of the grain brought into the storehouse. It also states that the lessee leases other properties in Soknopaiou Nesos, and that he will pay the rent of the storehouse before the rents of the other properties which he leased in the district. The average price of an art. of wheat is 8.4 dr. during the first century A.D.⁵⁸; so the rent is worth about 390 dr. plus the expenses of plastering which we do not know and if we add the rent of the chamber the total amount would be higher still.

The sixth papyrus, Bour.42 (A.D.147) from Hiera Nesos, includes two entries which record the rent of two imperial storehouses. In col.V 1.132 the rent is 84 $\frac{3}{8}$ art. of wheat and in col.VIII 1.202-3 the rent is 84 $\frac{3}{4}$ art. of wheat and 6 art. of barely. The average price of art of the wheat is 12.9 dr. and of the barley is 5 dr., the rent of the first is about 1088 dr. and the second is about 1118 dr. If the rent is $\frac{1}{2}$ %, the lessees need to store the quantity of 4225 art. of wheat in the first and 4525 art.

58) R.P.Duncan-Jones, Op.Cit.p.246.

in the second. Therefore one can say that the capacity of the two storehouses are more than the above quantities.

The seventh document, BGU I 32 (II/III century A.D.) from the Fayum, is a receipt for rent of a storeroom (ἀποθηκη⁵⁹). The rent is 40 dr. The papyrus does not say anything about the size, the condition and the location of the premises, so it is impossible to determine whether this sum represented the monthly rent or an instalment or the annual rent.

The eighth reference, P.Köln IV 196 (III century A.D., Fayum ?), is a register which records seven stores (ἀποθήκαι). Some of them were rented while the others were not. The monthly rental of three stores is 8 dr. each, while the rent of another store is 16 dr. We know from the register that a lessee used some stores for a period of 11 years, while the tenancy of the others changed from time to time. We see here that the rent of the stores was not increased during the period of 11 years. Presumably, the lessor did not find other lessees prepared to pay an increased rent.

To sum up, the level of the rent greatly varies. They are between 1 art. of wheat and 90.5 art. of wheat and barley. The variation is probably due to the sizes of the storehouses. The fig.15 covers the first two centuries. The curve goes up and down during the period. This indicates the great difference between the sizes of the stores.

59) G.Husson.Op.Cit.p.41.

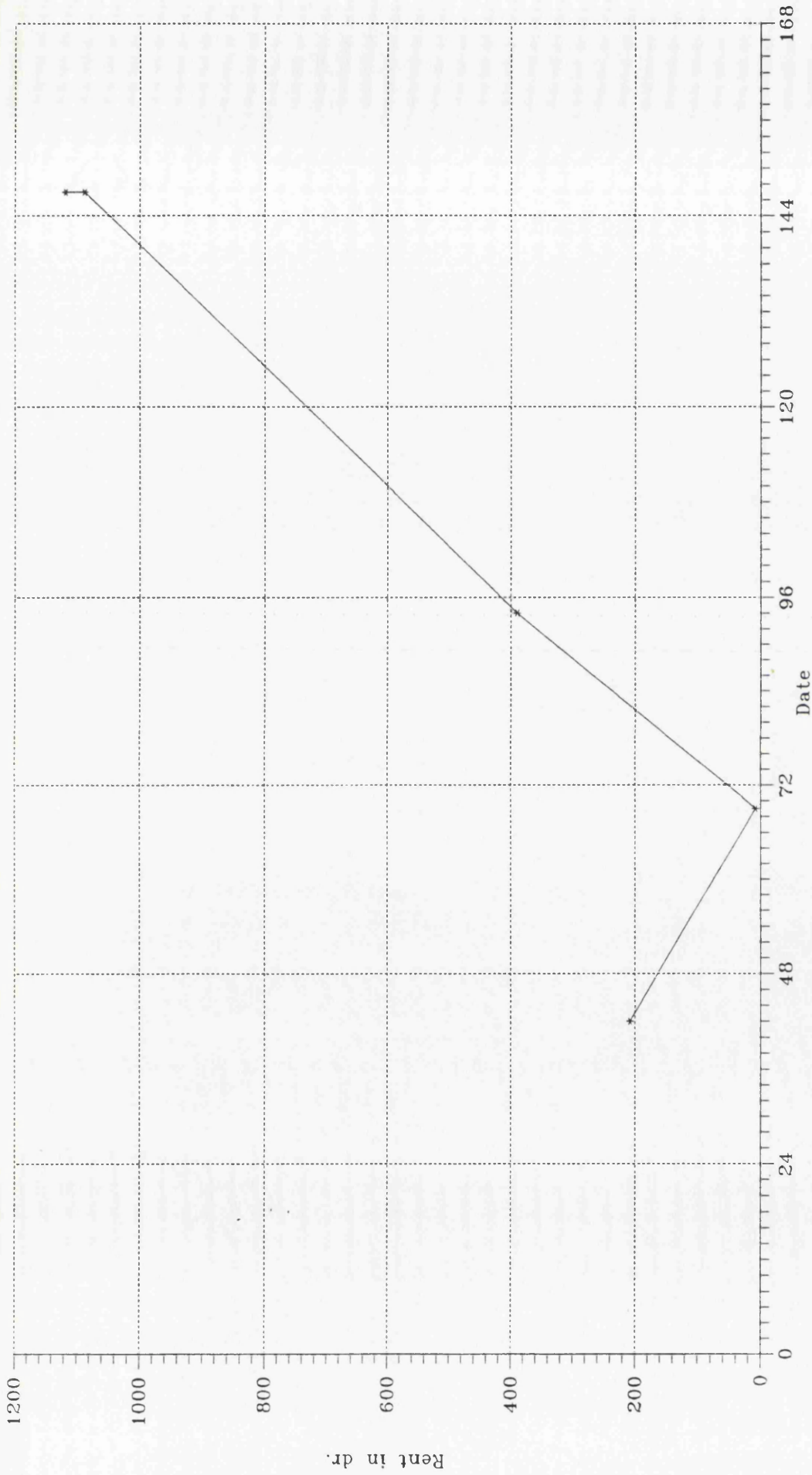


Fig.(15) Rent of the Store Houses in the Fayum Nome

The factories or work shops

1) The oil presses

The table gives us 15 papyri which are concerned with the lease of oil presses, 9 of them from the first century A.D. and 6 from the second century. The evidence covers the period between A.D.30 and 181; we have no references from the first sixty years of the Roman period and from the third century.

The sources come from Euhemeria, Soknopaiou Nesos, Heraclia, Theadelphia, Dionysias and some unknown places.

The lessee pays the rent either in kind or in money or in both. Let us begin with the evidence of the first century.

P.Ryl.II 128 (A.D.30) from Euhemeria, is a complaint to the chief of the police by an oil maker who reports that the olive carrier, who is working with him under contract, changed her mind, left the mill, and departed. She also carried off from his house a cloak worth 4 dr. and 40 dr. which he was keeping for payment of the rent. From the document, we do not know whether the sum of 40 dr. represents the monthly rent or an interval instalment or the total annual rent. The papyrus also tells us that the oil makers employ some workers. Unfortunately we do not have the labour contract through which we could know the daily wage of the workers.

SPP XXII 173 (A.D.40) from Soknopaiou Nesos, is a lease of an oil press for a period of seven months at a

total rent of 40 dr. The lessee also provides the lumber for the repairs. We do not know how much the lessee will have to pay for the wood.

P.Mich.II 123 R.XI (A.D.46/7) from Tebtynis, contains an entry which concerns a lease of an oil press. The rent is 7 measures of olive oil. The document does not mention the type of the measure. We do not know whether the rent is a monthly payment or a yearly payment.

The fourth document, P.Aberd.181 (A.D.41-68) from Soknopaiou Nesos, is an offer for lease of an oil press and its accessories for a term of one year. The rent is 2 choes of knekos oil and (x) choes of...?

W.Chr.176 (A.D.54-69), from the Fayum,⁶⁰ is a petition which informs us about a lease of an oil press in an imperial estate formerly belonging to Narcissus at a rent of 200 dr. and 3 choes of oil. The petitioner reports that the machine broke down twice and the managers did not provide beams or other necessary equipment for the machine. The first time, he was obliged to purchase at his own expense beams and other necessary equipment for the machine and repaired the press, the mortars, and other equipment. The second time, the press itself broke down and he was compelled to provide beams and props, and for the past two years, though not using the factory, he had been forced to

60) See G.M.Parassoglou, *Imperial estates in Roman Egypt*, p.56., who considers that this document and the following document (P.Lond.280 = W.Chr.312) deal with the same oil press, but from the language of the two documents, it appears that they are two different oil presses. In the first document we find the lessee asking the strategus to order the managers to leave him untroubled about the rent, while in the second document he sends his letter to one manager only, suggesting that he replaces the machine and its accessories at his own expense on the condition that he takes away the machine and its accessories.

pay the rent from his private means with no income from the press, he was no longer able to meet the charges or the obligations. He requested that the managers of the imperial estate be compelled to leave him untroubled with regard to the rent. From the document, one can see that the managers compelled the lessee to pay the rent without any deduction for two years, although he was obliged to buy the lumber needed for the repairs of the machines and paid the expenses of the repairs. The government collected the rents in money and in kind⁶¹. It is not easy to estimate the price of the oil because of the scarceness of the sources about the price of the oil during the mid first century A.D.

P.Lond.280=W.Chr.312 (A.D.55) from Heraclia, is a copy of concession from a lease of an oil press which was private property and now owned by the Emperor. The lessee leased the oil press from the government. The oil press broke down. He may have asked the authorities to repair it, but the authorities paid no attention to his request, so he offers to replace at his own expense the machine and the other objects on condition that he may take away the machines when he surrenders the lease or is released from

61) As for the price of the oil see: Reil, *Op.Cit.* pp.141; Dubous, *L'Oliver dans l'ancienne Egypte*, *Rev.Phil.* 7, 1927, p.31, note 1.; Johnson, *Op.Cit.* pp.316; Lydia Bandi, *Conti privati nei papiri dell'Egitto Greco-Romano*, *Aeg.* 1937, pp.437. The price varies between 2 dr. and 6 dr.3 ob. per chous during A.D.1. e.g in P.Oxy.IV 819, the price is: 5 dr.and 6 dr. 3 ob.per chous. In P.Oxy.IV 736, the price is 4 dr.4 ob. In P.Oxy.IV 739, the price is: 4 dr.2 ob. and 4 dr 3 ob. per chous. Here a question arises: why did the prices vary ? It is more likely that there are three reasons could be behind that: 1) the quality 2) the quantity 3) the price is seasonal. But in our examples the variation might be due to the quality. For the quality see: B.A.Wittenburg, *Zur Qualitaet des Olivenoels in der Antike*, *ZPE.* 38, 1978, pp.185; H.J.Drexhage, *Eigentumsdelikte im Roemischen Aegypten*, *ANRW.* II 10,1, 1988, p.973, idem, ...*Scimus,quam varia sint pretia rerum per singulas civitates regionesque...zu den Preisvariation im römischen Ägypten*, *Münst.Beit.zur Ant.Hand.* 7 (1988) pp.4-6 .

it. On the other hand, we find him in the previous document asking the strategus to compel the managers of the estate to leave him untroubled in regard of the rent, nor does he ask to take away the machines. Neither the amount of rent nor the period of the lease are mentioned. After the machine had broken down and the replacement and repairs were borne by the lessee, he in practice leased the place only and paid the rent for the premises only.

P.Giss.95 (A.D.94/5) from Euhemeria, is a lease of an oil press at an annual rent of 124(+) dr. in four different instalments: 60, 20,20 and 24 dr.

P.Lond.361 II p.164 (I century A.D.) from the Fayum, is a notice to the royal scribe of intent to surrender the lease of an oil press which had been held by his father. He asks the royal scribe to intervene for this purpose, professing his willingness to pay all outstanding taxes or charges. The lessee is from Polemon division while the press is in Heracleides division. Neither the amount of the rent nor the term of the lease is mentioned. The petitioner will pay the whole rent of the remaining period.

P.Prag.I 38 (A.D.96) from Heraclia, is a lease of an oil press for a period of one year at an annual rental of 2 metretai of raphanus oil, X keramion of?, x choes of...? One can only estimate the value of the raphanus oil. The price of the two metretai is about 576 dr.⁶² Unfortunately the rest of the rent is missing, but from the

62) See Johnson Op.Cit.p.317

value of the raphanus one can assume that the oil press is very large.

From the above documents one sees that: a) the rent is paid either in kind or in money, b) the machines and the premises together are taken into account by the parties of the contracts. c) Some annual rents of oil presses are not only higher than the rents of the houses but also higher than the value of some houses in the villages of Fayum. d) the oil presses are sometimes attached to the houses or parts of houses⁶³. e) the costs of the repairs of the oil presses are very high.

For the second century, the table gives us 6 references:

P.Sorb.inv.2371=SB XVI 12518 (A.D.104/5) from Theadelphia, is an offer for lease of an oil press including press, axes, a tank covered with copper, two mortars, two millstones, oil machine and two adjacent buildings, court, room and the appurtenances for a term of 3 years at an annual rent of 220 dr. plus a keramion of raphanus oil and, as a gift (θαλλός) 6 xestai⁶⁴ of raphanus oil on the occasion of Isis's feast⁶⁵ and another 6 xestai on Amesysia's feast⁶⁶. We do not know how the lessee used the two buildings, whether for living or for

63) G.Husson.Op.Cit.pp.72. .

64) xestes = 2 cotylai. Multsch, Op.Cit.p.265; Wilcken, Ost.I p.762.

65) D.Bonneau, P.Sorb.inv.2371, Scritti in onore di O.Montevicchi, 1981, P.Amh.93.

66) D.Bonneau, Les fêtes Amesysia, CE.49,1974,pp.366, D.Meeks, Les Fêtes Amesysia: essai d'etymologie, CE.49,1974, pp.380.

storing or for both, but from the term $\phi\acute{o}\rho\omicron\varsigma$ one can infer that the lessee used them for storing.⁶⁷ How do the parties of the contract estimate the rents of the oil press and the two premises? It seems that they estimate the rent of each object separately and then add their rent together. It is, however, difficult to know the proportion of the rent of the two adjacent premises and the room. As for the raphanus oil, the price per cotyle is approximately 1 dr.⁶⁸, so the value of the oil is 168 dr. The total rent is approximately 388 dr.

P.Fay.96 (A.D.122⁶⁹) from Theadelphia, is a receipt for rent for an oil press. The paid rent is 5 metretae of oil per year, consisting of two and half metretae of olive oil, and the remaining two and half metretae of raphanus oil.⁷⁰ The price of the olive oil is about 330 dr. and the price of raphanus oil is about 720 dr. The total rent amounts to about 1050 dr.

SPP XXII 177 (A.D.137) from Soknopaiou Nesos, is an offer to lease an oil press with all the equipment, machines, press..., and all appurtenances for a period of 2 years and 7 months at a rent of 100 dr. for the first 7

67) H.Müller, *Op.Cit.* pp.196.

68) The price of one cotyle of raphanus oil is: 1 dr.; 23 cotylae for 20 dr. (PSI VII 731V (I/II cent)). The variation of the price could be due to the following factors: quality, quantity, and the seasons.

69) P.Drewes, *Die Bankdiagraphie in den gräko-ägyptischen Papyri*. diss.1970 pp.23=JJP 18 (1974) p.113.

70) The price of olive oil is: 7 dr. per chous (P.Giss.16), 13 dr. per chous (P.Ross.Georg.II 41), 16 dr. per chous (P.Grenf.II 51). So the average price is 11 dr. The price of raphanus oil is 2 dr. per cotyle (P.Ross.Georg. II 41).

months and thereafter 200 dr. per year. The lessee provides the necessary lumber and pays the wages of the workmen if something happened to the machines. He also pays a so called diploma and he has the right to retail the oil in the area. He pays the rent for the first seven months in Thoth, and for the two years in equal instalments every 4 months. Why does the lessee pay the rent of 100 dr. for the first seven months while he pays the annual rental of 200 dr.? The lessee perhaps asks the lessor to reduce the rent and in return he bears the expenses of the wood and the wages of the workmen. Anyway it is unique evidence of the variation of the rent of the oil press during the lease term.

P.Lond.335=W.Chr.323 (A.D.166/7) from Heraclia, is an offer to lease an oil press and all its equipment for an unlimited period, but during the first five years the lessee spends the rent on repairing the machine. From the sixth rental year onward, he pays 120 dr. yearly. Johnson rightly says that⁷¹ ''since the rental amounted to 120 dr. per year, the abatement of the rent for 5 years implies that 600 dr. were required for repairs''. One can add that the lessee might spend the 600 dr. at the beginning of the first rental year in order to exploit the machine from the first moment. The additional payment from the second year onward supports the supposition that the lessee paid the rent of five years in advance in order to repair the oil

71) Johnson, Op.Cit.p.368.

press. This large sum shows the high costs of the repairs of the machines. The annual rental from the sixth year is 120 dr. plus 20 choenices of?, 2 chickens worth 8 dr. and 20 small eggs.⁷² The rent in money is 128 dr, plus the price of the 20 choenices ? and 20 eggs.

P.Amh.II 93 (A.D.181) from Heraclia, is an application for the lease of an oil press with all existing fittings for a period of one year at an annual rental of 7 ceramia of raphanus and, for the festivities, half a chous at the festival of Isis and a chous at the festival of Amesysia (the harvest festival) and two ...? of raphanus, exclusive of rent. The lessee pays in equal instalments and also agrees to pay all public charges except the Thyia tax. The amount of the rent plus the additional payment is 1028 (+) cotylae. If we consider the price of a cotyle as being about 2 dr., the total price of the oil approximately 2136 (+) dr. If we add the public charges, the rent will increase, but unfortunately we do not know how much it would be. We can however assume that it is a large factory.

P.Fay.95 (II century A.D.) from Dionysias, is an offer to lease an oil press, fitted with wheel..., two machines and a cauldron...with the pertaining upper rooms for a period of 4 years at an annual rental of 1 metretes 6 cotylae of olive oil and 1 metretes 6 cotylae of raphanus

⁷²) It is not easy to know the nature of the 20 choenices so we cannot know their value. We also do not have enough evidence about the price of the eggs; in P.Mich.II 123, 5 eggs are 2 ob.; 30 eggs are 10 ob. We do not know why the price varies. Is this due to the size of the eggs or to the quantity, or both ? It is probable that the price was estimated according to the size and the quantity as well (In P.Lond.335 the eggs were described as small eggs). In P.Mich. XI 619 the price of an unknown number of eggs is 1 dr. 3 ob. In BGU XIII 2357 the price of an unknown number of old eggs is 32 dr.

oil. plus the additional payments at the festival of Amesysia of 6 cotylae of olive oil, 6 cotylae of raphanus oil, 12 choes of ... oil and 2 choes of...oil ? The lessee pays the rent in two instalments, paying the olive oil in Phamenoth and for the raphanus oil in Pauni. As for olive oil, the price of 13 choes is more or less 143 dr. and the price of 13 1/2 choes of the raphanus oil is about 312 dr. Unfortunately we can not tell what kind of oil it was in two cases, so we are not able to estimate the value of the oil. Anyway from the price of the olive and raphanus oil together, one can say that the oil press was very large.

The above documents show that: 1) the rent varies from one oil press to another oil press. This variation may be due to the capacity of the machines and the size of the factory. 2) from the high repair costs of the machines, one can understand why the level of rents of the oil presses is higher than the level of rents of the houses. 3) the oil presses were sometimes leased with adjacent buildings (houses) and their rent is very high, therefore the value of the houses in which there is a shop or workshop is higher. 4) The average of the rents of the second century is higher than the average of the first century. The rents of the oil presses are very high compared with the prices of the houses. Fig.no.16 covers the first two centuries. The curve goes up and down during the period. This indicates the great difference between the size and capacity of the oil presses

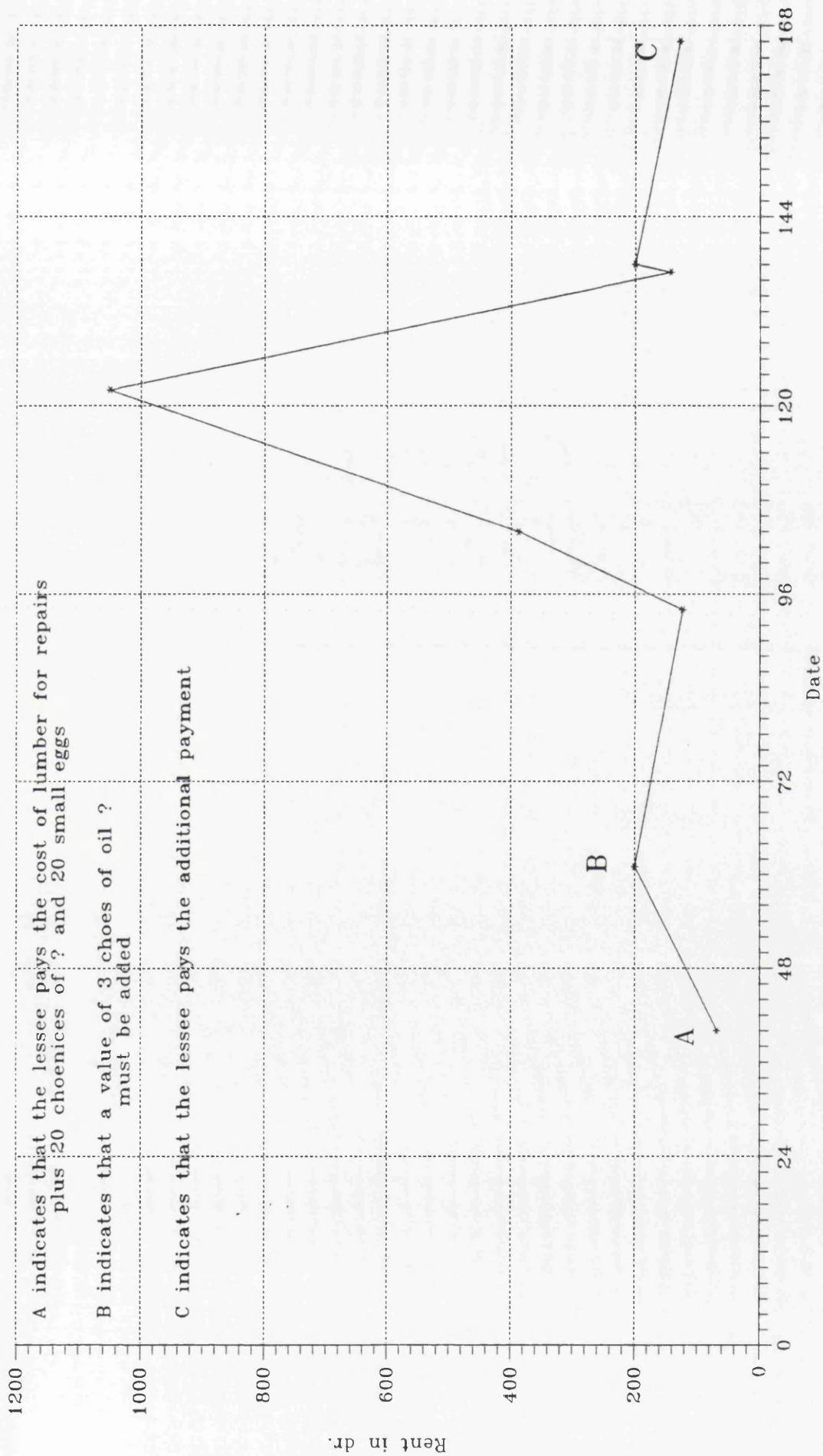


Fig.(16) Rent of Oil Presses in the Fayum Nome

2) The bakeries and the mills⁷³

The table includes 7 references to leases of bakeries and flour mills, two from the first century, four from the second century and one from the third century. The evidence covers the period between A.D.30 and A.D.250. The sources come from Tebtynis, Euhemeria, Theadelphia, Epoikion of Metrodoros and an unknown place. They are the following:

P.Mich.X 586 (A.D.30) from Tebtynis, is a lease of a bakery in a courtyard, with a theban millstone with nether millstones, grinding handle, one mortar and one oven, for a period of two years at an annual rent of 80 dr. The lessee pays the rent in four equal instalments. The rent is not only higher than the rent of some houses, but also higher than the purchase price of some Tebtynis houses.

P.Ryl.II 167 (A.D.39) from Euhemeria, is an application to lease a flour mill which contains 3 theban mills, with handle and nether-stone, 2 mortars and other accessories and existing pestles for a term of two years at an annual rental of 160 dr. plus 1/2 art. of bread and one cock. The rent will be paid in three instalments. Although it is clear from the description of the object that it concerns a flour mill only, the lessee offers 1/2 artaba of bread. He might make it in his oven.⁷⁴ Let us try to

73) See Reil, Op.Cit. pp.150-8.

74) See note 4; R.P.Duncan-Jones, Op.Cit. p.246; Johnson, Op.Cit. p.316; E.W.wall, Op.Cit. p.44. In P.Flor.III 322 the art. of bread is 40 double loaves = 80 loaves. The price of a loaf of bread

estimate the value of the additional payments. The price of the bread is more or less 6 dr.4 ob. and the price of the cock is more or less 2 dr.⁷⁵ The total rent is about 168 dr., moreover the lessee pays the maintenance charge and 25% on the bakeries⁷⁶. These public charges also increase the rent of the property. Anyway the rent is very high compared with not only the rent of houses but also the purchase prices of some houses. The reason must be the high value of the machines, for example in P.Oxy.II 278 (A.D.17) the value of a theban mill is 100 dr. and its rent is 2 dr. 3 ob.= 30 dr. per year. In P.Mich.IX 550 (A.D.99) the value of a theban mill with nether stone and handle is only 28 dr.

BGU IV 1067 (A.D.101) from Theadelphia, is an offer to lease a flour mill with 5 theban mills with socles and levers and 2 adjacent buildings (ὄικοι⁷⁷) and other equipment of the mill for a term of two years at an annual rental of 180 dr., and additional payment⁷⁸ of 1 art. of choice bread and 4 full grown cocks. The lessee has to grind 11 art. of wheat flour each year for monthly instalments as the lessor desires without grains toll and he will also grind annually, free of charge, 3 art. of fine

is 1 ob. (P.Mich.II 123, II 128), so the price of an art. of bread is about 13 dr.2 ob.

75) See note 51.

76) See Johnson, Op.Cit.p.577, P.Ryl.167 note 22.

77) G.Husson, Op.Cit.pp.211.

78) Müller Op.Cit.pp.212.

wheat and 1/2 of sweet wheat. To estimate the rent accurately we need, first, to know the cost of grinding and milling 15 1/2 art of wheat. In P.Oxy.IV 736, the costs of grinding an artaba of wheat is between 3 ob. and 4 ob., so the costs are between 7 and 10 dr. Secondly, the value of an artaba of bread is about 13 dr. 2 ob. Thirdly, the value of 4 cocks is about 16 dr.⁷⁹ The total rent thus amounts to between 216 and 219 dr. The rent is very high, but if we take into account the two adjacent buildings we can understand why it is so high. Anyway the rent here is higher than the value of some houses.

P.Mil.Vogl.II 53 (A.D.152/3) from Tebtynis, is an offer to lease a mill with two millstones, a mortar and ἀλητικαί are leased for a term of one year at an annual rental of 200 dr. In the document there is no mention of additional payments, so perhaps the highness of the rent is due to this.

In the next papyrus, P.Rain.Cent.60 (A.D.164) from Epoikion Metrodorou, the lessor notifies the nomarch that she is about to let the mill in her house and is herself taking responsibility for the mill tax. The lessor wants to lease the mill in her house, but there is no mention of the period and the amount of the rent. The interesting point here is that she pays yearly for pelochikon and the other charges 18 dr.

79) See note 51.

PSI VII 787 (A.D.169/7) from a hamlet in Fayum, is an application for the lease of a mill with machinery, grinding stones and other equipments, for a period of 4 years. The previous rent had been 160 dr. while the new offer is 200 dr., so the new offer is 25% more than the previous one. In the new offer the lessee offers to install a new machine with a value of 100 (+) dr. He also offers 2 suckling pigs and an additional fee (?) , 8 dr. for filing the report, the mill tax, for the diplomata, for bread making and for all the taxes of the nomarch and the repairs of chiselling the stones. Unfortunately we do not know the rate of these taxes. If we add the price of two pigs which is about 40 dr.⁸⁰ plus the sum of 100 (+) dr., the rent is 340 (+) dr. without adding the public taxes in the first year, while in the following years he pays 240 dr. plus the public taxes. The lessee pays the rent in three instalments.

Finally the last papyrus, SB VI 9408,1 (A.D.250) from Theadelphia, records an entry which concerns a lease of a mill; the amount of the rent is 200 dr. We do not know whether it is the total rent and whether there is an additional payment.

From the above references one sees at a glance that a) the rent of the mills and the bakeries are gradually increased. But we shall be mistaken if we ascribe the increase only to inflation for we have to take into account

80) See for the price of pigs P.Mich.XI 620.

the capacity of the machines and the size of the buildings in which the machines are installed. Unfortunately the papyri do not give us any information about the capacity of the machines and the size of the building⁸¹. b) from the references we also find that the rents vary from village to village even within the same village. For example, in Tebtynis the rent varies between 80 dr. and 200 dr. In Theadelphia the rent varies between 180 dr. and 200 dr. and if we add the additional payment and the public charge which the lessees agree to pay, then the rent becomes very high. c) in some documents the lessee pays all of the public taxes, so the lessor receives his income without any deduction. d) the level of the rents of the mills and the bakeries is higher than the level of the rent of the houses. Fig.no.17 covers the first two centuries. The curve goes up and down during the first two centuries. This indicates that the rents vary according to the size and capacity of the oil presses.

81) There are two papyri which give us the price of two mills: 100 dr.(in P.Oxy.II 278 (A.D.17) and 28 dr.(in P.Mich.550 IX (A.D.99). From these prices we can infer that there is a great variation in the power, capacity and the quality of the machine's materials.

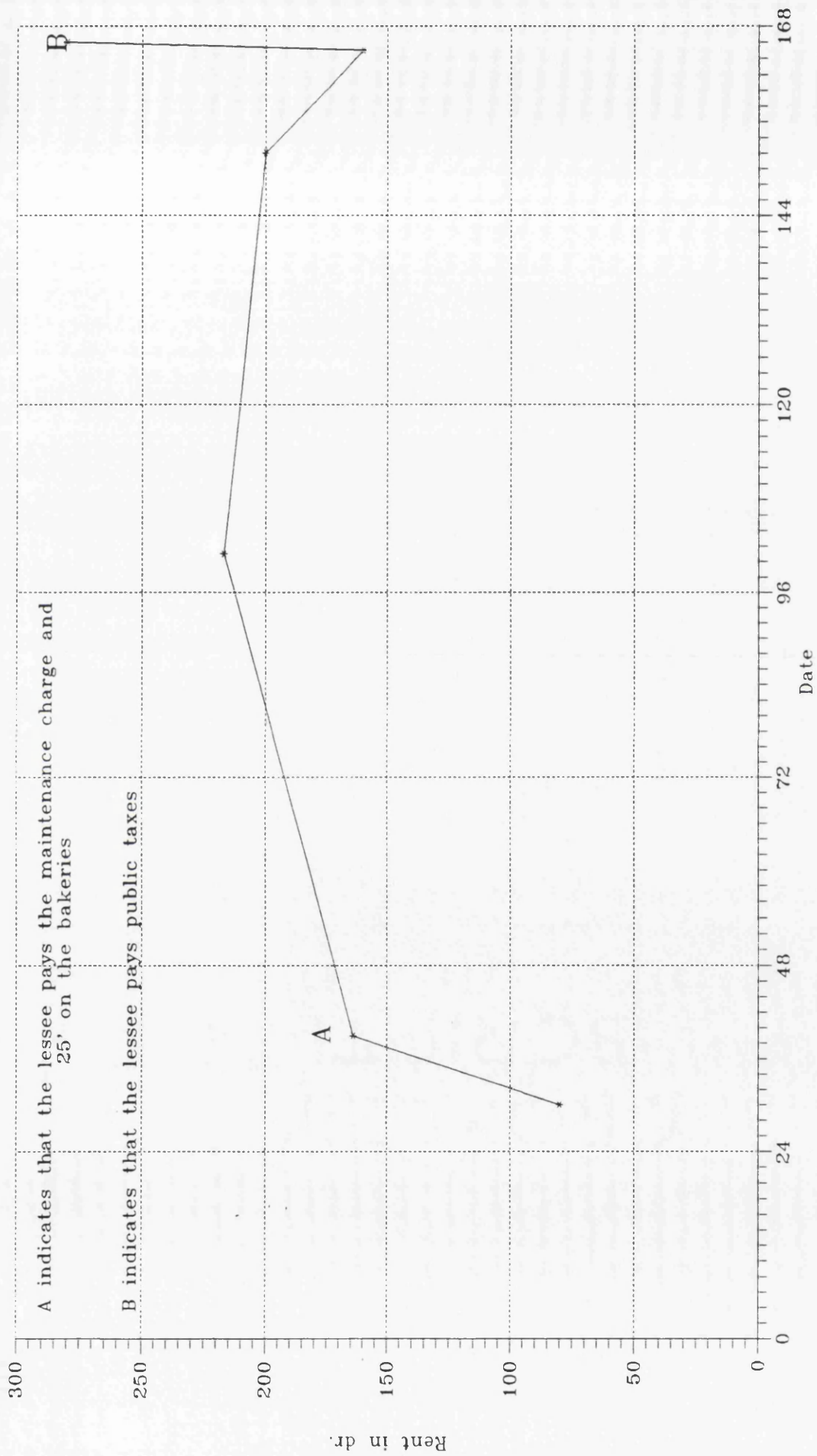


Fig.(17) Rent of Bakeries and Mills in the Fayum Nome

3) The sheds for domestic animals and birds

The Fayum gives us some lease contracts which deal with the lease of camel stables, hen and geese stables and pigeon houses. We have no evidence for the lease of donkeys, cows and other animals stables. The Egyptians usually parked their animals in the courtyard of the house or they have a stable inside the house or separate stables. The table gives us 5 documents which deal with the lease of animal sheds. Two deal with the lease of hen and geese stables, two are concerned with the lease of pigeon houses and one deals with the lease of a camel stable. The evidence covers the period between A.D.122/3 and A.D.253/4. The papyri come from Dionysias, Tebtynis, Karanis, Unknown places.

As for the lease of hen and geese sheds, the first reference, P.Strassb.VII 706 (A.D.122/23) from the Fayum, is concerned with a lease of a chicken stable for a rent of 40 dr. plus an additional payment (?)

The second document, P.Mil.Vogl.III 145 (A.D.174) from Tebtynis, is an offer for the lease of a geese stable with a brood of 100 chickens, 7 geese and eggs. The value of the chickens is 200 dr., while the geese and the eggs are 250 dr. The term of rent is 6 years at an annual rental of 160 dr. and an additional payment (ἐξάίτερα⁸²) which is 10 chicken and 300 eggs and 2 fattened geese. The lessor gives the lessee 4 art. of barley. The lessee pays the rent in

82) Müller, Op.Cit.pp.212.

two instalments and the other additional payment whenever the lessor wishes. The lessee will give the lessor 4 geese with a value of 90 dr. at the festival of harvest and Souchus. The value of 10 chickens is roughly 40 dr.⁸³, the eggs about 20 dr., the geese is approximately 80 dr.⁸⁴ The total rent is about 300 dr. We cannot tell the proportion of the rent of each of the stable and the brood of birds and eggs separately.

One can see that in the first contract the lessor does not provide the lessee with birds while in the second the lessor provides the lessee with the birds and especial quantity of food. It also seems that the first stable is smaller than the second.

As for the lease of pigeon cotes: The first papyrus, P.Goodsp.30 (A.D.192) from Karanis, gives us five entries which record the rent payment for pigeon houses. The first entry records 100 dr. as the rent for a pigeon cote for a term of 4 months (Col.13 l.15). The other four payments do not mention the period of the rent. The amounts of the rents are: 60 dr. (Col.21 l.10), 80 dr. (Col.21 l.13), 20 dr. (Col.23 l.9) and finally 40 dr. (Col.23 l.15). We do not know whether these sums represent the total annual rent or just instalments. One can conclude from the rent (in col.13), which was paid for a period of four months, that

83) See note 51.

84) The price of geese is mentioned once in the papyri: the value of a goose is 40 dr. (PSI VIII 961 A.D.176/8). In our document the lessee agrees to give the lessor 4 geese and estimates their value 90 dr. It seems that the price of geese in the free market is higher than the price fixed by the lessee.

the other rent payments are only instalments. Why does the rent vary ? Is the variation due to the size of the dovecotes and the number of the doves or is it due to the seasons or for all these reasons ? If we had the lease contracts, we could probably answer these questions. However, one can say that when the pigeon houses are leased per season, the rent varies because the productivity of the bird varies from one season to another, and the parties of the contract here may also take into account the size of the pigeon house and the number of the pigeons. From these entries, one can conclude that the owner has several pigeon houses.

The second document, P.Flor.I 10 (A.D. 249/50 or 253/54) from Fayum, is a fragment of an offer to lease two pigeon cotes and a storeroom for a term of 3 years at an annual rental of 400 dr. The document gives neither the size of the two houses nor the number of the pigeons, therefore, we cannot know whether there is any difference between the rent of two pigeon houses.

Although our evidence is very meager, one can conclude that from the above two documents the rents of the pigeon houses are higher than the rents of some houses and the purchase value of some houses as well. The high value of pigeons and their dung explain the high level of the rents⁸⁵. No doubt the size and the total number of the

85) In BGU XIII 2357 (III cent.A.D.) the price of a pigeon is 20 dr.

pigeons are always taken into account by the parties of the contracts.

BGU II 393 (A.D.168), from Dionysias, is a lease of a camel stable for a period of 4 years at an annual rent of 24 dr. We do not know why the rent of is so low, especially if we compare it with the other places.

To sum up: the level of rents of the animal and birds sheds greatly varies. The size and condition of the sheds and the economic condition play a great role in increasing and decreasing the rents of the sheds. Fig.no 18 deals with the rent of the animal sheds during the second and third centuries. The curve goes up and down during the whole period. This indicates that the parties of the contract took into account the previous factors.

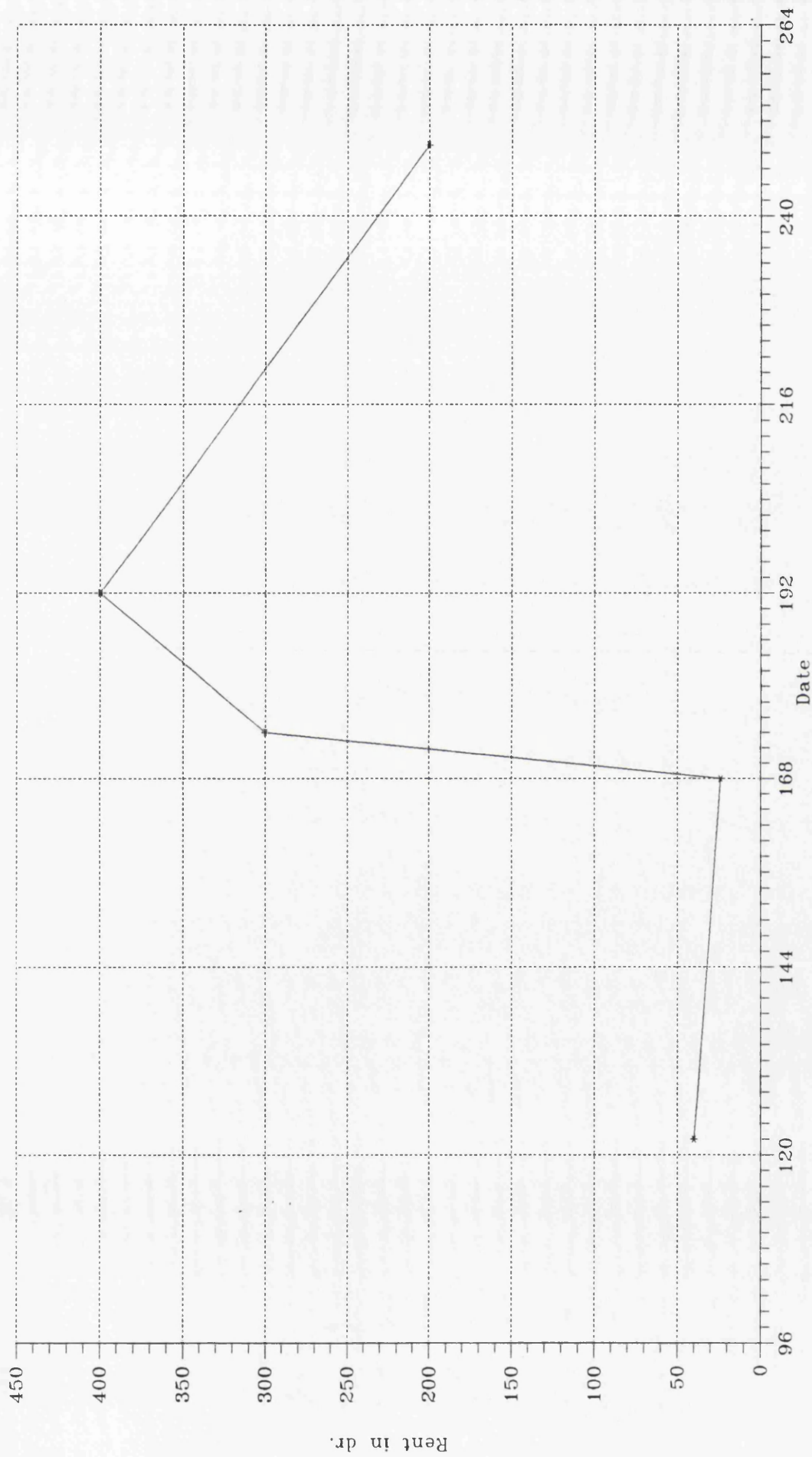


Fig.(18) Rent of Animal Sheds in the Fayum Nome

4) Other workshops and shops

The table contains two documents which deal with the lease of workshops. One is dated to A.D.80 while the other is from the second century. The period and the amount of the rent of one of them are lost (P.Oslo.III 139, mid II century A.D.), while the second deals with the lease of a fuller's factory for a period of one year at an annual rental 240 dr. The lessee pays the rent in ten instalments (P.Lond.286 II p.183 A.D.88).

5) Fish shop

The table gives us a unique document (P.Strassb.VI 569, A.D.162) which is concerned with a lease of a fish shop for a period of 62 days at a rental of 740 dr. and an additional payment of five fresh and salted fish, each worth 8 dr., plus additional payment (?) and finally the supply of water. The lessee has the right to fish in the lake. We do not know why the term of the lease is very short. Does this short period represent the high season of fishing⁸⁶? Anyway the lessee in this case has the right of fishing and selling and this would give a good explanation as to why the rent is high, more than 12 dr. a day.

86) The season of fishing is in autumn and winter: P.Oxy.XLVI 3267-70 and XLIX 3495.

6) Baths⁸⁷

The table gives us a unique document, P.Mich.V 312 (A.D.34) from Theogenis, which deals with a lease of a private bath with three leaded vessels of bronze for a period of three years at a rent of 265 art.of wheat. The lessees pay the total rent during the period between Pauni and Mesore of the first rental year. The lessors receive a proper instalment each month. They receive the immunity from bath fees for ten men plus extra payments (?). If we try to estimate the value of the wheat in money it will be about 2226 dr., excluding the additional payments and the fees of entering the bath. We have also to take into account that the lessees pay the total rent during the first year, that means that the lessee paid the rent in advance, so the rent might be under the normal level of the current rent. Anyway this sum of rent is very high and equal to the value of several houses during that period.

It is time to turn to estimate the average of the rents of houses and industrial business premises. Although the first century gives 90 antichretic loans with the right of habitation⁸⁸, the nature of the premises is only stated in 6 references plus one reference for normal lease. One reference only deals with the lease of the whole house, and the rest deal with shares. Therefore, it is not easy to draw the average of the rents. In order to know the average

87) J.Husson.Op.Cit.pp.57.

88) See the table.

during the first century, I suppose that the owner(s) of the house rented the whole house. The rents vary between 4.8 dr. and 216 dr. The average rent is 87.24 dr.

For the second century, the table lists 25 references, 13 of them are only mentioning the nature of the premises and the means of payment while the others do not mention either the nature of the property or how much the proportion of the share is or the way of payment, whether it is monthly or an instalment or an annual payment. The rents vary between 12 dr. and 162 dr. The average of the rents is 51.78 dr.

For the third century, the table gives 10 documents, but we have only 5 references which clearly mention the nature of the property. The rents vary between 48 dr. and 2400 dr. The average is 864 dr.

For the average of rooms, we do not have any evidence from the first century. For the second century, the table gives 5 references. The rents vary between 5 dr. and 30 dr. The average is 21 dr. For the third century, the table lists 43 single and double rooms⁸⁹. The rent of a single room is 108 dr. while the rent of the double room is 156 dr.

For the flats, the table gives two references, their dates are A.D.102 and A.D.215. The rent of the first is 2.4 times the second.

⁸⁹) I put aside the rent of 8 rooms because it seems that the tenants, who serve the land lord, partially exempt from the rent . (The rents of these rooms are 60 dr. each.) P.Mich.XI 620.

For the storehouses and stores, the table offers evidence for the first century and third century. The table gives 6 references⁹⁰ for the first century. The rents of the first century vary between about 208 and 390 dr. The average is about 299 dr. For the store, the table gives 4 references from the third century. The rents vary between 8 dr. and 16 dr. The average is 10 dr.

For the bakeries and mills, the table gives 7 references. The rents vary between 80 dr. and 168 dr. The average is 124 dr. For the second century, we have four references. The rents vary between 160 dr. and 280 dr. For the third century, we have only one reference, the amount of the rent is 200 dr. but we do not know whether it is the total rent or not and whether there is an additional payment or not. The average of the rent here is not only higher than the average of the rent of some houses but also the value of some houses.

As for the oil press, the rents are either in kind or in money or in both. I estimated the value of the payments in kind into money when it is possible. For the average of the first century, the table gives 9 references. The rents vary between 68.57 (+) dr. and 200 dr.+ 3 choes of oil, the average without adding the value of the oil is 121 dr. For the second century, we have 6 references. The rents vary between 100 dr. and 2136 dr. The average is 595.55 dr. The

⁹⁰) I put aside three references because we do not know whether the payment is a monthly or an instalment or annual.

average of the rents is higher than the average of the rents of houses.

For the sheds for domestic animals and birds, the table gives 5 references. We do not have any evidence for the first century. During the second century the rents vary between 24 dr. and 400 dr. The average of the rents is 191 dr. For the third century we have only one contract for lease of two pigeon cotes. The rents is 400 dr. The rent per unit may be 200 dr.

To sum up our discussion, we can conclude that: a) If we compare the rents of houses and the prices of houses, we find from the available references that the level of the rents in some cases is very high compared with the purchase value of some houses. b) The level of the rents in some cases is very high while in other cases it is very low. For instance, the rent of a room is 22 dr., 26 dr. and 30 dr. (P.Ross.Georg.II 35), while in another text is 108 dr. and 156 dr. (P.Mich.XI 620); the rent of some houses is only 40 dr. and 80 dr. In some cases the tenant is able to pay his monthly rent easily. Sometimes he needs to work one day in order to pay his monthly rent while at other times he needs to work about a month in order to pay his annual rent (P.Ross Georg.II 35) or between 54 and 78 days (P.Mich.XI 620). Sometimes the tenant also pays less for the rent than for his poll tax. c) The level of the rent of the workshops and the other economic premises is generally higher than the level of the rent of houses or even more than the value of houses.

Oxyrhynchus

Date	Period	Rent	Object	Place	Document
A.D.29	-	interest on 160 dr.	1/3 of two storey house, yard and courtyard	Oxy.	SB VIII 9827=13042
44	-	interest on 400 dr.	share of a house	,,	P.Fouad 44
48	-	interest on 72 dr.	premises ?	,,	SB V 8034
48/9	-	-	rent receipt	,,	P.Oxy.X 1321
68	-	interest on 80 dr.	house, pylon, roof and court	,,	P.Oxy.XIV 1641
81	-	interest on 430 dr.	rooms ?	,,	P.Oxy.369=JJP.13, 1961, pp.33
81/96	3 years	interest on 400 dr.	3/5 share of a three storyed house, court, well and other fixture	,,	P.Oxy.VIII 1105= P.Oxy.339
I/II	-	-	premises ?	,,	SB XVI 13041
109	-	140 dr.+ 1 chous of oil and other payments and obligation	oil press	,,	PSI IX 1030
137	4 years	payment in kind plus 60 dr.	vineyard, and 2 rooms	,,	P.Oxy.IV 729
159	-	36 dr. part of the rent	bath	Kerkem-unis	P.Theon.16

Date	Period	Rent	Object	Place	Document
164	1 year 6 months	200 dr. per year	house, yard, 2 courtyard, well and portico	Oxy.	P.Oxy.III 502
173	2 years	20 dr.per year	dining-room and storeroom	Oxy.	P.Oxy.VIII 1128
175/6	5 years	300 dr. yearly, 4 cock,8 hens,100 eggs,plus 8 dr.for libation	camel stable turned into fowl- house	„	P.Oxy.IX 1207
181	1 year	9 ob.per day=45 dr, per month =540 dr. per year	share of pottery, sheds and well	„	P.Mert.II 76
183	4 years	60 dr.per year	upper room,pigeon house and ladder	Mouch- enor	P.Oxy.VIII 1127
195/6- 221/2- 225/6	-	lost	premises ?	Oxy.	P.Harr.II 225
II/III	5 years	72 dr.per year	1/2 share of a house ?	„	P.Oxy.XLIV 3200
214	-	80 dr.per year	2 rooms	„	P.Yale.I 69
222	-	104 dr.+ 20 dr.for repairs	vegetable shop	„	P.Oxy.XII 1461
226/42	-	-	1/2 share of a house	„	P.Köln III 150
233 or 265	2 year	-	1/2 share of a house,yard and courtyard	„	P.Oxy.VI 911
235	1 year	60 dr.per year	cellar and the space above the hall	„	P.Oxy.VI 912

Date	Period	Rent	Object	Place	Document
243	2 years	32 dr.as a wage of producing 100 jars ¹	pottery, storerooms	Senepta	P.Oxy.L 3595
1 half III	3 years	-	house and court- yard	,,	SB IV 7442
219/55	1 year	36 dr.as a wage of producing 100 jars ²	1/4 share of pottery, kiln..	Sinnis	P.Oxy.L 3596
256	5 years	as for 1) dung: 1st year half of dung from 2nd year: 2/3 of dung. 2) doves increase yearly: 6, 11, 16, 20, 26 pairs	pigeon house	Oxy.	SB V 7814
258	-	-	house and land	,,	P.Oxy.XX 2284
259	-	17 dr. 1 ob. monthly = yearly 206 dr. 5 ob.	wardrobes in municipal baths	,,	P.Giss.50
260	1 year	32 dr.as a wage of producing 100 jars	1/3 share of pottery, kiln, storehouses	Sinnis	P.Oxy.L 3597
261	-	8 dr. per month=96 yearly	workshop	Oxy.	P.Oxy.XVII 2109

1) See the discussion

2) see the discussion

Date	Period	Rent	Object	Place	Document
263	6 months	220 dr.	camel sable	,,	P.Oxy.VI 964
273	2 years	400 dr. yearly	house, court, and appurtenances except a room and plot.	,,	P.Oxy.VII 1036
280	6 years	1000 dr. yearly	house	,,	P.Oxy.XIV 1694
257/59	-	535 dr. monthly	wardrobes in municipal baths	,,	P.Flor.I 63
III	1 year	not stated	a house	,,	P.Mich.inv 1355v=ZPE 30 (1978) pp.191-2.
III	3 years	140 dr. yearly + suckling pig worth 32 dr.+ 2 minae of pork monthly	2 rooms, well and vacant lot	,,	P.Giss.49
III	4 years	-	courtyard	,,	P.Oxy.XIV 1693
III	5 years	-	house, and yard	,,	SB XVI 12268
III	-	24 art.of wheat	workshops	,,	P.Oxy.IX 1668 = Sel.Pap.150
III/IV	-	260 dr. yearly	rooms	,,	SB IV 7444

From Oxyrhynchus we have 40 papyri which are concerned with the lease of houses, shares of houses, and the other economic premises, such as sheds, pigeon cotes, potteries, workshops, baths... etc., from the first and the second

centuries eight documents each, 24 from the third century. From the Fayum, there is more evidence for the first two centuries than for the third. 22 documents deal with the lease of houses or shares of houses, while the remainder deal with economic buildings. The documents concern the period between A.D.29 and 280.

I shall begin with leases of houses and shares of houses. We draw our information from: lease contracts, rent receipts, antichretic loans with the right of habitation. The table lists six documents which deal with the antichretic loans with the right of habitation. They date from A.D.29 to 81-96. We do not have any evidence from 30 B.C. to A.D.28, or after the first century. This group of documents represents all our sources of leases from the first century. It is noticeable that our early references from the Fayum nome, are also antichretic loans. Why did the people adopt this type of deeds? Is this by accident, as a result of discovering or publishing the papyri? Or do the people prefer this type of transaction to the normal contracts ? Perhaps new papyri will be published in the future about the lease of houses from the early period of the Roman era. If this happens, it means that our evidence came to us by accident. If not, it means that the people preferred this type of deeds to the normal ones during the early period of the Roman Rule. The reason behind it might be also some official ban on house property.

The fourth document, P.Oxy.369 =JJP.13 (1961) pp.33-38 (A.D.81), is an antichretic loan of 430 dr., in lieu of interest thereon, the creditor-tenant has the right to occupy the rooms (τόποι) of the borrower-lessor. If the annual interest is 12%, the annual rent is about 52 dr.

The fifth papyrus, P.Oxy.XIV 1641 (A.D.68), is an antichretic loan of 80 dr., in place of interest the creditor-tenant has the right to inhabit the debtor's house, pylon, roof, court and the other appurtenances of the house. When the borrower repays the loan, the lender is to surrender the house within 60 days. If the annual interest is 12%, the annual rent is 9 dr.4 ob.=4 5/6 ob. per month.

The sixth reference, P.Oxy.VIII 1105=339=P.Lond.805 (A.D.81-96), is an antichretic loan of 400 dr., instead of the interest the lender-tenant enjoys the right to occupy a 3/5 share of a three storey house, below which is a cellar, court, and stone-well and other fixtures for a period of three years. The lessor pays the annual charge for the renewal of the mortgage. If the annual interest is 12%, the annual rent is 48 dr.=4 dr. per month. For the whole house, the annual rent would be 80 dr.=6 dr.3 ob. per month.

To sum up: the antichretic loans vary between 72 dr. and 430 dr. In some papyri the description of the property either is not given or not very detailed making it difficult to account for the wide variations in loans and

interest (rent). For example, 1/3 share of a house was given to the creditor in place of interest of a loan of 160 dr., while a house was granted to the lender in place of interest of a loan of 80 dr. The rents vary between 9 dr.4 ob. and 80 dr. The high variation must reflect the large variation in the value of the houses. If we make a comparison between the amount of the antichretic loans in the Fayum nome and Oxyrhynchite nome, we find that they are higher in the second than in the first.

From the second century, there are only four leases of house property, one from A.D.137 and the remainder is from A.D.164 onward. The first document, P.Oxy.IV 729 (A.D.137), mainly deals with the sublease of a vineyard for 4 years and χέρσαμπέλος for 2 years. The contract contains a clause by which two rooms in the farmhouse are secured to the lessees. The rent of the vineyard is half of the wine produce in addition to 50 jars of wine and perhaps a sum of money or corn, while the rent of χέρσαμπέλος is 60 dr. and perhaps half the produce. The document does not mention the rent of the two rooms. It is probable that the lessor included their rent when he estimated the rent of the land.

The second papyrus, P.Oxy.III 502 (A.D.164), is a lease of a house, court, and two courtyards in which there is a well and portico and its appurtenances, for a period of 18 months at an annual rental of 200 dr. The tenant pays it in two instalments at the conclusion of each six months. The monthly rent is 16 dr.4 ob. The amount of rent here is

very high compared with the prices of houses in this period. For example, the price of a house in Oxyrhynchos is 500 dr. (P.Oxy.III 505 A.D.179), while in Arsinoe the price is 400 dr. (SPP XX 10 A.D.168). That means that the rent is equal to 40% of the value of the first and 50% of the second. But we must not forget the factors that play a role in estimating the rent and the price as well. Perhaps the house here is very large and well founded.

The third document, P.Oxy.VIII 1128 (A.D.173), from the village of Sepho, deals with a lease of a (*συμπόσιον*⁴) dining room and a room within it for a term of two years at an annual rental of 20 dr., corresponding to just 1 dr. 4 ob. per month. The tenant pays the rent at the end of each year. This sum, less than the daily wage, is one fifth of the price of a symposium in P.Strass.14=P.Monac. 84 (A.D.211) sold for 100 dr.

The fourth reference, P.Oxy.XLIV 3200 (II/III cent. A.D.), is concerned with a lease of a half share of a house for a period of 5 years at an annual rental of 72 dr. The tenant pays the rent in two instalments at the end of each six months. For the whole house, the annual rental would amount to 144 dr. or 12 dr. per month.

In the above texts the annual rent of houses varies between 144 dr. (II/III cent.A.D) and 200 dr. (A.D.164).

4) G.Husson, Op.Cit.pp.267.

For the third century, the table records 12 documents; in 5 of them, the rent is lost. The remainder are as follows:

P.Yale I 69 (A.D.214), deals with a sublease of 2 rooms in Claudia Isidora's house which the lessor himself has leased. The annual rental of the two rooms is 80 dr.= 6 dr.4 ob. monthly. The rent is not very high if we compare it with the rent of the single room in P.Mich.XI 620, where it is 108 dr. yearly, and the rent of the double room is 156 dr. per year. Assuming that the rent of the two rooms in P.Yale I 69 is equal, it amounts to 3 dr. 2 ob. per room per month.

P.Oxy.VI 912 (A.D.235) is concerned with a lease of a cellar in a house with the space above the exedra for a term of one year at an annual rental of 60 dr.= 5 dr. per month. We do not know for what purpose the tenant leases the space above the exedra and how big is it.

PSI VIII 940 (A.D.266) is a petition in which it is stated that for 13 years the tenant did not pay the rent for a share of a house. The total rent of the whole period is 2600 dr., so the annual rent of a share of a house is 200 dr., but we cannot assess the total rent of the house because we do not know how big the share is. It is very odd that the lessor apparently did not collect the rent for 13 years.

P.Oxy.VIII 1036 (A.D.273) deals with a lease of a house and yard and courtyard and all the appurtenances,

except a room beneath and the room for a kiln, for a period of two years at an annual rental of 400 dr. The monthly rent is 33 dr.2 ob., or slightly more than 1 dr. per day, and this sum is less than the daily wage during that period.

P.Oxy.XIV 1694 (A.D.280) deals with a lease of a house, yard, courtyard, in which there is a well for a period of 6 years at an annual rental of 1000 dr. The monthly rent is 83 dr.2 ob. This rent represents one of the highest rents we have for a complete house in Oxyrhynchus, it reflects the accelerating inflation.

P.Giss.49 (III cent.A.D.) is concerned with a lease of a vacant space in which there are two rooms and a well for a term of three years at an annual rental of 140 dr., plus the additional payment of 2 minae of pork monthly, and a suckling pig for sacrifice worth 32 dr. The tenant pays the rent in two instalments. So the total rent is 140 dr.+32 dr.+24 minae of pork meat. Unfortunately there are no references for the price of pork.

The last papyrus in the group, P.Princ.inv.7548 (III/IV cent.A.D.)= JEA 14 (1928),pp.192., is an offer for the lease of rooms and an upper room of a house at an annual rental of 260 dr. which was payable in two instalments. We do not know how many rooms there were, or the proportion of these rooms to the rest of the house.

From the above references one can see that the level of the rents of houses or shares of houses during the third

century is higher than the level of the rents during the first two centuries. In A.D.273 and 280 the rents are more than 400 dr. and 1000 dr., a significant increase.

The second group deals with animal sheds: The table contains only 4 documents which deal with the lease of animal stables, 3 of them deal with the lease of stables of a fowl house and pigeon cotes and one deals with the lease of a camel stable. The dates range from A.D.175/6 to A.D.263. We do not have any evidence from the first two centuries of Roman rule. The documents do not give any information about the size of these sheds. The term of the lease is between 6 months and 5 years.

The first document, P.Oxy.IX 1207 (A.D.175/6) is a lease of a camel stable which was turned into a fowl house, excluding any parts needed for an oil press, for a period of five years at an annual rental of 300 dr. and an additional payment of 4 cocks and 8 hens in perfect condition, as well as 100 eggs and a donation to the lessor's slaves of 8 dr. for libation (*σπονδή*) As I have already mentioned before, it is not easy to estimate the value of the chicken and the eggs⁵ because of the scarcity of the references, and the prices might vary from one area to another. If we suppose the price of a chicken to be about 4 dr.⁶, the price is about 48 dr. Although we cannot

5) For the price of eggs and the variation of the price see, P.Mich.II 123, the price of 5 eggs is 2 ob. and the price of 30 eggs is 10 ob.

6) See n. 51 in Chap.II.

estimate the price of eggs because of the lack of evidence, it seems that it was very low. Anyway the rent of the stable is about 348 dr. without adding the price of eggs. If we compare the rent of the stable and the rent of houses from this period, we see that the rent of the stable is higher than the rent of houses. Why did the lessor turn the camel stable into a fowl house ? It seems that the rental market for camel stables was not prosperous, so the owner preferred to offer the stable for lease as a fowl house.

The second document, P.Oxy.VIII 1127 (A.D.183), is a lease of an upper room of a house and pigeon cote with wooden ladder for a term of 4 years at an annual rental of 60 dr. The monthly rent is 5 dr. We do not know for what purpose the tenant used the room (τόπος ⁷)? It is clear from the terms (ἐνοικίου καί φόρου ⁸) that the tenant was to live in the room. We cannot tell how much the rent of each object was.

The third document, SB 7814 (A.D.256), is a lease of a pigeon house for a term of 5 years , the lessor undertakes to furnish one art. of wheat and one art of barley per year. The lessees bind themselves to feed and care for the pigeons. It is stipulated that the quantity of dung and number of doves to be delivered as rent is to increase yearly as follows:

7) G.Husson, Op.Cit.pp 276.

8) Müller, Op.Cit.pp. 196, S.V.Bolla, Untersuchungen zur Tiermiete und Viehpacht im Altertum, pp.17, Berger, Op.Cit.pp.342.

In the first year: a) one half of the dung, b) six pairs of young pigeons.

In the second year: a) two thirds of the dung, b) eleven pairs of young pigeons in three instalments; 5 in Pachon, and 3 in Payni and 3 in Epeiph.

In the third year: a) two thirds of the dung, b) sixteen pairs of young doves in three instalments; in Pachon and Payni 5 pairs each month, and 6 in Epeiph.

In the fourth year: a) two thirds of the dung, b) twenty one pairs of young doves in four instalments; in Pachon, Payni and Epeiph 5 pairs and 6 pairs in Mesore.

Finally in the fifth year: a) two thirds of the dung, b) twenty six pairs in four instalments; 10 pairs in Pachon, 5 pairs in Payni and Epeiph each month, and 6 pairs in Mesore.

This increase in the number of pigeons to be delivered probably bears some relation to the increase of the flock's number. Within each year young birds are to be delivered in varying quantities during the months of Pachon, Payni, Epeiph, and Mesore. This indicates that the pigeon bred mainly during these months. The lessor furnishes 2 art. of wheat and barley per year for feeding the pigeons. The editor assumes that the aim of the owner is to guarantee

the proper feeding and preservation of the flock of pigeons⁹. This contract is a shared contract, and that type of transaction still exists nowadays. When the owner gives 2 art. of corn, that means that he wanted to increase his share of the production of pigeons. It is impossible to estimate the value of the dung and the pigeons because a) we do not know the quantity of the dung and there is also no evidence for the value of dung. b) the price of the pigeon is scarcely mentioned in the papyri¹⁰.

The fourth papyrus, P.Oxy.VI 964 (A.D.263), deals with a camel stable for a period of 6 months at a total rental of 220 dr. equivalent to 36.66 dr. per month or 440 dr. per year. The rent here is more than the rent of the houses.

The third group deals with baths. Both the private and the public baths were frequent in the Oxyrhynchite nome¹¹. The private owners exploited their baths either directly or indirectly (P.Theon.3,15), while the government or the cities offered their baths for lease. The evidence covers the period between A.D.159 and 259.

The first papyrus, P.Theon.16 (A.D.159), from Kerkemunis, gives us 36 dr. as an interim payment of the rent of a private bath. Unfortunately we do not know the total rent of the bath.

9) K.S.Gapp, Lease of a Pigeon house with brood, TAPA 64 (1933) pp.89 note.11.

10) In P.Oxy.IV 736 (A.D.1) the price of a pigeon is 1 ob. We can not use the price here as evidence because its date is very early. In BGU XIII 2357 (III cent. A.D.) the price of a dove is 20 dr. H.J.Drexhage, Zur Preisentwicklung im römischen Ägypten von ca 260 n.Chr. bis zum Regierungsantritt Diokletians, Münst.Beit.zur Ant.Hand.VI 2 (1987) p.37.

11) J.Krüger, Op.Cit.pp.315,p.368.

The second reference, P.Giss.50 (A.D.259), is an offer for the lease of two cloakrooms $\kappa\alpha\psi\alpha\rho\iota\alpha$ at a monthly rental of 17 dr. 1 ob.= the annual rental is 206 dr. We do not know how much the rent of the whole bath was.

Finally the third document, P.Flor.I 63 (A.D.257/ 259 (BL.VII p.49) tells us that a cloakroom attendant pays the monthly rental of 535 dr. for the cloakroom(s) ? in the municipal baths ? The document does not give the number of the rooms and this rent is very high. The annual income of the city from this contract is 6600 dr.

From these documents one can see that some lessees leased the whole bath and others leased part of the bath. The lessee pays the rent either monthly or in instalments. The rent here is very high compared with the rent of houses.

The fourth group deals with industrial buildings. The table lists us 6 documents, four of them concerned with the lease of potteries; one deals with the lease of an oil press, and another is concerned with the lease of a workshop.

As for the potteries¹², they date from the period between A.D.181 and 260; we have no references from the first two centuries of the Roman era.

The first papyrus, P.Mert.II 76 (A.D.181), is an offer for the lease of a share of a pottery (?), the entire

¹² The potters appear in a number of papyri from the city and from the nome (P.Oxy.XLI 2996 II cent., P.Theon.9 and 12.

management of part of the factory and all appurtenances, including premises built from stone (οικοδομηματα¹³) and a well, the tenant inhabits the sheds. The daily rent is 9 ob., the monthly payment is 45 dr. and yearly 540 dr. The document contains some interesting points: 1) it describes the rent as (ενοικιον). 2) the tenant and his family inhabit the sheds, so he runs his business from the workshop and lives nearby. 3) it is the only papyrus which gives the payments of the rent per day. We cannot calculate the total income of the whole property because the document only describes the property as a share.

The second document, P.Oxy.L 3595 (A.D.243) from Senepta, is a lease of a pottery and store rooms, kiln, potters'wheel and all other equipments for the term of two years, the lessee accepts to produce yearly 15000 Oxyrhynchite four chous pots, 150 double ceramia and 150 two choes jars. The lessors provide all the materials, friable earth, sandy earth and black earth, sufficient firing materials for the kiln, water for the cistern and for coating with pitch 26 talents in weight by measure of Aline for 10000 jars. The lessee provides the potters, assistants, stokers and receives only 32 dr. per 100 pots as a wage for the ceramia and 2 ceramia of wine and ceramia of sour wine as special payment for 10000 jars . The total wage is 4800 dr. The lessors pay in monthly instalments

13) G.Husson, Op.Cit.pp.193.

from Thoth to Pachon (400 dr. monthly). The lessee also receives 1200 dr. for refiring in three instalments; 500 dr. in Payni and Epeiph each and the remaining 200 dr. in Mesore. The document contains some interesting points: 1) there is no mention of the rent (φόρος) but (μισθός¹⁴), and the wages (4800 dr.) will be paid for the 15000 jars only, while there is no mention of the wages for producing 150 double ceramia pots and 150 two choes pots. The editor assumes the additional payments in kind (ἔκτρακτα¹⁵) are equal to the wages for producing the 300 jars,¹⁶ but this assumption can be dismissed because the lease contracts usually mention the rent and the additional payment separately, besides which, if we account the value of the wine and the lentils, it will be less than the wages of the potters¹⁷. 2) the lessors provide the lessee with the necessary material which the latter needs to produce the quantity of jars mentioned above or any other quantities which the first demand, 3) Here the question arises: Is this type of contract a labour contract¹⁸, or is it really a lease contract, or is it a mixture of both? The following considerations suggest that it is a lease

14) See S.V.Bolla, Op.Cit.pp.7.

15) See Müller, Op.Cit.pp.216.

16) H.Cockle, Pottery Manufacture in Roman Egypt, JRS.71 (1981) p.91.

17) See Johnson,Op.Cit.pp.315, the price of the wine varies between 9 dr.1 ob. and 11 dr. per ceramion. and for the lentil the price is per art. is more or less 16 dr.

18) J.Hengstl, Einige Juristische Bemerkungen zu drei Töpferei-Mieturkunden, Studi Biscardi,IV 1983,pp.665, K.Strobel, Munst.Beit.zur Ant.Hand. VI 2 (1987) pp.92-97.

contract rather than a labour contract: 1) The lessee leases the pottery and its appurtenances among which are storerooms. 2) The capacity of the factory is higher than producing the quantity mentioned above and this is clear from this clause '' If over and above the aforesaid number I make other jars and you have need of them...' ', so there is no restriction from the side of the lessors upon producing jars for the private account of the lessee whenever he wishes. 3) It might be that the lessors owned the pottery factory, were in need of the quantity of jars mentioned above, instead of using it directly, they offered it for lease, and although there is no mention of the rent in the contract, one can assume that either the wage for producing 300 jars represents a part of the rent, or the wage of the lessee is less than the real wage, so the rent represents the difference between the wage stated above and the real wage, moreover the lessee has the right to produce any quantity for his private account whenever he wishes, in return for this right, he accepted to produce the jars needed by the lessors on condition that they supplied him with all materials. Anyway the contract serves two purposes for the lessors: a) The lessors secured sufficient supplies of jars and paid the cost of the production. b) They exploit their factory. As for the lessee, the contract has the following positive points: a) He secured to receive a permanent income for himself and his assistants. b) He can increase his income by exploiting the full capacity of the

plant for his private account or when the lessors need extra quantities of jars. The next two documents follow the same pattern.

The third papyrus, P.Oxy.L 3596 (A.D.219-255) from Sinnis, deals with the lease of 1/4 share of a pottery, kiln, storehouses and all its appurtenances for a term of one year. The lessee will make for the lessor, fire and coat with pitch what are called Oxyrhynchite four choes jars to the number of 4000, 100 double jars, and 15 two choes jars. The lessor supplies the black earth, friable earth, and sandy earth and water for the cistern and the necessary firing material for firing and smoking of the jars and for coating the same jars and double ceramia and two-chous jars with pitch twelve standard talents in weight¹⁹. The wages for making, firing, and coating with pitch is 36 dr. per 100 pots. The total wage is 1400 dr. which the lessor pays in two instalments plus one ceramion of sour wine and (X) artab(s) ? of lentils. From the last part of the document it is evident that the lessee owes from the production of the past 2nd year 250 jars, 50 double ceramia... , one bare talent of pitch from Siris and... the current....jars. We do not know whether the conditions of the lease of the share of the pottery during the previous years were the same or not. The wage for

19) half of it is to be Troadension ? pitch and half from Siris.

making the jars here is higher than in the previous document.

The fourth reference, P.Oxy.L 3597 (A.D.260) from near Sinnis, deals with a lease of 1/3 share of pottery, kilns, storehouses and all appurtenances for one year. The lessee makes 8000 pots of Oxyrhynchite 4- chous, 100 double ceramia, 30 two chous jars , and he makes another 100 jars. The lessor provides the black earth, sandy earth, friable earth and the necessary firing material, pitch, water for cistern. The lessee receives from the lessor 2560 dr. The lessee will deduct 700 dr. The lessor pays the remaining sum of 1860 dr. in a monthly instalment of 200 dr. between Thoth and Tybi, in Mecheir 300 dr. and in Epeiph and Mesore for stoking the remaining 500 dr. The lessor also gives him 2 ceramia of sour wine and an artaba of lentils.

These three contracts are a mixture between leases and labour contracts, but they are nearer to the lease than to the labour deed. The lessor supplies the pottery, storehouses, kiln, wheel, yard, and the other equipments, clays, firing material, water and pitch. The lessee supplies the workmen and manufactures a specific number of 8- chous, 4- chous, and 2- chous pots. The wages for manufacturing pots vary between 32 dr. and 36 dr. plus an additional payment. It seems that it is less in P.Oxy.L 3597 than 3596 because the lessor in P.Oxy.L 3597 supervised the coating of jars with pitch. The quantities of jars are strikingly large. We find the capacity of the

first plant is higher than 15000 jars of 4- chous, 150 jars of 2 chous, and 150 pots of 8- chous. The capacity of the second is at least 16000 jars (4- chous), 60 jars (2- chous), 400 jars (8-chous). The capacity of the third is at least 24000 jars (4-chous), 105 jars (2-chous), and 300 jars (8-chous).

The table contains one reference, PSI IX 1030 (A.D.109), which deals with a lease of an oil press with its equipment in a private house for a term of two years at an annual rental of 140 dr., 1 chous of oil from the pressing, 100 pressing of refuse (πιάσματα) ?, 1 keramion of ointment, oil pressing without cost of 8 art. of vegetable seed. If the lessors desire oil, they shall receive it at the price current at the time in their own measure up to 5 choes. If any part of the press is broken, the lessors will give the amount of the cost of the part, while the wages of the carpenters will fall on the lessee. The annual rent will be paid within 5 months, between Pharmouthi and Mesore, in a monthly instalment of 28 dr. The document contains several interesting points: 1) The lessee pays the rent in money and in kind. 2) He also will press 8 art. of vegetable seed at his own expense, but we do not know how much the cost of pressing an art. of vegetable seed is. 3) He will sell to the lessors up to 5 choes at the current price. One can conclude from this clause that the prices of the oil may vary from month to month. We can estimate the value of oil at between 7 dr.

and 11 dr.2 ob. (P.Giss.16, P.Amh.126). 5) It is difficult to estimate the wages of the carpenter because they depended upon how big the damages were and how much work was involved. If nothing went wrong the lessee saved paying additional expenses. One has to take into account all these direct or indirect payments when one wants to estimate the rent.

There are also two references to leases of workshops: P.Oxy. XVII 2109 (A.D.261) is an offer to lease a workshop belonging to the city with a view to opening a tavern for a period of one year at a monthly rental of 8 dr.= 96 dr. yearly. We do not know whether the authorities accepted this offer, or whether there was another offer.

P.Oxy.XIV 1668 (III cent.A.D.), contains an interesting letter that describes some negotiations concerning certain workshops. It tells us that the co-owners hire workmen to do the work in the workshops. Although the co-owners increased their wages (in kind) one and a half times, the workers did not agree on the new terms because of the low value of the corn. From this one can conclude that the wages of the workers were in kind. One of the two co-owners offers to rent the share of the other and offers 12 art., so the rent of the workshops is 24 art., but we do not know the number of these shops or whether the rent is monthly or interim or an annual payment. On the base of the average price of wheat during the third cent., which is 18 dr. per art., the value of the rent can be said to be approximately 432 dr.

Finally P.Oxy.XII 1461 (A.D.222) gives us information about the rent of a vegetable shop. The lessee paid for the rent 104 dr. in five instalments (20, 20, 20, 20 and 24 dr.), and for repairs 20 dr. The total payment is 124 dr. We do not know the clauses of the contract. The editor assumes that the lessee was responsible for the cost of repairs, but it is more probable that the lessee deducted the cost of repairs from the rent. If he was responsible why did he record the cost? Perhaps the agreement contained a clause which gave the lessee the right to deduce the cost of repairs otherwise there was no need to mention the cost of repairs and add it to the total payment.

Next let us try to draw the average²⁰ of the rents in Oxyrhynchos. For rent of houses, the first cent. gives six references²¹, the rents vary between 9.6 dr. and 80 dr. the average of the first cent.49 dr. For the second cent. the table gives us two references. The rents vary between 144 dr. and 200 dr. The average is 172 dr. For the third century the table gives 8 references, but only two rents are stated. The rents vary between more than 400 dr. (P.Oxy.VII 1036 A.D.273), and 1000 dr. (P.Oxy.XIV 1694 A.D.280). The average is about 700 dr.

20) It is not easy to take the average from two or three references.

21) I disregarded P.Fouad 44, SB V 8034, P.Oxy.II 369 because we do not know the proportion of the property.

For the rent of the rooms, the table gives us two references for the second cent., but the rooms are mentioned with other objects. The rents vary between 20 dr.²² and 60 dr.²³ The third cent. gives us six²⁴ references. The rents vary between 40 dr. (P.Yale I 69 A.D.214), and 60 dr. (P.Oxy.VI 912 A.D.235). It is not easy to draw the average of the rents of the shops, workshops, stables.. etc. This is because we have only either one piece of evidence or the rent was paid in kind, however let us try to draw the average for the camel stables. The table gives us two references. The rents vary between 348 dr.(P.Oxy.IX 1207 A.D.175/6²⁵) and 440 dr. (P.Oxy.VI 964 A.D.263).

To sum up our discussion. The rents of houses vary from house to house for the following reasons: condition, size, location of the house, and finally the economic condition of the area. From our references we find that the rents of the third century are higher than the rents of the first two centuries. Fig.no.19 indicates that the curve reaches its highest top during the second half of the third cent. As for the business premises: 1) the rents of animal sheds also vary from one stable to another. The level of

22) In P.Oxy.VIII 1128 the rent of a dining room and storeroom.

23) In P.Oxy.VIII 1127 the rent is for an upper room and pigeon house and ladder.

24) Four of them do not mention the number of the rooms (P.Giss.50, P.Flor.I 63, P.Giss.49, SB IV 7444).

25) The stable used to be as stable for chicken.

rent generally is not only higher than the level of the rent of houses, but also than the purchase prices of some houses. Fig.no.20 indicates the great variations between the animal sheds. We find the curve goes up and down. this might be due to the size of the stables and what sort of animals or birds they housed. As for the business premises, we find that there is a variation in their rents; this is because of the size and the condition and the capacity and the location of the factories or the workshops. Their rents are not only higher than the rents of the houses but also than the prices of some houses.

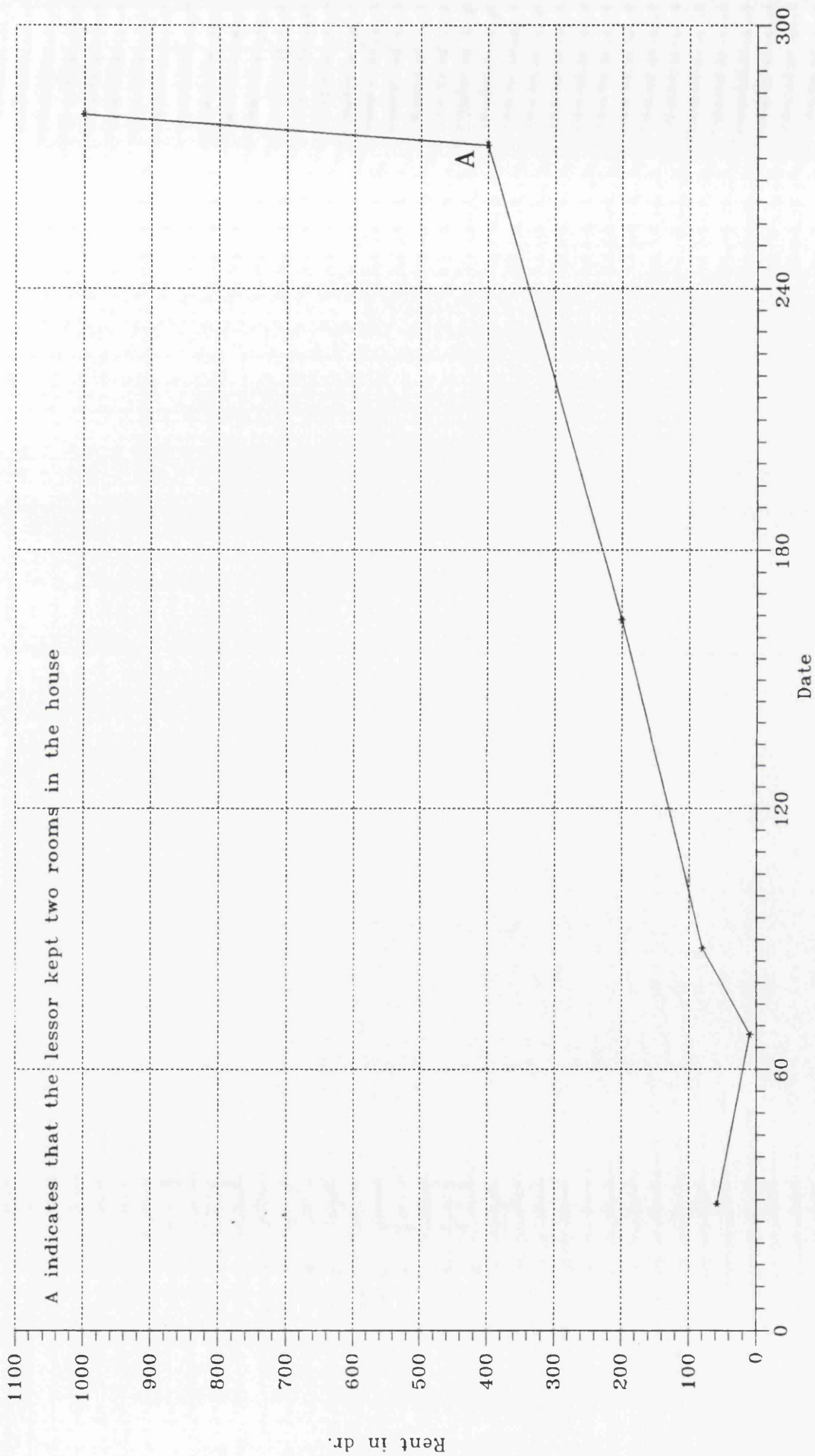


Fig.(19) House Rent in Oxyrhynchus

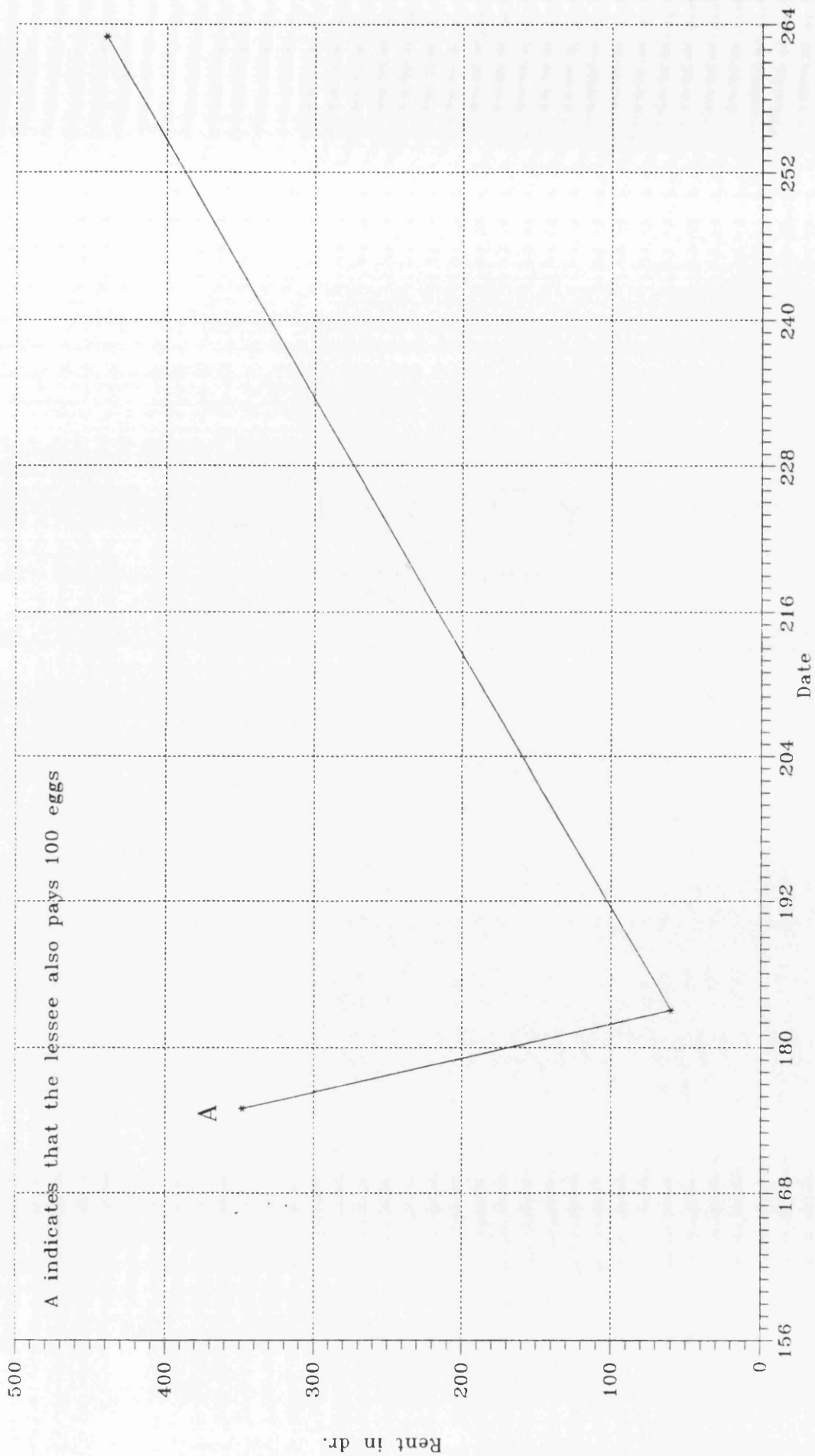


Fig.(20) Rent of Animal Sheds in Oxyrhynchus

c) **Hermopolis**

Date	Period	Rent	Object	Place	Document
A.D.18	4 years	interest on:220 dr.	1/6 house,court	Herm.	P.Lond.1168 (III p.135)
83	-	100 pigeons per year	pigeon house	,,	P.Flor.III 361
148	1 year	lost+ 6 dr.	half street+ half sitting-room	,,	P.Vind.Sal.11
first half II cent.	1 year	100 dr. monthly	dining- rooms+ storerooms or bedrooms	,,	SB X 10278
167	5 years	interest on:600 dr.	10 1/2 ar.+ 1/4 house	,,	P.Ryl.II 120
late II	3 years 7 months	lost	pottery	Herm.	P.Tebt.II 342
253/68	2 years	96 dr.per year	new house	,,	SPP V 119R III
260	5 years	40 dr.per year	vacant lot	,,	P.Lond.954 (III p.153)

From Hermopolis, we have eight papyri dated between A.D.18 and 260. Five documents deal with the lease of houses and shares of houses, the other concern a lease of a pigeon house, a pottery, and finally a vacant lot.

As in the Arsinoite and Oxyrhynchite nomes, the early sources tend to take the form of the antichretic loans with the right of habitation. The table gives us two documents which deal with antichretic loans, dated A.D.18 and 167 respectively.

The first document, P.Lond.1168 III p.135 (A.D.18), is an antichretic loan of 220 dr., in lieu of interest the creditor-tenant has the right to lease the sixth share of a house, court and its appurtenances for a term of 4 years. It is also stipulated that the tenant may still enjoy the right of occupation or subletting to others if the capital is not paid. At the standard rate of the interest (12% annually), the rent of the whole house would be 158 dr. 3 ob. yearly.

The second reference, P.Ryl.II 120 (A.D.167), is concerned with an antichretic loan of 600 dr. Instead of interest the creditor-tenant enjoys the right to cultivate 10 1/2 ar. and the right to occupy 1/4 share of a house, court and the appurtenances for a period of 5 years. It is not easy to estimate the rent of the share of the house.

Three documents deal either with lease of house property or give some information about the rent of house property.

P.Vind.Sal.11 (A.D.148²⁶) is a lease of a half street and half a sitting-room (ἀνδρῶν²⁷) for a term of one year at an annual rent of (x) dr. The tenant pays half of the cost of a door with a value of 12 dr.

SB X 10278=P.Brem.Inv.8 (first half of the second century A.D.), is a letter which contains information about a lease of an unspecified number of dining rooms and rooms

26) BL.VII p.278.

27) G.Husson,Op.Cit.pp.37.

which were used either as storerooms or as bedrooms for a period of one year. As a result of nobody staying or dining in them for two months, the tenant lost 200 dr. In order to avoid more losses he wants to cancel the contract and hopes that someone wishes to rent the property. The amount of 200 dr. is a rent for two months, so the yearly would be 1200 dr. We do not know what was going to happen if the lessor refused to cancel the contract. Did the tenant have to pay the rent of the premises for the whole term of the lease? From other documents²⁸ it is evident that he had to pay the rent, but here he is hoping that a new tenant will offer to rent the property. If no one wants to take over, the first tenant might have to pay the rent of the whole period.

The third papyrus, SPP V 119 R III (A.D.253/68) is an offer of lease for a new one storey house for a period of 2 years at a monthly rental of 8 dr.= 96 dr. per annum. If we compare between the rent in P.Lond.1168 III p.135 (A.D.18) and SPP V 119R III (A.D.253/68), we see that the rent of the former is 1.65 times of the latter, although the period between them is about two centuries and half. This seems also amazingly low compared with rents in Oxyrhynchus and the Fayum in mid 3rd century.

28) See P.Lond.361

There are two texts concerning commercial property. P.Flor.III 361 (A.D.83), is a lease of a pigeon house at an annual rental of 100 pigeons.

P.Tebt.II 242 (late II cent.A.D.), which contains a lease of a newly fitted pottery with all equipments and stones and supplied with every thing including two potters tools ? and as many doors in with the vacant lot surrounding the pottery for a term of 3 years 7 months. The rent consisted of a certain quantity of manufactured earthenware of a specified pattern, for the first 7 months the rent is (x) pots, and for the 3 years at annual rental of 1...pots. After paying the annual rent the lessee delivers at the price of (x) dr. 2000 pots in good order. An advance was made to the lessee of 640 dr. in three instalments and free of interest. One can conclude from the document that there is a variation in the rent of the pottery. It seems that the level of rent of the first seven months is less than the rent of the following three years. Since the lessor will receive at a fixed price, its price is less probably than the current price of the market.

Finally Hermopolis gives us a piece of evidence, P.Lond.954 III p.153 (A.D.260), which is an offer for the lease of a vacant lot for 5 years at an annual rental of 40 dr. The papyrus does not give the size of the plot. We can not tell whether the rent of the vacant spaces is higher than the rent of the arable land or not. It seems from the prices of the vacant lots compared with the arable land

that the rent for the former is higher than the latter.

d) **Alexandria**

Date	period	Rent	Object	Place	Document
13 B.C	-	interest on 100 dr. plus 3 dr. 3 ob. monthly.= 54 dr.per year.	a room in a flat	Alex.	BGU IV 1115
„	2 years	720 dr.per year	house with work-shops	„	BGU IV 1116
„	1 year 4 months	120 dr.per year	bakery	„	BGU IV 1117

Alexandria only produces three documents all dated from 13 B.C.:

The first document, BGU IV 1115 (13 B.C.), deals with an antichretic loan of 100 dr. Instead of interest plus paying 3 dr.3 ob. monthly, the creditor enjoys the right of occupation of a room in a flat. If the monthly interest is 1%, the monthly rent is 4 dr.5 ob., so the annual income of the lessor is 54 dr. We do not know the number of the rooms of the flat. The rent here is higher than the value of some houses in the Fayum nome (P.Srassb.I 31).

The second document, BGU IV 1116 (13 B.C.), is a lease of a house and workshops for a term of two years at a monthly rental of 60 dr.=720 dr. annually. We do not know

how many workshops are in the house and how large the house is. Its high annual income suggests that its value is very high. If we compare between the rents in BGU IV 1116 (13 B.C.) and P.Oxy.VII 1036 (A.D.273), we see that the rent of the former is nearly 1.8 times of the latter. If we take into account the high rate of the inflation during the second half of the third century, we can say that it is very high rent. The rent here is higher than the value of several houses in the Fayum nome (Soknopaiou Nesos) during the first two centuries and even of some houses in Oxyrhynchus.

Finally the third document, BGU IV 1117, is a lease of a bakery with two ovens, bakery equipment and a baker's board for 16 months at a daily rental of 2 ob.= 60 ob. per month= 120 dr. per annum. The lessee pays for the repairs of the bakery and of X water-pipes and reed-thatching in addition to the rent paid for the location and taxes. They also accept not to abandon the lease within the term nor ever to build another bakery in the neighbourhood within a radius of five plethra of the bakery. Unfortunately we cannot estimate the cost of repairs, the taxes and the rent of the location nor do we know to whom the rent was paid. The total value of the lessee's obligations may have been considerably higher than 120 dr. per year.

One can see from these references that: a) The level of the rent in Alexandria was very high compared with the level of rent in the other nomes. b) The rents here are

higher than the value of houses both in the cities and in the villages. c) Finally one can also conclude that the value of Alexandrian houses are much higher than those in the other nomes.

e) The other nomes

a) Antinoopolis

Antinoopolis gives us one piece of evidence, P.Tebt.II 613 (A.D.154), which is a lease contract between a female inhabitant from Hermopolites and a landlord from Antinoopolis. The tenant paid 360 dr. for the previous rent and the new annual rent is 100 dr. We do not know the term of the previous lease and how much the annual rent is, so we can not tell whether there is an increase in the rent or not. Any way if we compare the rent and the prices of houses in Antinoopolis, we find that the rent is relatively high.

b) Heracleopolis

Heracleopolis produces two references which date from A.D.172/5 and A.D.253.

The first document, P.Heid.IV 297 (A.D.172/75) from the village of Ankyron, is a petition in which a landlady, who is a co-owner, asks the Epistrategos to stop the rent-collectors from pressing her to pay the sum of 3500 dr.,

being the accumulated rent of a half share of an old house which is sequestrated. She reports that she did not live in that share and appeals to the Epistrategos to order the rent-collectors to charge the rich heirs of the original owner. We do not know for how many years the rent was not collected, it seems that the value of the share is higher than the amount of the rent, otherwise, the authorities would confiscate it²⁹. Alternatively, it may be that after sequestrating the share and estimating its rent, the collectors forgot to collect the revenue. After an unspecified period one of the officials discovered the mistake, ordered the collectors to collect from the heir the accumulated rent in arrears which was a very large sum.

The second papyrus, SPP XX 53 (A.D.246), which deals with a lease of a 2/3 share of a house for a period of ... years at an annual rental of 160 dr. payable in four instalments. The tenant is not allowed to weave in the house except in the gate building. He has the right to weave 3 webs only, and if he wishes to weave garments for his own use, he has the right to weave up to 4 webs. The contract shows: a) The tenant inhabits the share. b) He is practising his trade in the house. The rent here might be high because the tenant is plying his trade.

29) Taubenschlag, ΓΕΝΗΜΑΤΟΓΡΑΦΙΑ in Greco-Roman Egypt, JJP.4, 1950, pp.70, O.Tebt.I 63 Introd.

c) Thebaid

Date	Period	Rent	Object	Place	Document
A.D.119	-	8 dr.3 ob.	-	Thebes	W.O.1420
123	-	24 dr.per year	-	"	O.Cair.GPW. 59
134	-	5 dr.2 ob. 2 ch.	-	"	O.Ashm. Shelton 15
136	-	1 dr.4 ob.	-	"	O.Lips.73
137	-	16 dr. per year	-	"	O.Tait.1101
139/140 140	-	4 dr. 2 dr.2 ob.	-	"	W.O.1580
144/5	-	1 ob.	-	"	O.Wilb.25
146	-	2 dr.2 ob. 2 ob.per month	-	"	Zereteli.O. 29=AP.4,pp. 177
149	-	lost	-	Syene	Zereteli.O. 30
late half of II cent	-	1 dr.5 ob. 2 ch.	-	Thebes	SB XII 11261
151	-	1 dr.3 ob.	-	"	W.O.644
160/1	-	5 ob.	-	"	W.O.654
188/9	-	1 dr.3 ob.	-	"	W.O.661
194 ?	-	1 dr.3 ob. per year	-	"	O.Amst.53
II cent	-	8 dr.3 ob.	-	"	W.O.671
212	-	lost	-	Eleph.	O.Tait.22
-	-	4 dr.1/2 ob.	three houses	"	W.O.292
III	-	4 dr.1/2 ob.yearly	-	Thebes	O.Tait.1102

The papyri do not give us any evidence about the lease of houses and industrial and business premises from Elephantine, Syene and Thebes. Fortunately the Ostraca give us evidence which indicates the existence and the flourishing nature of the rental market in Upper Egypt. They date from the period between A.D.119 and A.D.212. All the Ostraca are receipts for ἐνοίκιου which were issued by the public collectors.

However, the nature of the term ἐνοίκιου is a matter of dispute between the scholars who divide into four schools of thought.

U.Wilcken³⁰ believed that the receipts ὑπὲρ ἐνοίκιου could be only for: either a) the rents paid by the tenants to the government for houses owned by the latter, or b) a tax paid by private house owners upon the rent paid by tenants. Wilcken preferred the second interpretation which was accepted by other scholars³¹

C.Preaux³² was not convinced by Wilcken's explanation, and says it is odd to collect a tax called ἐνοίκιον with this nature together with other personal taxes. She considers it a μερισμός.

30) W.O.I p.192.

31) Hohlwein, L' Egypte Romaine, 1911, p.221; Wallace, Taxation in Egypt From Augustus to Diocletian, 1938, p.76; S.V.Bolla, Untersuchungen zur Tiermiete und Viehpacht im Altertum, 1940, p.21 note 2; H.Müller, Op.Cit.pp.200-1,p.281.; W.Boochs, Die Finanzverwaltung im Altertum, 1985,p.155

32) O.Wil.Brok.p.57.

J.Shelton³³ says that it is a charge called rent, ενοικιον, the exact nature of which still await clarification and suggests that it may have been a charge similar to μερισμος, designed to make up losses on government property which had been offered for rent but found no takers.

M.Rostovtzeff³⁴ says that it seems to be a rent collected from confiscated house property. Grenfell and Hunt, in editing P.Oxy.XII 1519, indicate that a payment recorded for ενοικιον is a rent on property owned by the government and refer to P.Oxy.XII 1461 (A.D.247/8) which record sums paid (100 dr.) for rent on a vegetable shop belonging to the imperial estate. A.Berger³⁵ adopted Rostovtzeff's interpretation and refers to P.Lond.972 (III p.212)³⁶ and BGU I 293³⁷.

Before discussing these interpretations, let us first state that: a) in most cases, the sums paid are not only rather small but also greatly varied (between 1 ob. and 24 dr.), but the total income is quite substantial. In O.Strassb.293 (II/III cent.A.D.) of unknown provenance, the

33) O.Ashm.Shelton, no.15, introd.

34) Grenfell and Hunt in editing P.Oxy.VI 986 (A.D.132) indicating that the payments recorded for rents of government's house properties, the payments are 12 dr. for a house and 4 dr. for 1/3 of a house. These houses were in the hands of οσσιακοι μισθωται; M.Rostovtzeff, in his study ' Studien zur Geschichte des roemischen Kolonates, 1910, p.140 note 2.' used P.Oxy.VI 986 as evidence against Wilcken's view.

35) A.Berger, Wohnungsmiete und Verwandtes in den graeko-aegyptischen Papyri, ZVglRWiss.p.348 note 93.; A.C.Johnson, Roman Egypt, p 561.

36) The editors adopt Wilcken's view.

37) Cf. W.Ost.I p.390.

total sum is 16 talents. In P.Lond.972 (III cent.A.D.) the total sum is 5 talents; b) in most cases, we do not know whether it is a monthly payment, or an instalment, or a yearly payment, c) The documents do not mention the nature of the premises except for one piece of evidence which records the payment (4 dr.1/2 ob.) for three houses W.O I 292); d) the sums paid for the account of ενοικιον were collected by πράκτορες ἀργυρικῶν, πράκτορες ἐνοίκιον, ἀπαιτηταί, and ἐπιτηρηταί³⁸.

It is obvious that Wilcken, Preaux and Shelton mainly build their interpretations upon the smallness of the payments, but they interpret the nature of the payment differently. If Wilcken or Shelton were correct, how many private houses were rented, or publicly owned houses were not rented in O.Strassb.293 and P.Lond.972? In O.Strassb.293, 16 talents entered into the account of ενοικιον and in P.Lond.972, 5 talents entered into the account of ενοικιον. If we suppose that the houses were similar to the houses in W.O.292., the average is 1.8 dr. So we would have 53,333 houses or if we account the average 10 dr. per house we might still have 9600 houses in O.Strassb.293. For P.Lond.972 III p.212 (III cent.A.D.), If we suppose the average is 1.8 dr. we would have 16,666 houses and if the average is 10 dr. we would have 3000 houses. It seems impossible and implausible to have such a

³⁸) D.H.Samuel, New editions of two Vienna papyri, BASP.14 (1976) p.123, see also P.Lond.972 III p.212; P.Heid.IV 297.

large number of private rented houses or publicly owned houses which found no takers in one area in Upper Egypt. As for the interpretation of C.Preaux who called it *μερισμός*, we cannot accept her view for the following reasons: a) it seems that the government exacted these taxes from the tenants of houses owned by the government, while it exacted the personal taxes from the private house owners (P.Oxy.III 502), so it is more economic for the government to collect these personal taxes and the rents of publicly owned houses together from the tenants. In papyri, P.Oxy.986³⁹, 1519⁴⁰, P.Fay.42 (a)⁴¹, BGU II 653⁴², we have the rent payments with personal taxes and land rents and taxes. b) The amounts of payments in most cases are not high and come in the plural form⁴³. c) It is obvious from P.Oxy.X 986 and XII 1519 that the *ἐνοίκιον* is a rent of a house belonging to the government. But for the large payments in O.Strassb.293 and P.Lond.972, we can assume that the government owned or sequestered a large number of

39) It is a list of rent of sequestered, royal, and estate lands and list of houses in the hands of lessee of imperial estates.

40) A list of arrears of taxation from various persons whose trade were generally stated. In ll 10-14 part of a similar list of arrears of rent for building owned by the state, the figures being omitted.

41) This document gives the name of no less than twenty five different taxes which imposed upon the trades, the lands and rents of sequestered houses.

42) This document includes payments for the account of poll tax, rent of imperial estate, and rents of sequestered houses.

43) O.Pearl, in "short texts from Caranis" Aeg.33 (1953) p.4 note 5, and G.M.Browne, in "a receipt of *περιγυνομένα*", *BASP*,4 (1967)p.23, followed Wilcken's interpretation in considering the payments of *προσόδων οἰκοπέδων* and *περιγυνομένων οἰκοπέδων* as charges on the income from buildings. But these payments are rents of sequestered house properties, see Johnson, *Op.Cit.* pp.257;575; R.Taubenschlag, *ΤΕΝΗΜΑΤΟΓΡΑΦΙΑ*: in *Greco-Roman Egypt*, JJP.4 1952, pp.77; I.Gendy, *The Development of the States of the Cultivated land in Egypt during the Roman Rule from 30 B.C.-A.D.284*, *Dis.M.A. Ain Shams Univ. (Arabic)* 1982, pp.26.

say that they are not rents. In P.Lond.III 1157 ll.150-2 (A.D.197-8 ?), there is payment of 400 dr. for the account of ἐπιβολή οἰκπέδων and 400 and 600 dr. for ἐπιβολή πηχισμου. This piece of evidence may indicate that when the government's house properties and building lands found no takers, the government adopted the ἐπιβολή as a method to rent its house properties, and the term used for the payment is ἐπιβολή and not μερισμός⁴⁶.

b) The lease contracts of houses do not state any clause which is concerned with a tax on the rent payments or any assessments.

c) The level of the rents in the Fayum nome, which are between 12 dr. and 30 dr. from the period between 109 and 141, is not far from the payment (28 dr.) in AP.IV pp.177.

46) We do not know the government's policy towards the confiscated houses in the areas in which there were large numbers of private uninhabited house properties. For instance, in P.Osl.III 111 (A.D.235), from Oxyrhynchus, in Goose-Keepers' quarter houses inhabited and uninhabited may have been at the rate of about 7-5., and in the Western district of Hermaion quarter 22 to 27. Did the government impose its house properties on the private house owners who might have a number of empty houses? It seems that the government might use one of the following three methods: a) it might offer its publicly owned houses, which were not rented, for sale. For example, in P.Petaus 14, no income was derived from the houses which were offered for sale and in P.Amh.II 97, the third share of the house which was offered for sale, was described uninhabited. From these two documents, it seems that the government usually did not impose its house properties on private owners, and the houses found no tenants, and no income could be derive from them. Consequently the government offered them for sale, so it achieved two goals: 1) the price, and 2) it secured new owners who could bear the compulsory services. b) It might let some of them to public farmers who were transferred or moved from their homes in order to cultivate its lands in another near by village in the same nome or another nome (P.Oxy.986) see also G.Poethke, Epimerismos, 1969, pp.100-106. c) Finally, the authorities might issue special regulations through which the government might reserve the prior right of renting its house properties in the rental market before any private individual, in P.Oxy.Hels.10 (A.D.34) census return, in which the owner swears that there is neither alien nor Roman nor Egyptian nor Alexandrian or any other living with him, in P.Oxy.III 480 (A.D.132) a census-return, in which the declarant swears by the Emperor that neither stranger nor Roman nor Alexandrian nor Egyptian nor freedman nor any one else dwells or is registered in his uninhabited house. One can read between the lines that the government had the prior right of offering for rent its house properties, before the private owners could offer their houses. In other words, if there were empty publicly owned houses and empty private houses, then the private owner could not offer the houses for lease before the leasing of the government's property. If the owner did let his house and there was an unrented house which belonged to the government; the government then might impose its house on that owner. The owners might adopt other methods in order to avoid those compulsory assignments, such as, loan contracts with the right of habitation, and oral agreements. Anyway we await new evidence which could clarify the government's policy towards exploiting its house properties.

d) Since the level of the taxes⁴⁷ and commodity prices and wages⁴⁸ are lower in Upper Egypt than Middle and Lower Egypt, it is not so strange that the level of rents in Upper Egypt is lower than the Middle and Lower Egypt.

e) It is very clear from P.Heid.IV 297 that the *ἐνοίκιον* is a rent (3500 dr.) and not a tax on the income or a special assessment imposed upon the private houses.

Until further evidence is available, we must assume that these payments are rents of confiscated and sequestrated houses⁴⁹. Let us turn to discuss the rents in the Ostraca.

In W.O.II 292, from Elephantine, the collectors give the tenant the receipt for rent of three houses. The stated amount is 4 dr.1/2 ob. We do not know whether the payment is a monthly rent, an instalment, or a yearly rent. It seems that the tenant leased the three houses in order to offer them for lease, so his aim was to make a profit.

In O.Tait,I 22 (A.D.212) from Elephantine, the collectors give the tenant a receipt for unspecified premises. The stated amount is lost.

47) Wallace, *Op.Cit.*, pp.116; Johnson, *Op.Cit.* pp.531; L.Nesen, *Untersuchungen zu den Direkten staatsabgaben der roemischen Kaiserzeit*, pp.128.

48) R.P.Duncan-Jones, *The prices of wheat in Egypt under the Principate*, *Chron.*6 (1976) pp.24-162; H.J.Drexhage, *...Scimus, quam varia sint pretia rerum per singulas civitates regionesque...*, *zu den Preisvariation im roemischen Aegypten*, *Muenstersche Beitrage zur Antiken Handelsgeschichte*, 7 (1988) pp.1-11.

49) But I prefer to leave the question open until we have lease contracts of houses from Upper Egypt which may give a decisive answer whether the *ἐνοίκιον* is a tax income or a *μερισμός*, or a charge similar to *μερισμός*, or a rent.

In Zereteli O.30 (A.D.149) from Syene, the collectors give the tenant a receipt for the rent of unspecified premises. The rent is lost.

In W.O.II 1420 (A.D.119) from Thebes, the collector gives the tenant a receipt for the rent of unspecified premises. The stated amount is 8 dr.3 ob.

In O.Cair.GPW.59 (A.D.123) from Thebes, the collectors give the tenant a receipt for the rent of unspecified premises. The amount of the annual rent is 24 dr.

In O.Ashm.Shelton 15 (A.D.134) from Thebes, The collectors give a receipt for the rent of unspecified premises. The stated rent is 5 dirty dr. 2 ob.2 ch.

In O.Lips.73 (A.D.136) from Thebes, the collectors give the tenant a receipt for the rent of unspecified premises. The stated rent is 1 dr.4 ob.

In O.Tait.1101 (A.D.137) from Thebes the collectors give the tenant a receipt for rent of unspecified premises. The amount of the annual rent is 16 dr.

In W.O.II 1580 (A.D.140) from Thebes the collectors give the tenant a receipt for the rent of unspecified premises. The amounts are 4 dr. and 2 dr.2 ob.

In O.Wil.25 (A.D.144/5) from Thebes the collectors give the tenant a receipt for the rent of unspecified premises. The stated sum is 1 ob.

In Zereteli O.29 (A.D.146) from Thebes the collectors give the tenant a receipt for the rent of unspecified premises. The monthly payments are: 2 dr.2 ob. and 2 ob.

In SB XII 11261=ZPE 14 (1974) p.238-9 no.13 (late half of the second cent.A.D.) from Thebes the collectors give the tenant a receipt for the rent of unspecified premises. The stated rent is 1 dr.5 ob.2 ch.

In W.O.II 644 (A.D.151) from Thebes the collector gives the tenant a receipt for the rent of unspecified premises. The rent is 1 dr.3 ob.

In W.O.II 654 (A.D.160/1) from Thebes the collector gives the tenant a receipt for the rent of unspecified premises. The rent payments are: 2 1/2 ob. and 2 1/2 ob., the total is 5 ob.

In W.O.II 661 (A.D.188/9) from Thebes the collectors give the tenant a receipt for the rent of unspecified premises. The rent is 1 dr. 3 ob.

In O.Amst.53 (A.D.194 ?) from Thebes the collector gives the tenant a receipt for the rent of unspecified premises. The rent is 8 dr.3 ob.

In W.O.II 671 (II cent.A.D.) from Thebes the collector gives the tenant a receipt for the rent of unspecified premises. The rent is 8 dr. 3 ob.

In O.Tait 1102 (III cent.A.D.) from Thebes the collectors give a receipt of the rent of unspecified premises. The amount of the annual rent is 4 dr. 1/2 ob.

From the above references we see that: 1) The amounts of the rents which were stated in these documents are very small. They are between 1 ob. and 24 dr., but the total income is quite substantial. 2) We can not know the level

of the rents because the documents do not mention the nature of the premises except one piece of evidence which records that rent was paid for three houses (W.O.II 292).

3) In most cases, we do not know whether the rent is a monthly payment, an instalment or a yearly payment. 4) The level of the rents seem to be generally very low compared with the other nomes. The yearly rent in some cases is equal to the wage for one day or less.

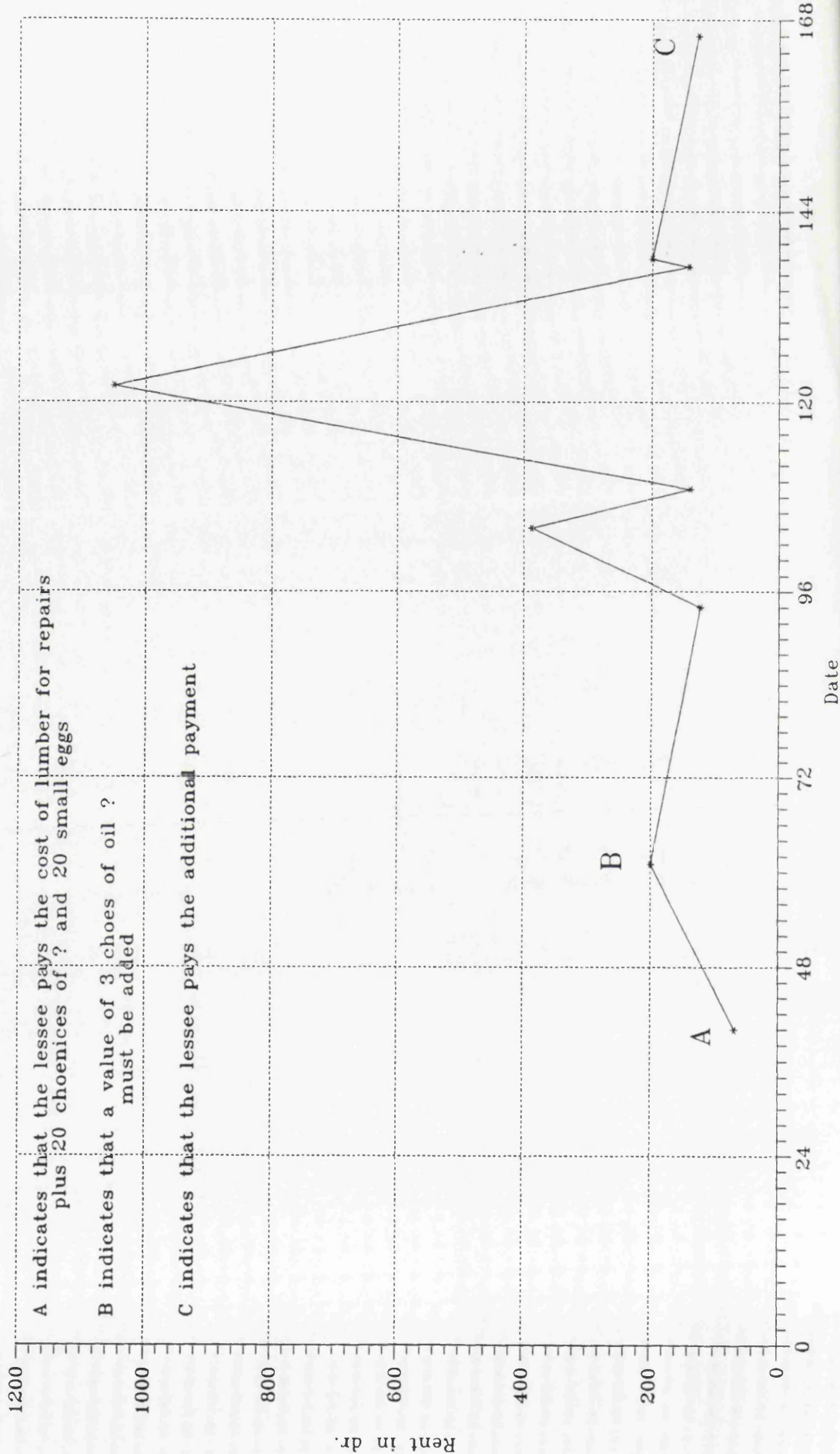
d) Unknown provenance

We have one piece of evidence of unknown provenance. P.Mich.XIV 678 (A.D.98), deals with an offer for the lease and confirmation of the lease of parts of a house for a term of one year at an annual rental of 40 dr. which will be paid in two equal instalments. The tenant has the right to ply the fuller's trade in the gate-building and on the roof of the house. Here we also find a combination between dwelling and practising the trade. It seems that the rent is higher than the rent of the property if the tenant uses the premises for his dwelling only.

To sum up our discussion, 1) the Fayum nome and the Oxyrhynchite nome produced a tremendous amount of references which are concerned with the rent of houses or shares of houses or business and industrial buildings, while the evidence from Hermopolis, Alexandria, Antinoopolis, Heracleopolis, Thebes and other areas is

comparatively slight. 2) The rents of houses vary from city to city and from village to village, even from one area to another within a city or a village. 3) The levels of rents in the cities are usually higher than in villages, but sometimes the level in some villages is higher than in the city. 4) There are many factors which play a role in the variation of the rent, such as, the size, condition, location and economic situation of the area. 5) The rents of some houses are relatively high compared with the prices of houses. Therefore renting can produce a good income for their owners. 4) The rent in many cases is less than the poll-tax which was imposed upon the Egyptians. If we compare rents with the daily wages or the monthly salary, their levels are very reasonable. 6) The level of the rents of business and industrial premises are much higher than the level of the rents of houses (Fig.no.21). 7) The level of the rents of animal sheds in most cases are higher than the level of the rents of houses (fig.no.22). When there is a combination between the purposes of dwelling and plying a trade, the level of rents of houses is higher than the normal level. 8) The level of the rent of the vacant spaces can be higher than the level of the rents of arable land. 9) The evidence shows that the rents were sometimes increased, when the parties had renewed the lease contracts, but at other times there were no increases. The reason behind that could be the condition of the rental market and the economic situation in the area. 10) From the

first glance, one can easily see a steady increase of the level of the rents. But if one carefully checks the references, one finds that: a) in all cases there is no full description of the premises, b) there is no mention concerning the size of the houses, c) in most cases there is no mention concerning the condition of houses. Therefore we will be mistaken if we say that there is generally a steady increase in the level of the rents. This is because: a) some early rents are higher than the latter ones, b) our evidence survived by accident and perhaps the future publications will support this assumption. Figures nos.23-6 indicate that the curve of the rents goes up and down during the first two centuries and reaches its maximum peak during the second half of the third century.



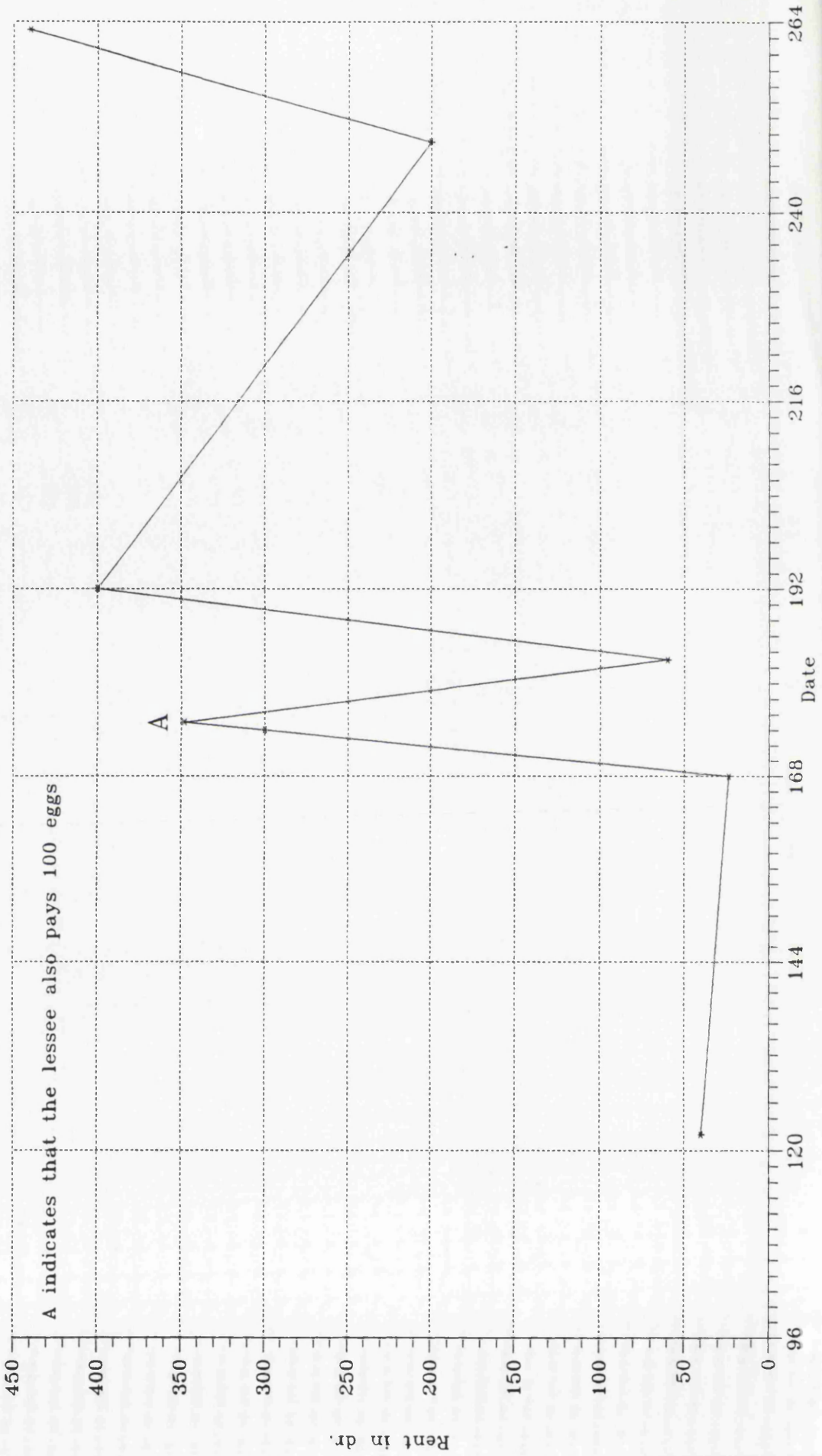
A indicates that the lessee pays the cost of lumber for repairs plus 20 choenices of ? and 20 small eggs

B indicates that a value of 3 choes of oil ? must be added

C indicates that the lessee pays the additional payment

Rent in dr.

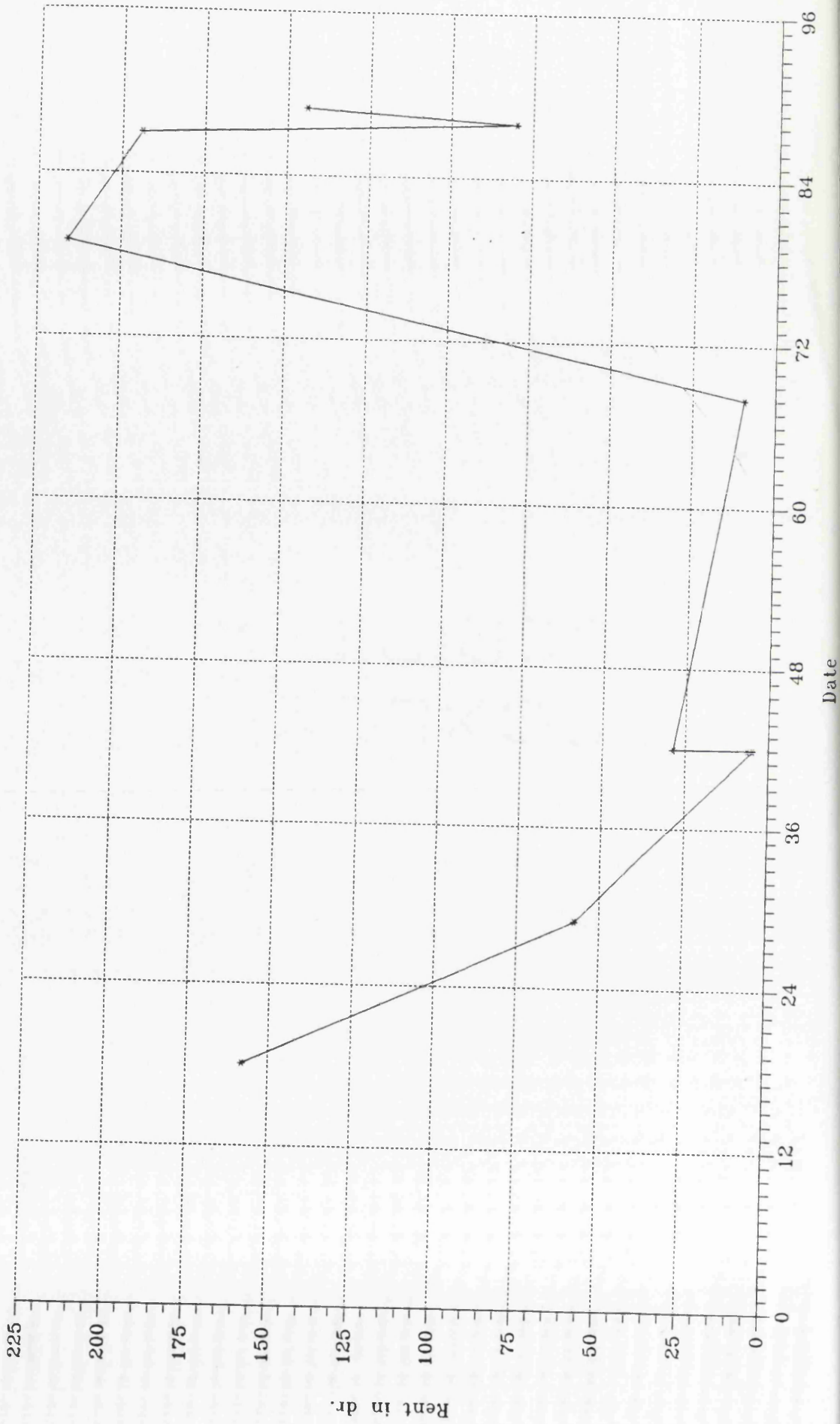
Date



A indicates that the lessee also pays 100 eggs

Rent in dr.

Date



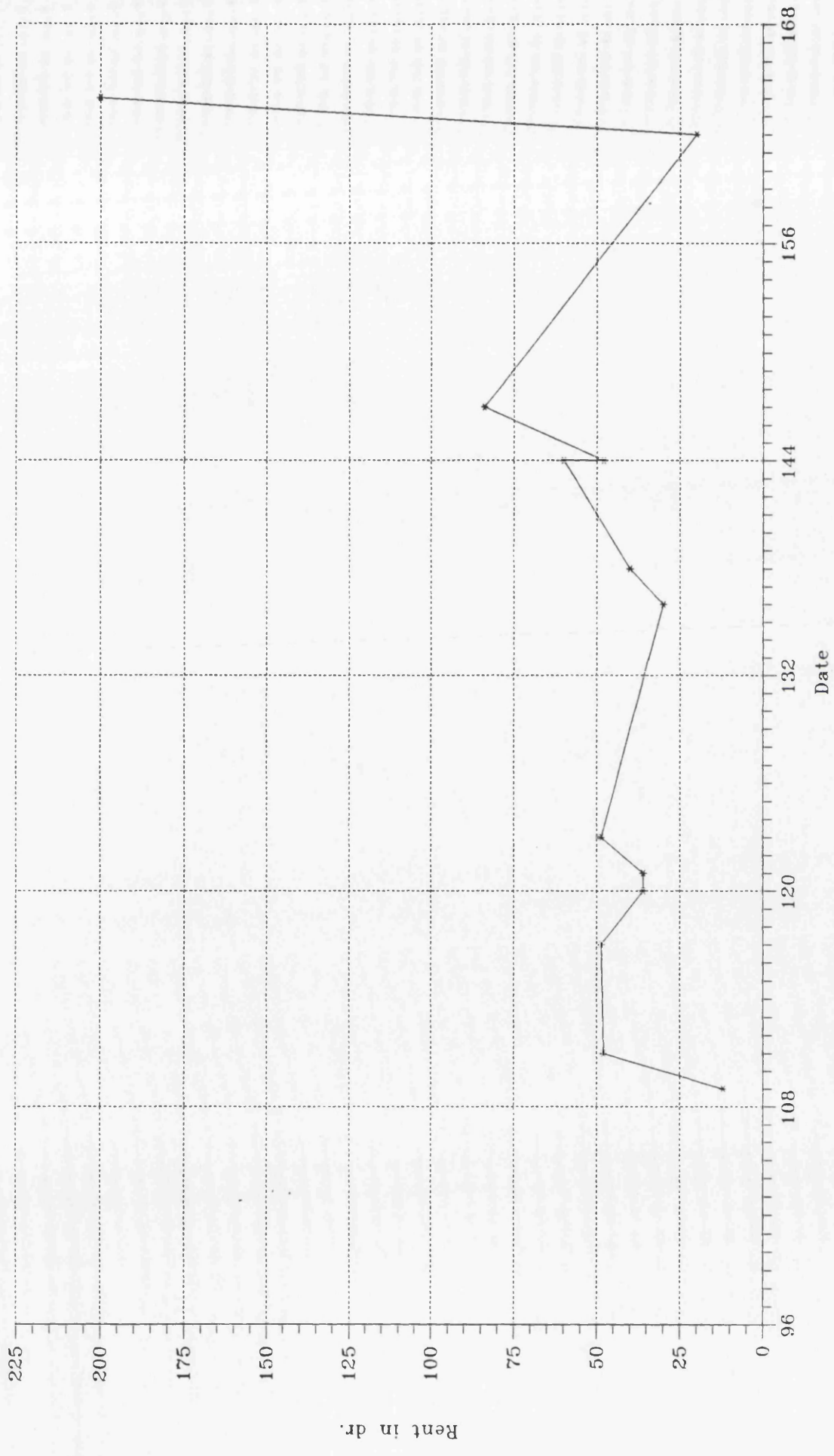


Fig.(24) House Rent in Roman Egypt

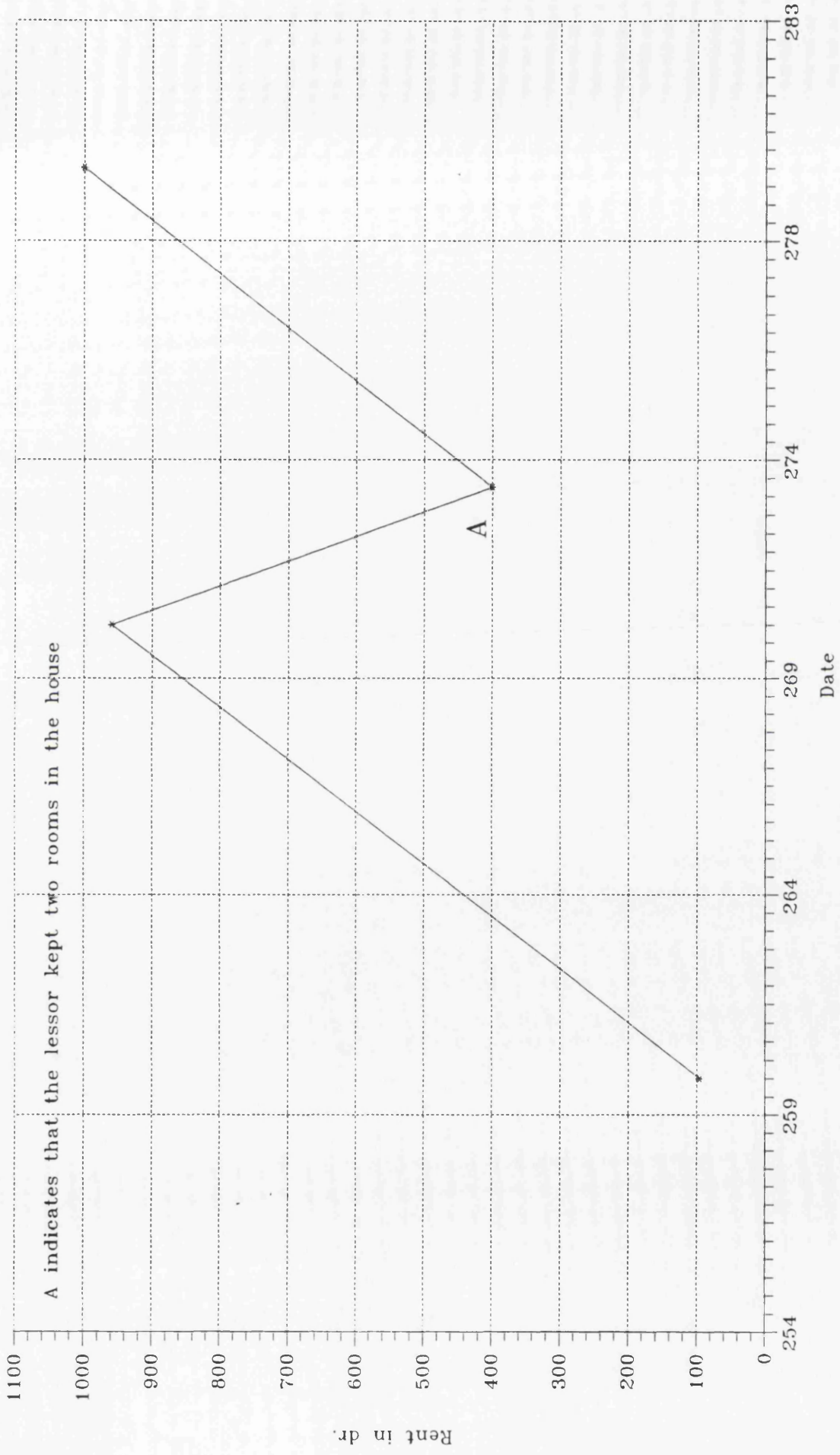


Fig.(25) House Rent in Roman Egypt

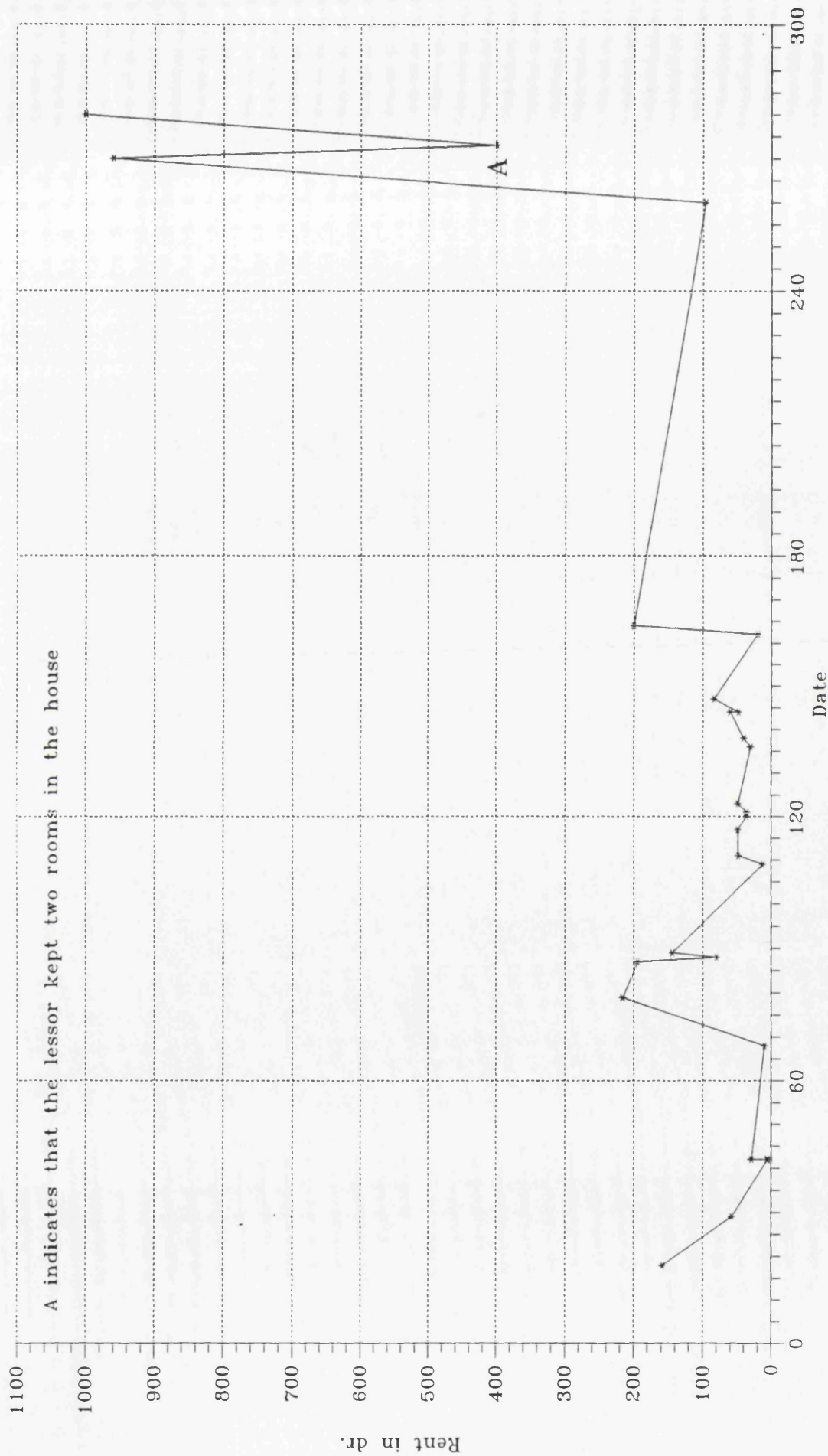


Fig.(26) House Rent in Roman Egypt

A indicates that the lessor kept two rooms in the house

IV

**Some common features between ancient and
modern Egyptian rural houses**

The Egyptian house seems to show from Pharaonic times until today a continuous line of development. However, if we remember the conservative character of Egyptian farmers (Fellahin), it is not astonishing to find that they preserved the Egyptian character of their houses in plan and architecture. They seem to have been satisfied with types of houses which they inherited from very ancient periods (plates I-V).

Plate I

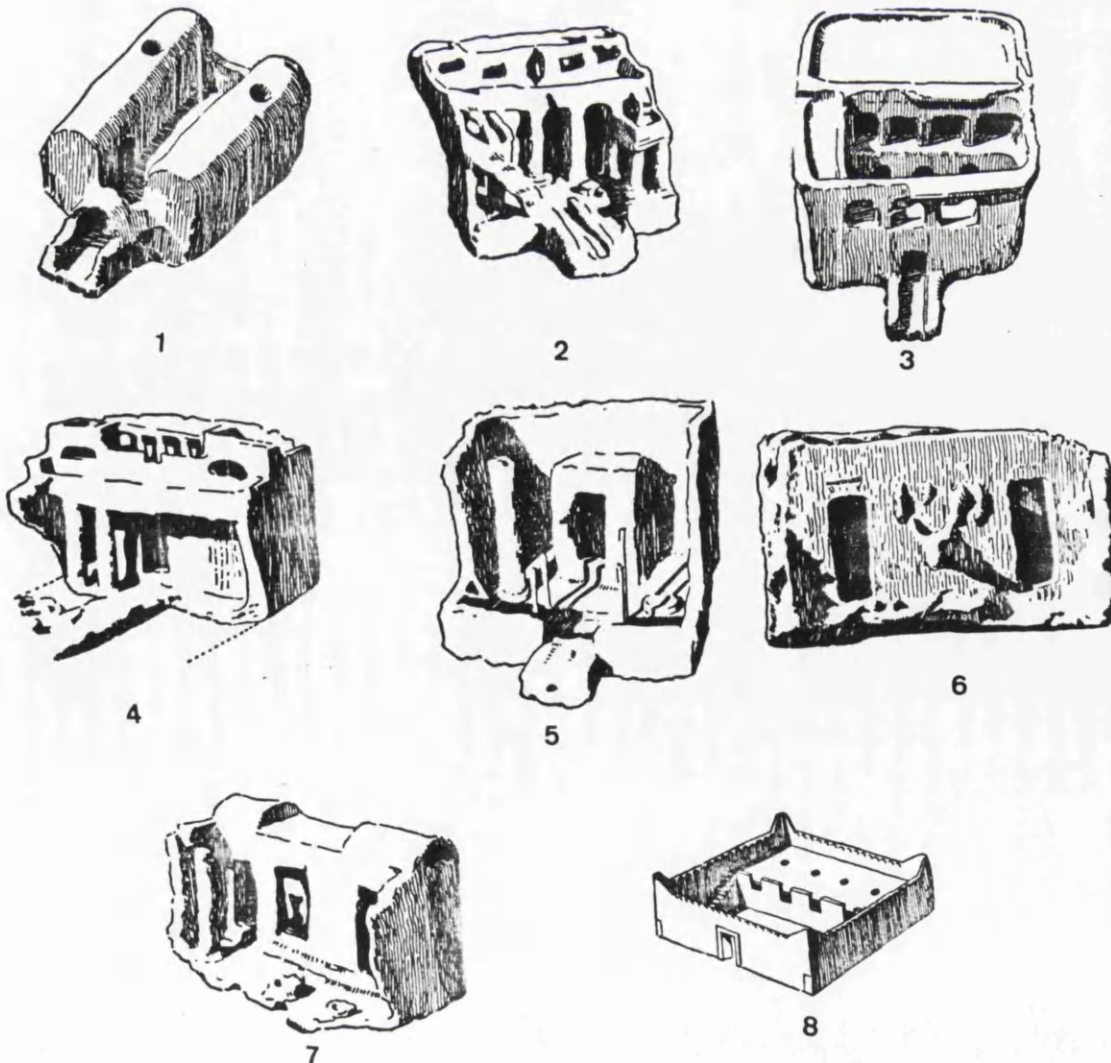
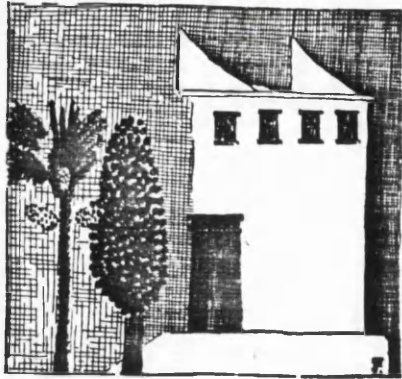
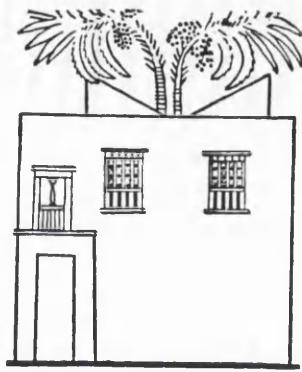


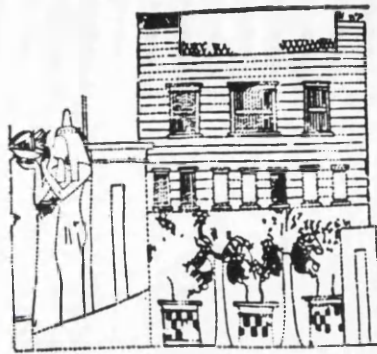
Plate II



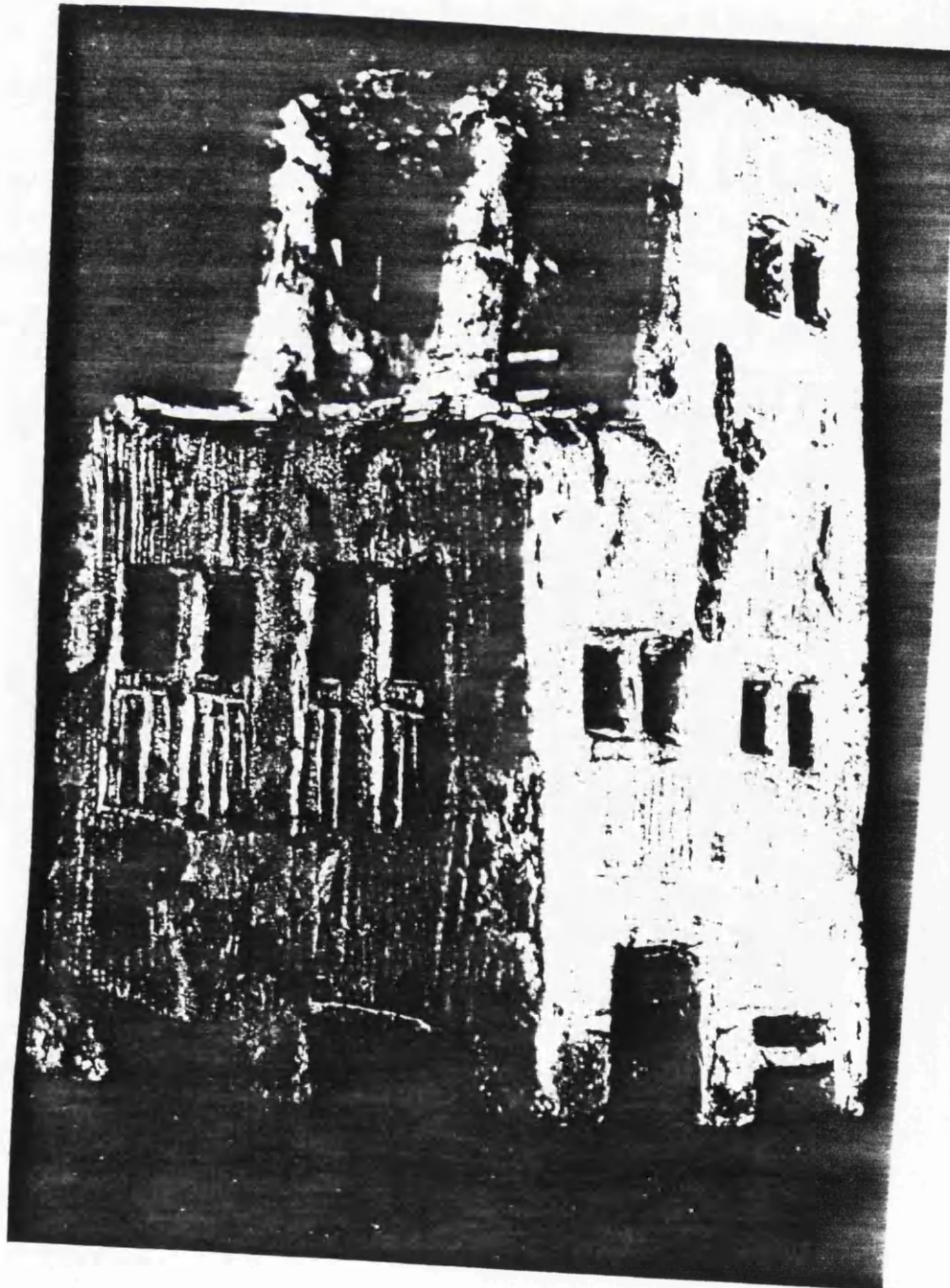
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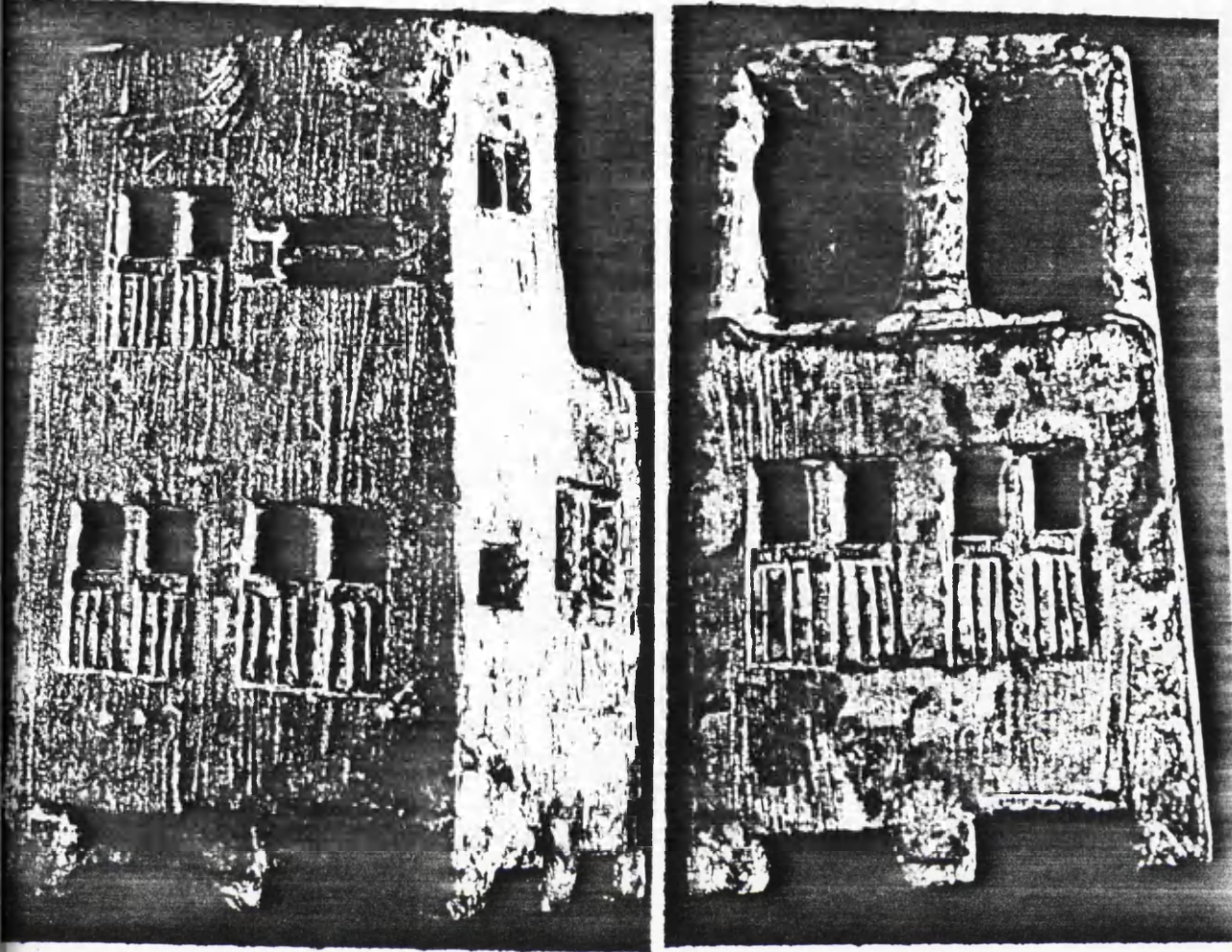
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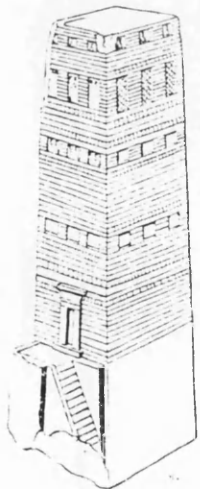
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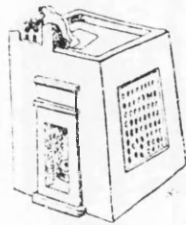
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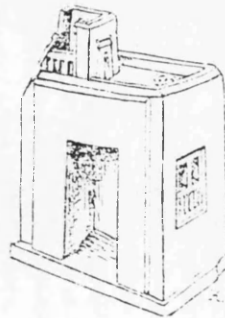
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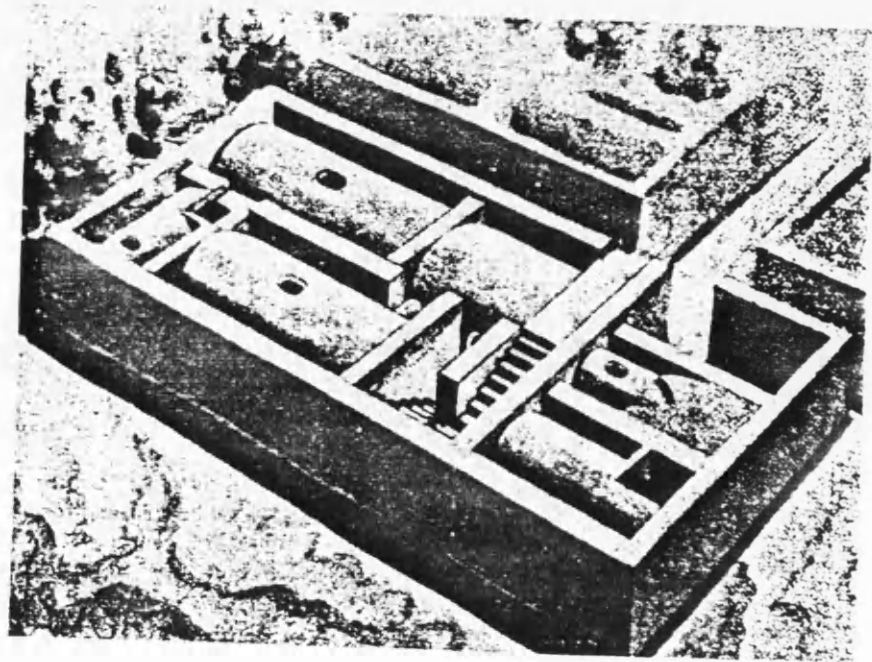
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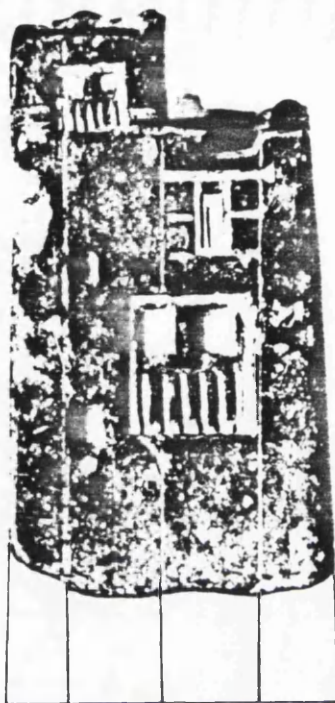
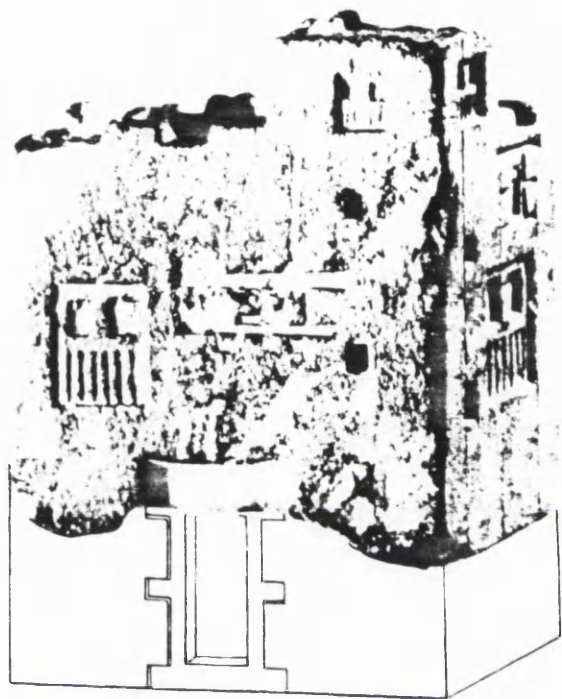


Plate IV

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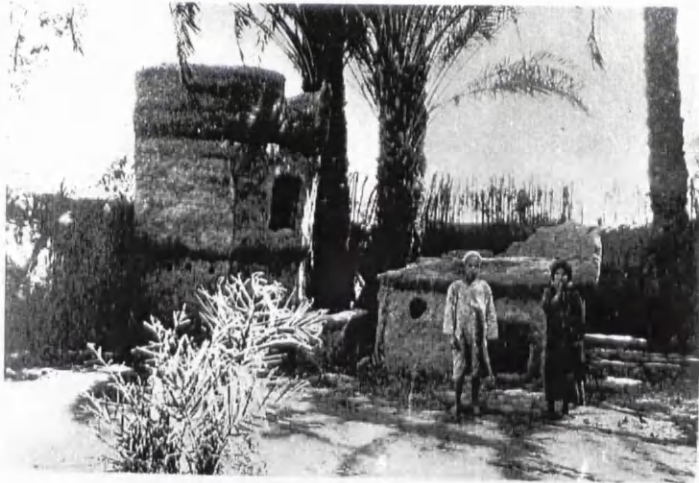


Plate V

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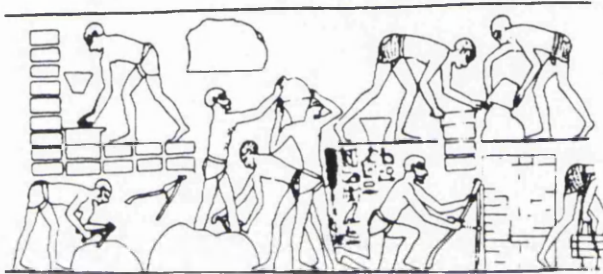


The ancient and modern Egyptian houses are very similar to each other in many aspects such as:

The building materials:¹

The modern Egyptian farmers use in erecting their houses almost the same building materials which their ancestors had already used. We find that the mud-brick² was and still is the main building material in constructing the villages houses (plates-VI-VII).

Plate VI



1



2

1) For the ancient period see G.Husson, Op. Cit.pp.232-235; Nowicka, Op.Cit.pp. ; Boak & Peterson, Karanis, pp.27-29; Spencer, Op. Cit.

2) For modern Practice see Plates Nos.2-4.

Using stone and burnt- brick was and still is very expensive compared with the financial means of the majority of farmers, so they are only used in foundations of houses, and to protect the areas which are suffering from wear. Reeds were used and are still in use for roofing the houses (plate no. XXX). The Egyptian farmers still also continue to use the local trees or branches of trees without shaping for roofing their houses and in strengthening the mud-brick walls (plate no.XXXI). The methods of preparing the plaster and the brick are still the same and so are also the uses of plaster (plates no.VI-VII).

The sizes: The sizes of modern rural houses are not far from the sizes of ancient houses. The measurements of Pharaonic houses are between 50 sq.m. and 168 sq.m.³ The measurements of houses of the Greco-Roman period are between 17 sq.m, and 300 sq.m. Finally the measurements of modern rural houses are between 30 sq.m, and more than 300 sq.m.

Plans and design:

The available plans of houses from the Pharaonic, and Greco-Roman periods, and the plans of modern rural houses show considerable similarity (plates VIII-XXI). The majority of plans are either square or rectangular. They consist of between one room and six rooms in each floor, but the grouping of rooms may differ. Most of the houses have only inner courtyards, some have outer courtyards. A

3) A.Badawy, Architecture in Ancient Egypt and the Near East, London, 1966, pp.21-28.

few houses have two entrances, while the majority have only one. They are either one storey or two storeys and few houses are three storeys high.

Plate VIII

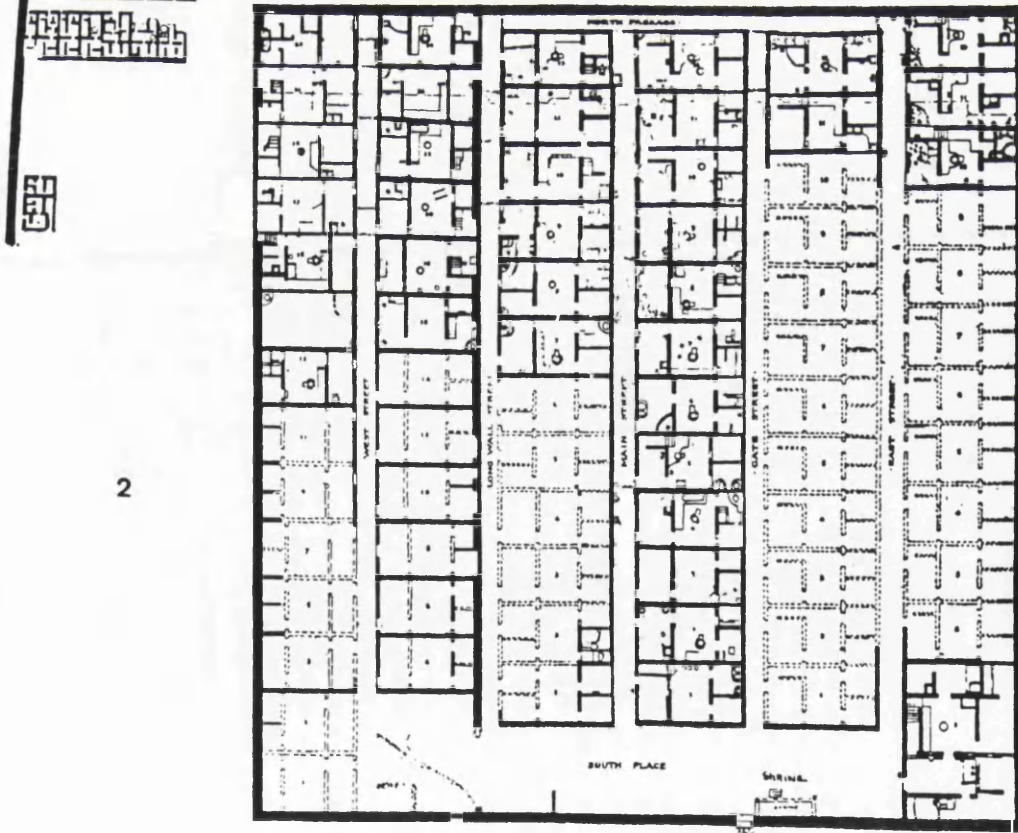
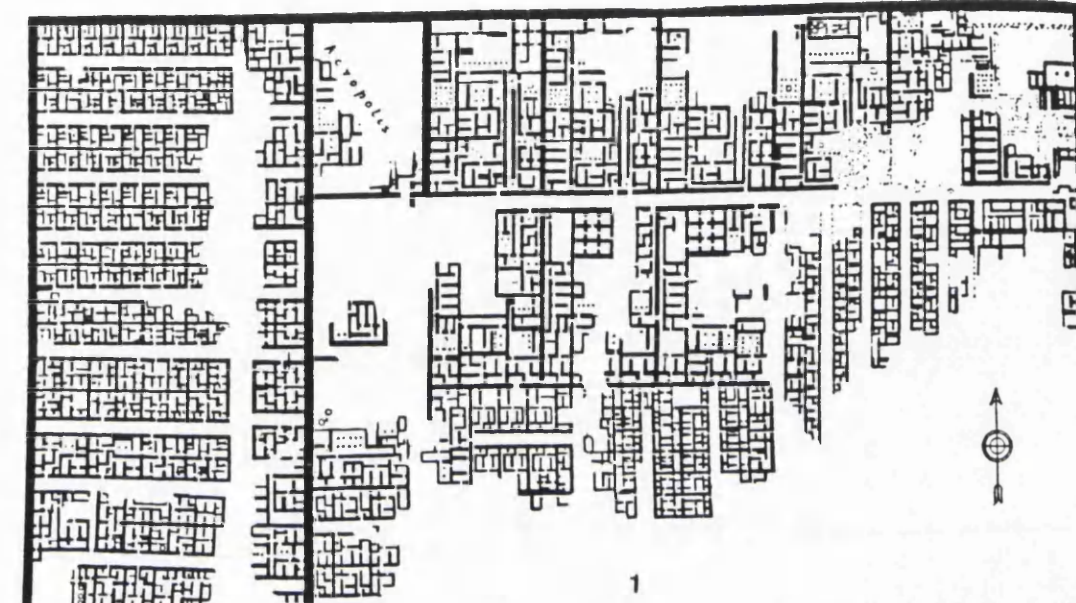


Plate IX

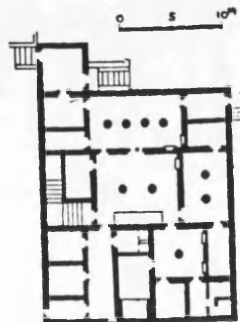
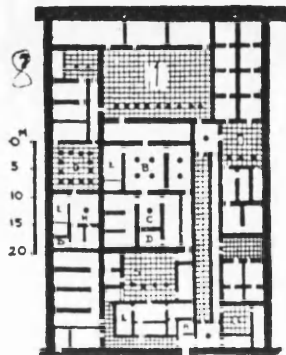
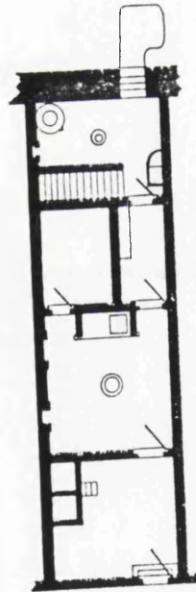
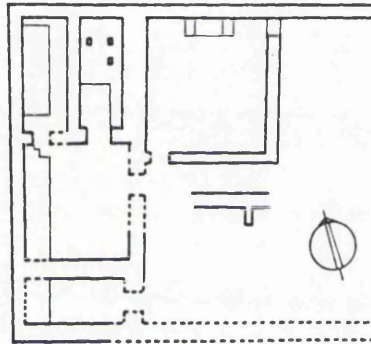
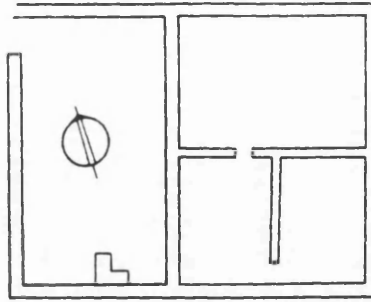
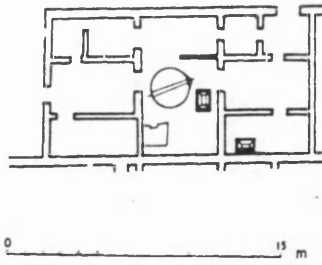


Plate X

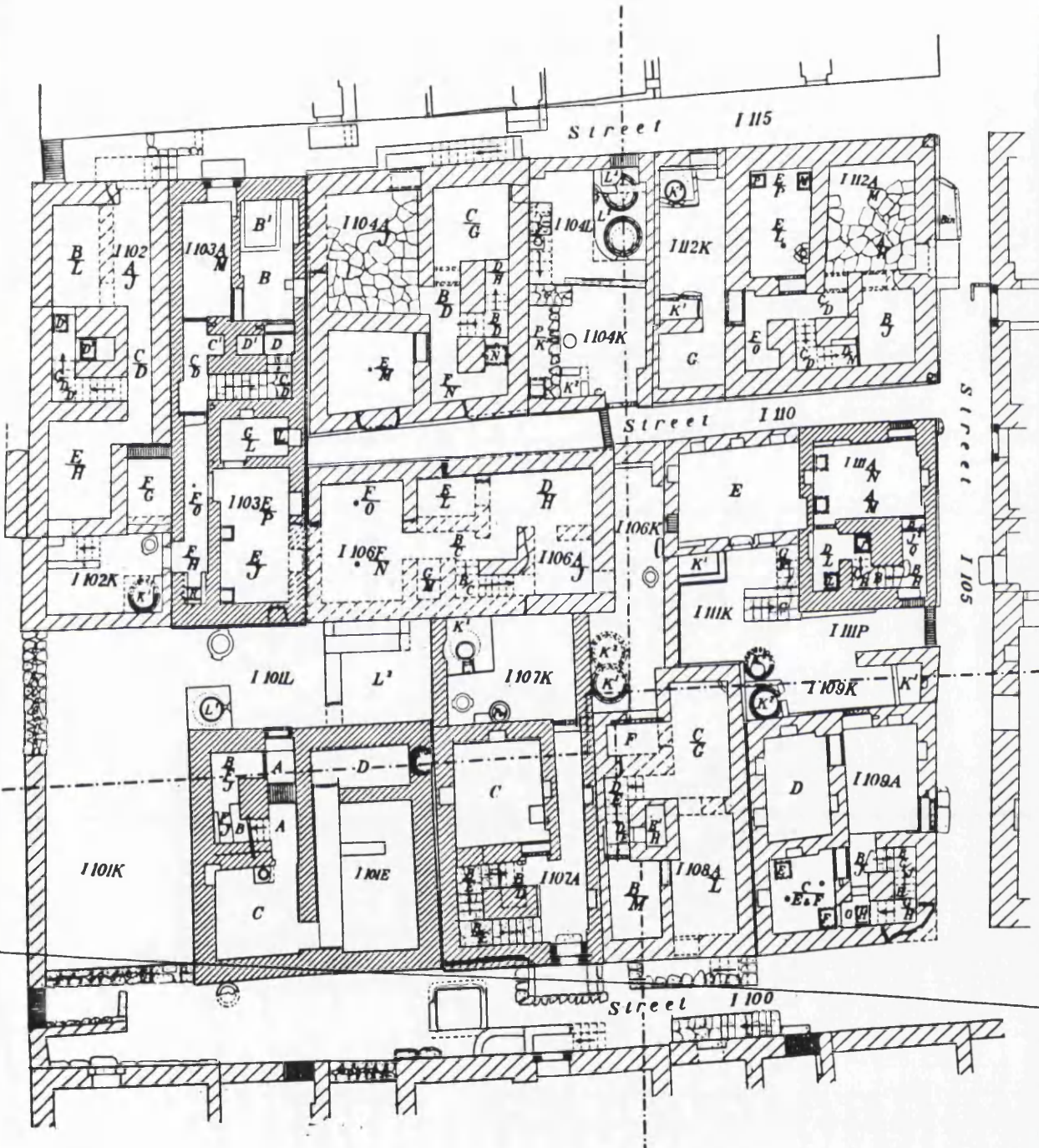
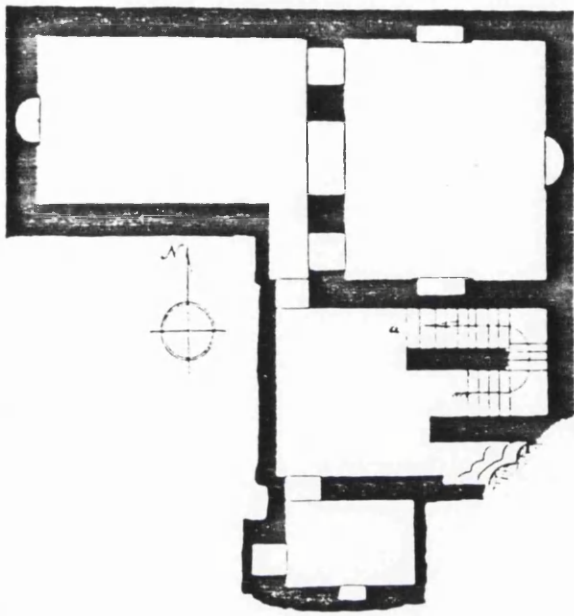
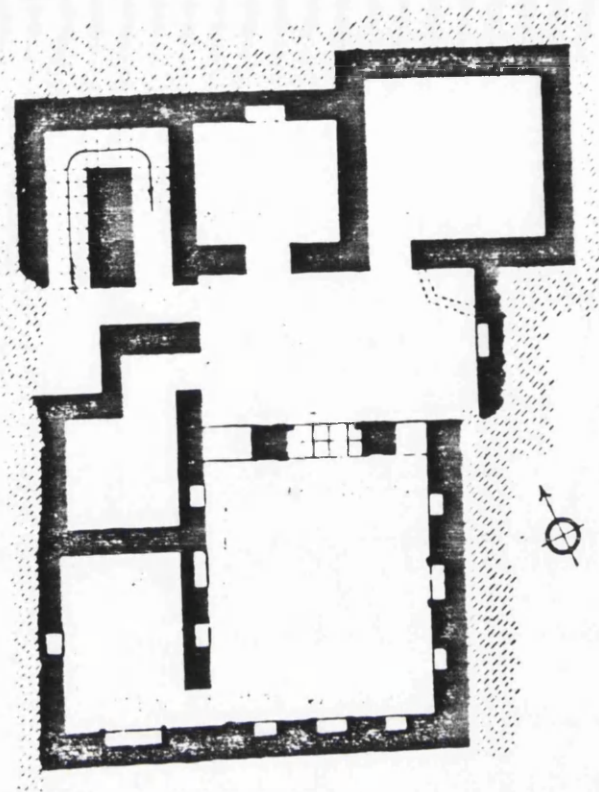


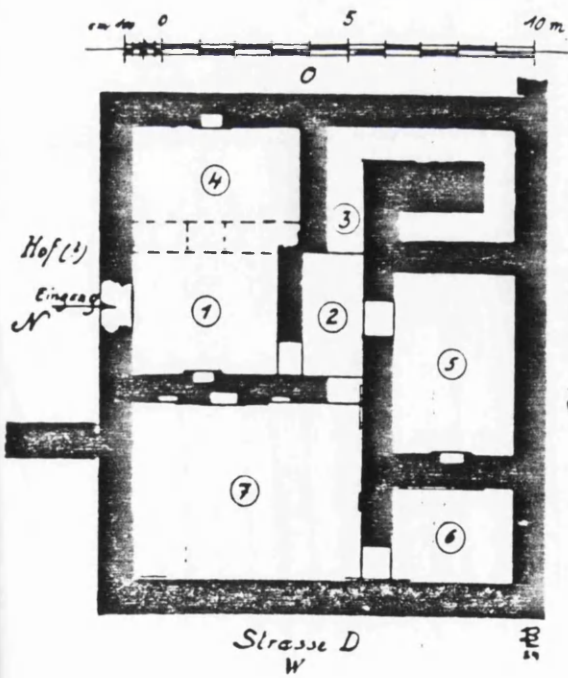
Plate XII



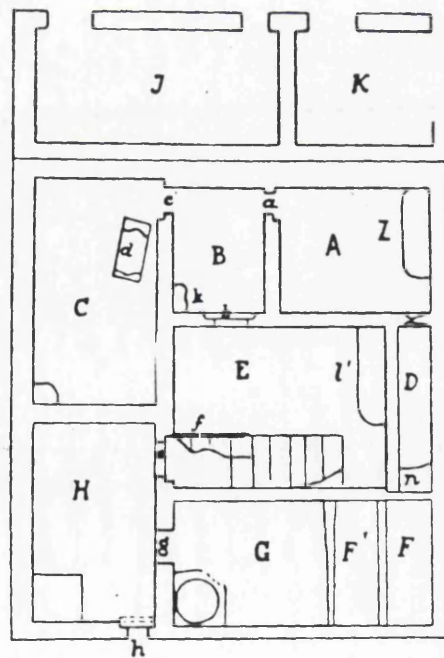
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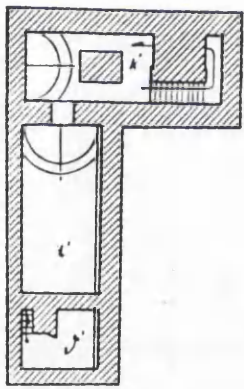
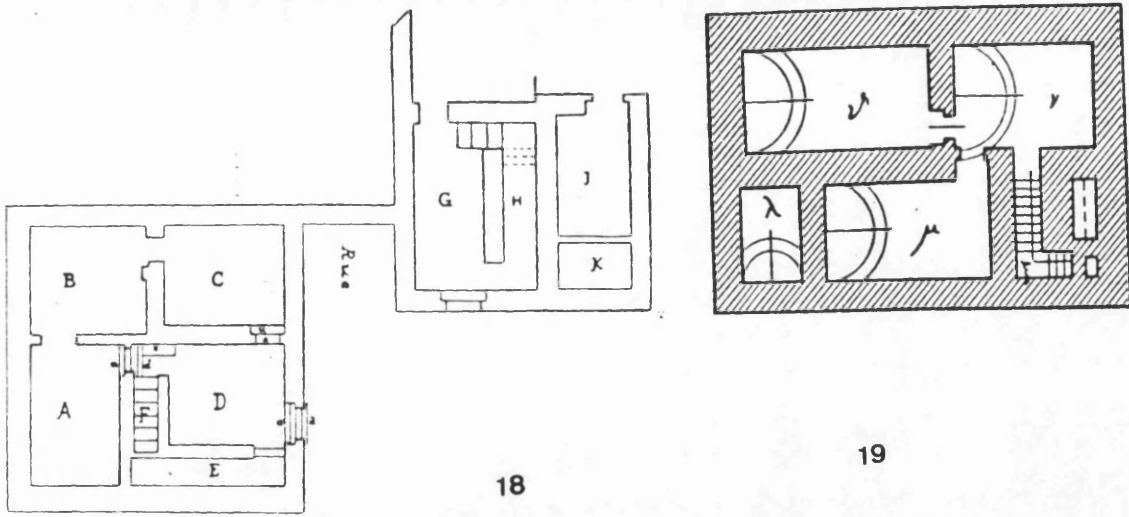


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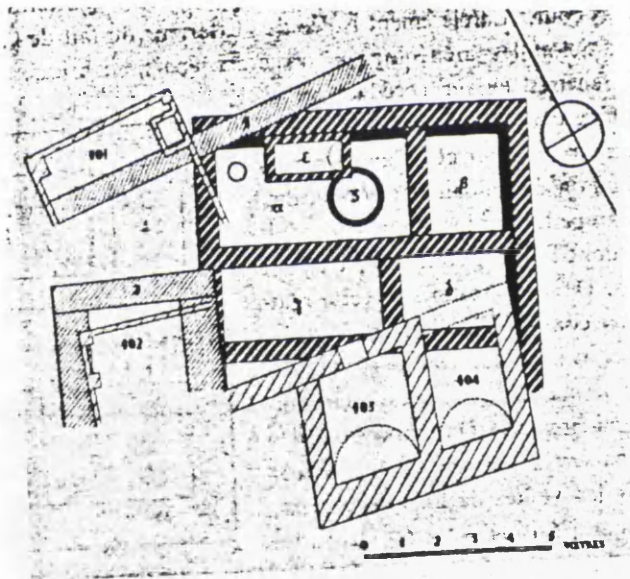


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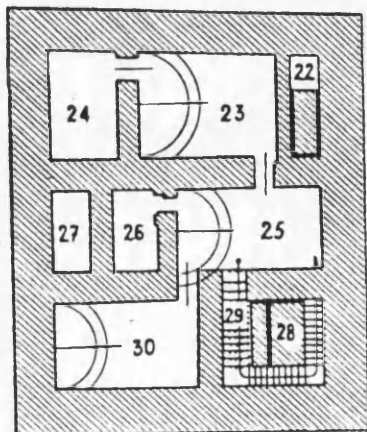
Plate XIII



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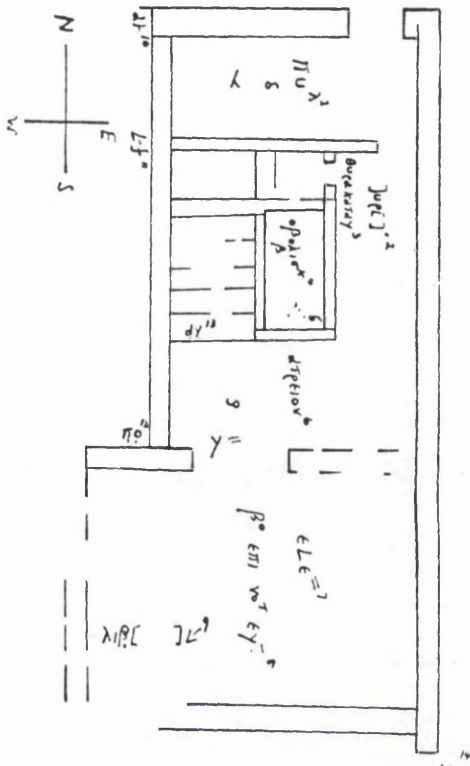


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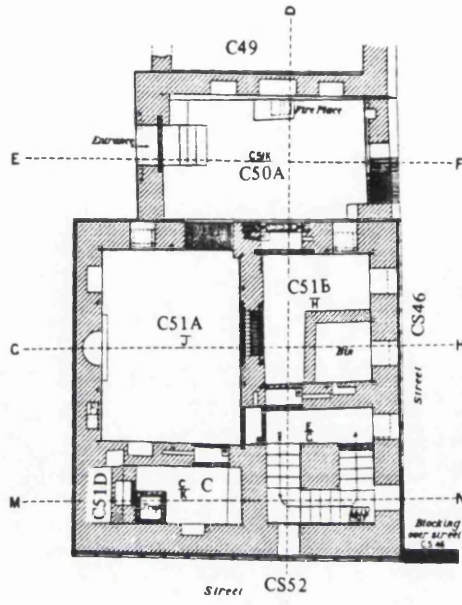


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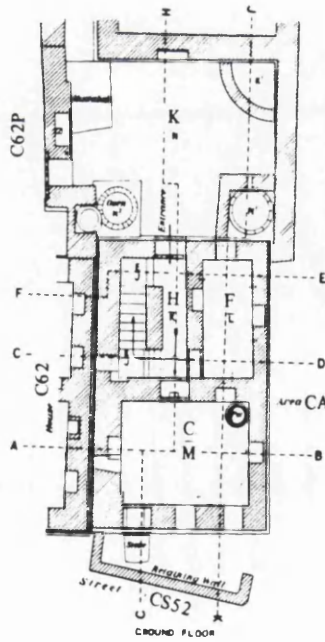
Plate XIV



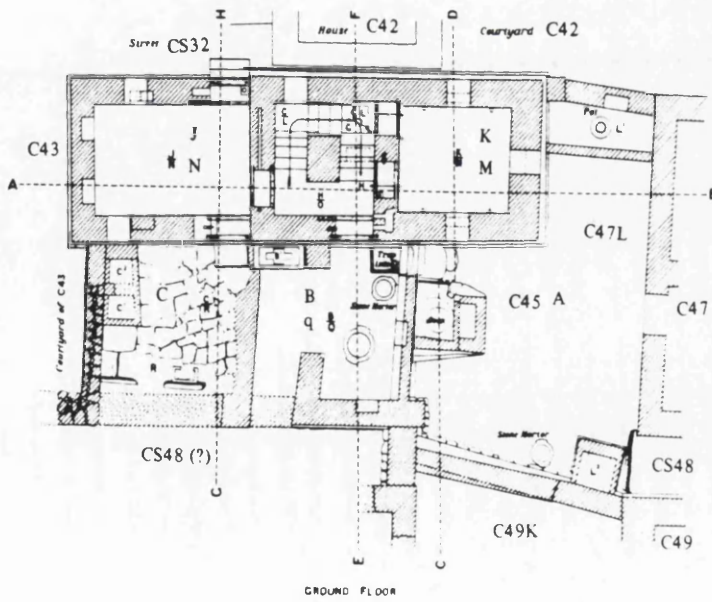
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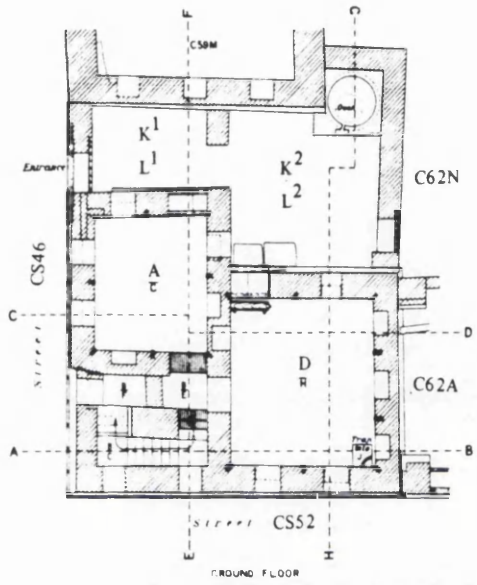


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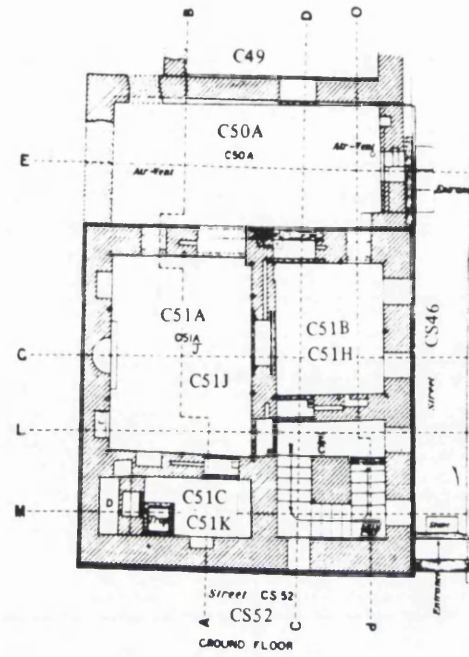


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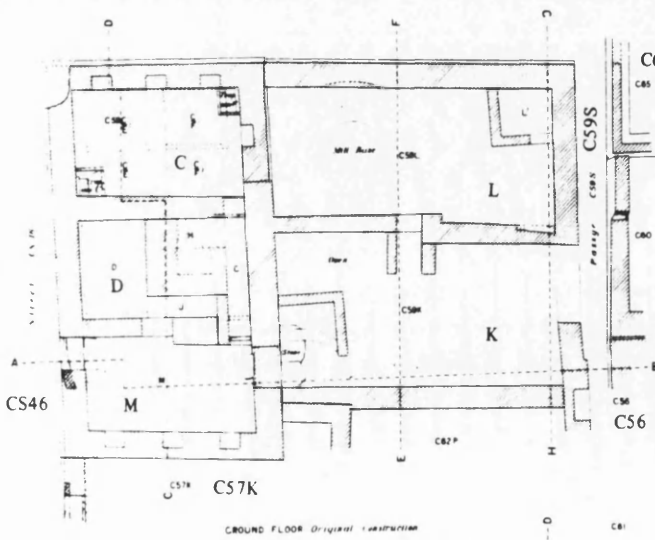
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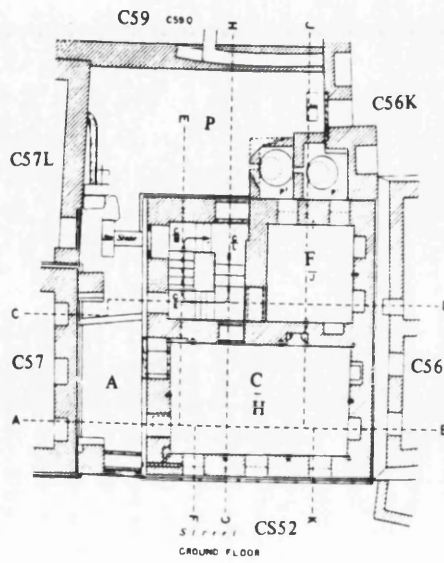
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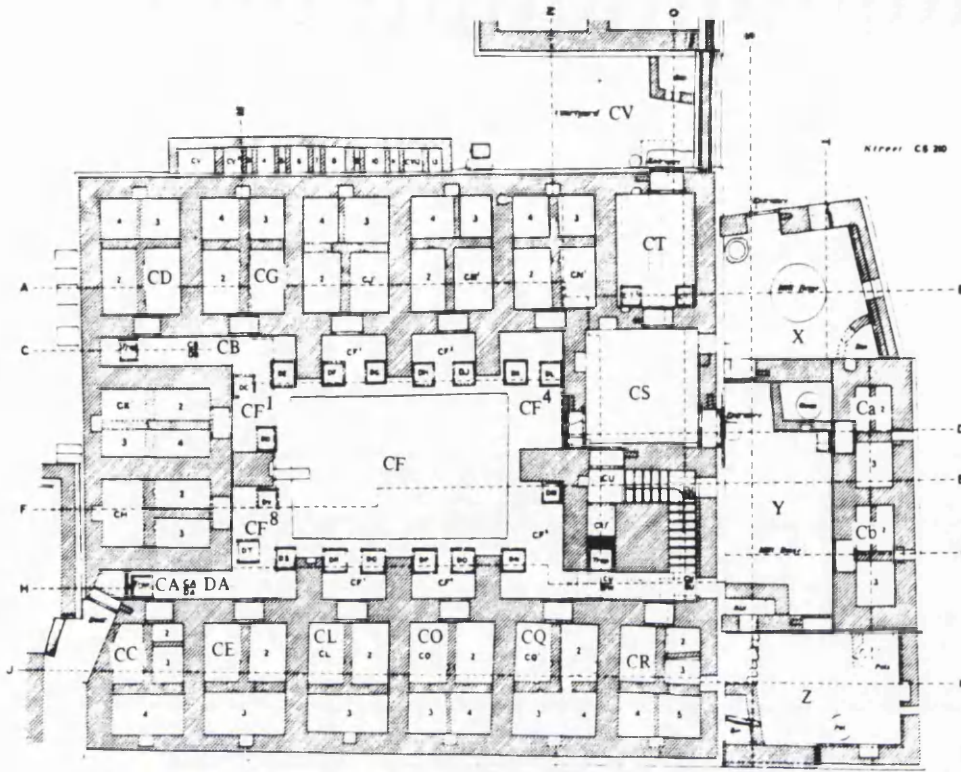


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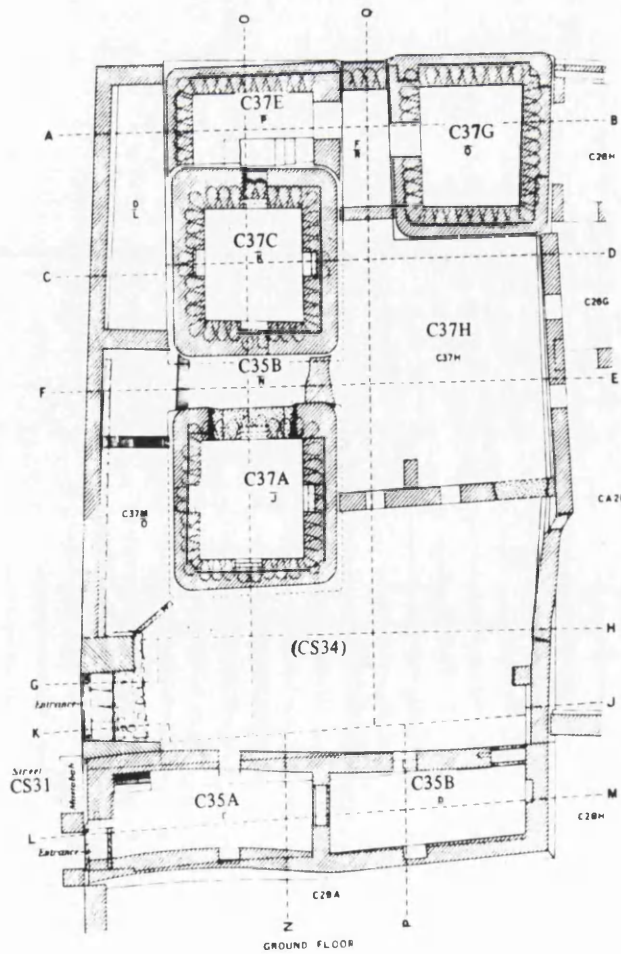


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Plate XVI



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Plate XVII

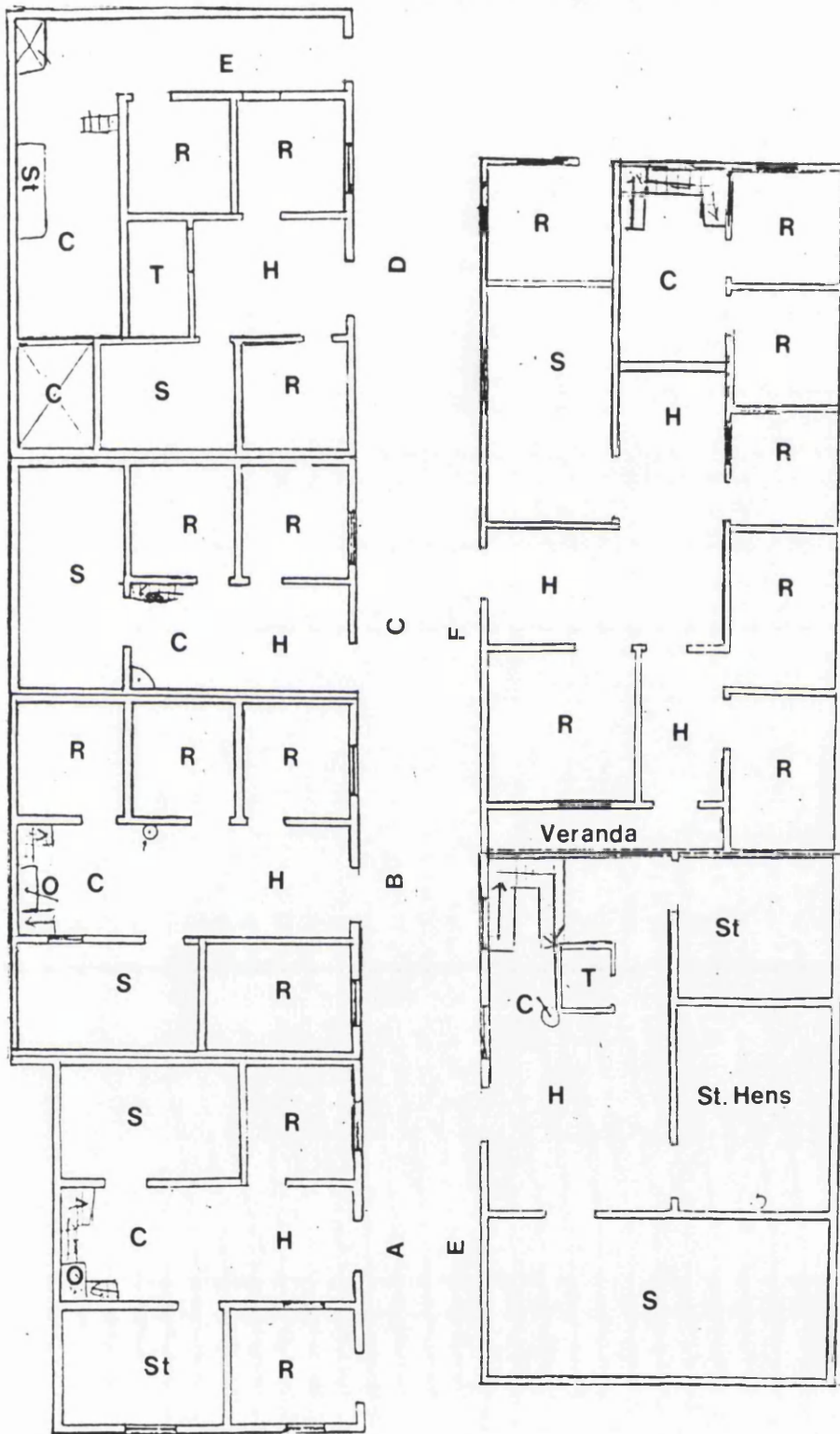
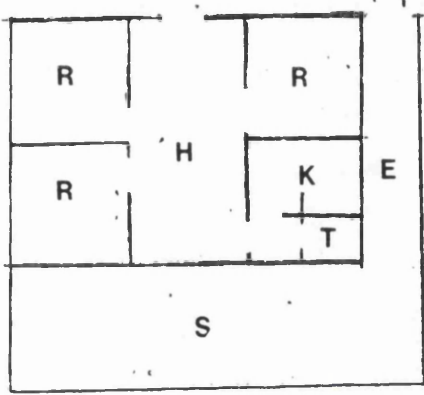
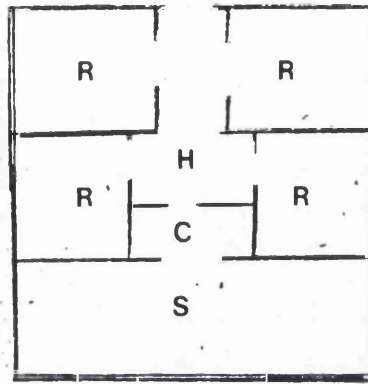


Plate XIII

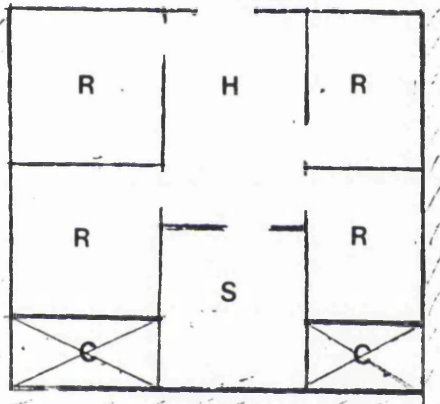


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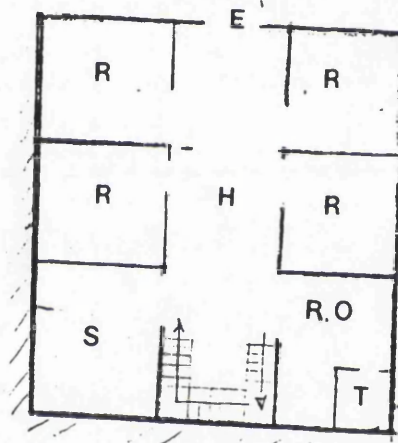


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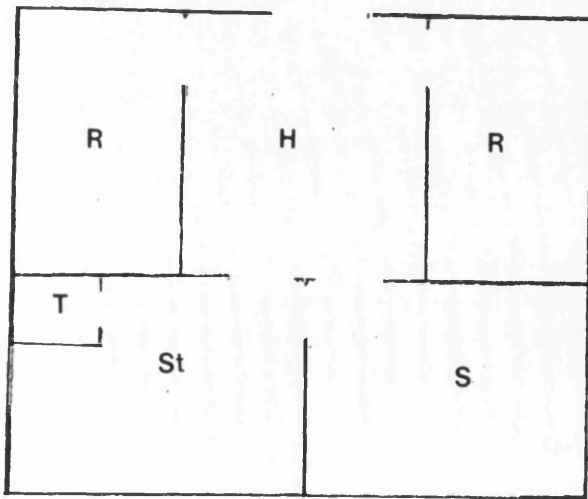
- C = Courtyard
- E = Entrance
- H = Hall
- K = Kitchen
- O = Oven
- P = Pump
- R = Room
- S = Stable
- St = Store
- T = Toilet



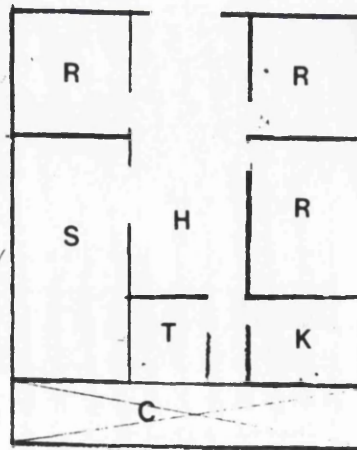
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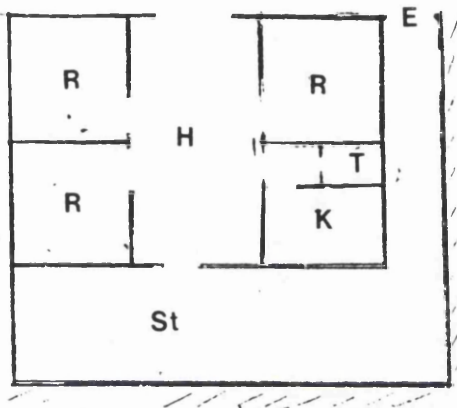


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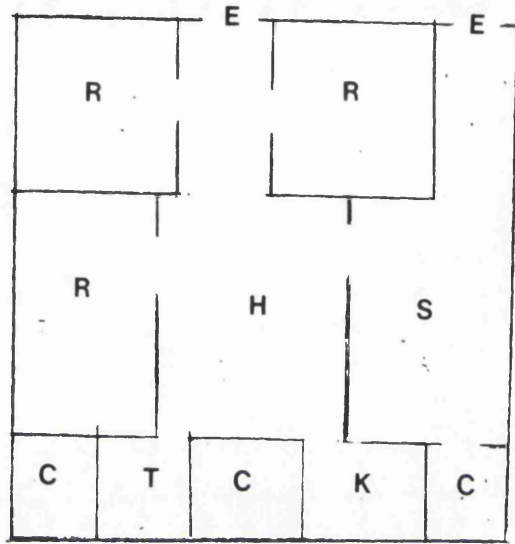


39

Plate XIX

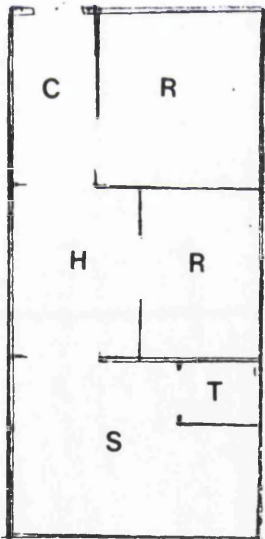


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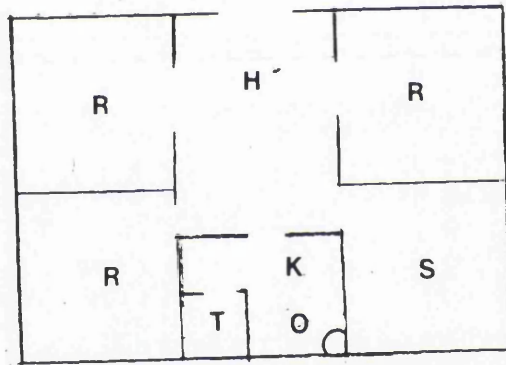


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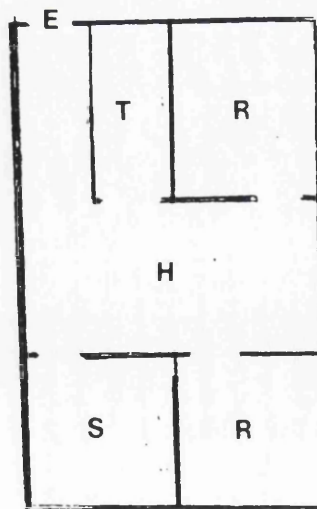
- C = Courtyard
- E = Entrance
- H = Hall
- K = Kitchen
- O = Oven
- P = Pump
- R = Room
- S = Stable
- St = Store
- T = Toilet



42

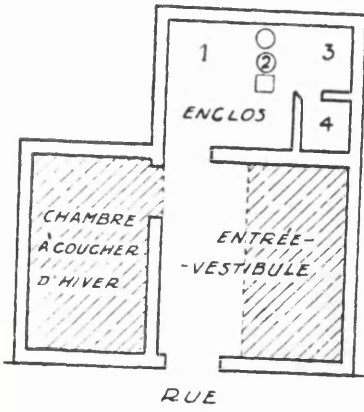


43

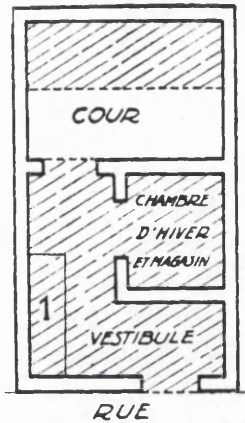


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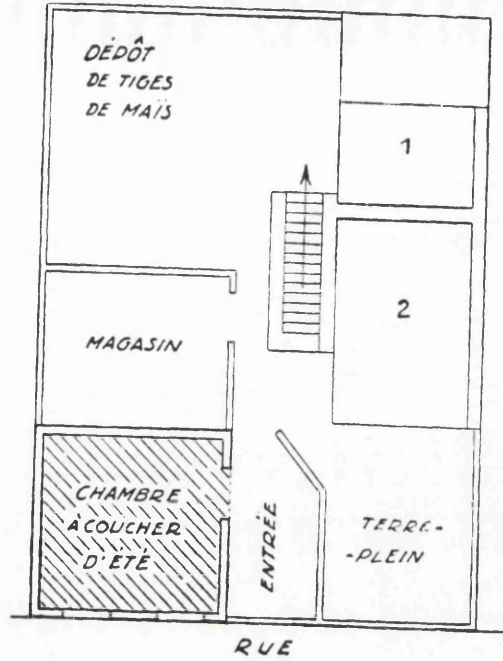
Plate XX



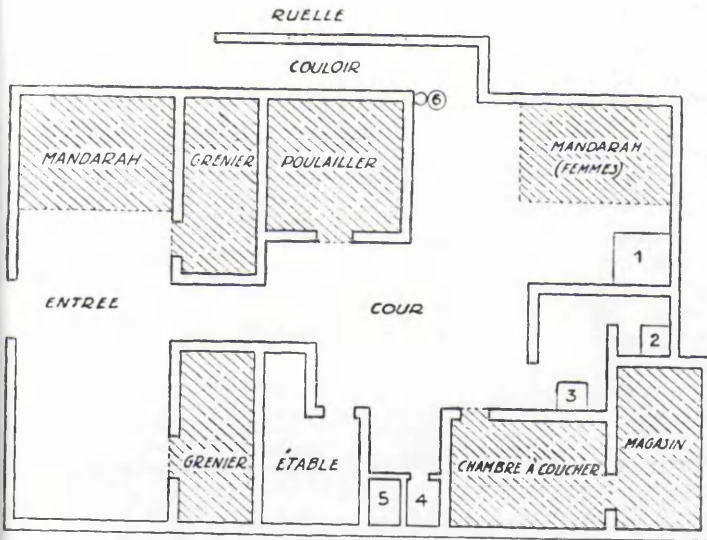
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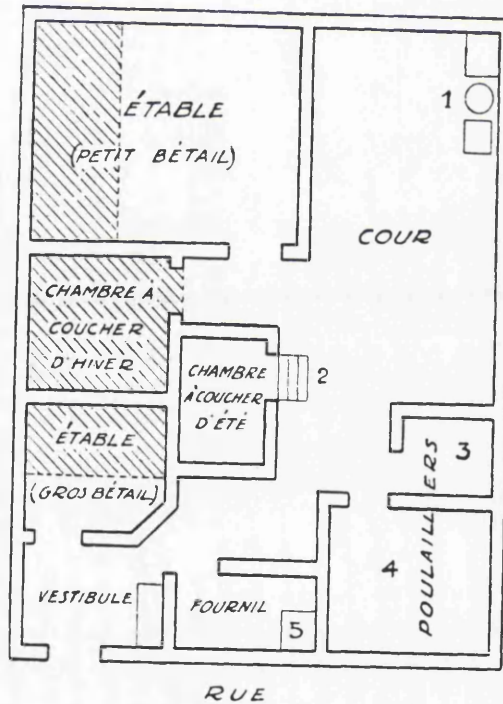
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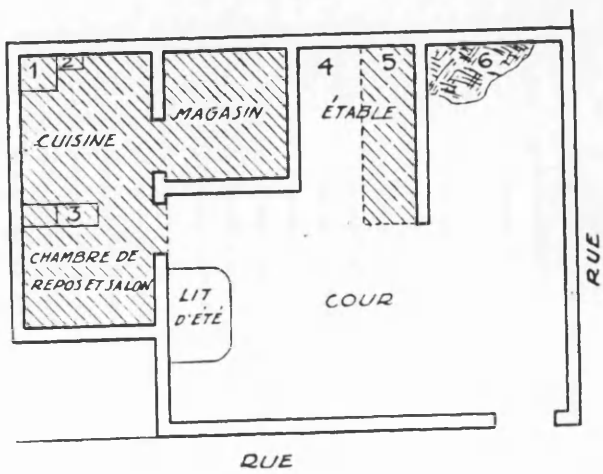
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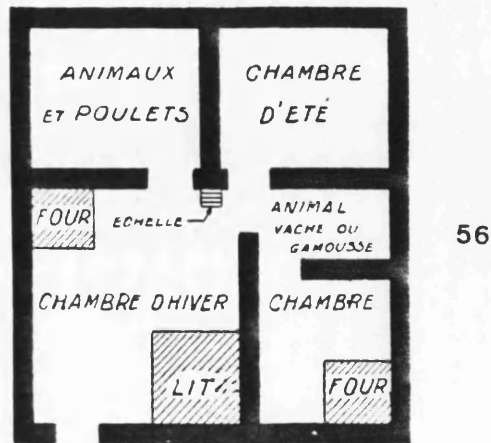
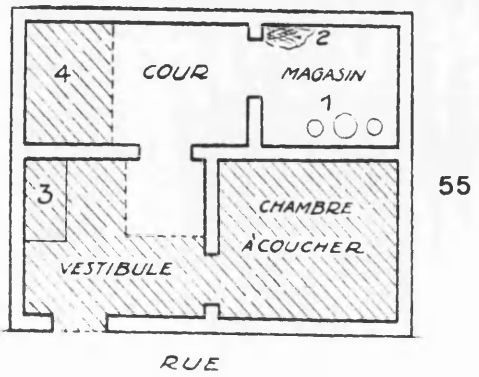
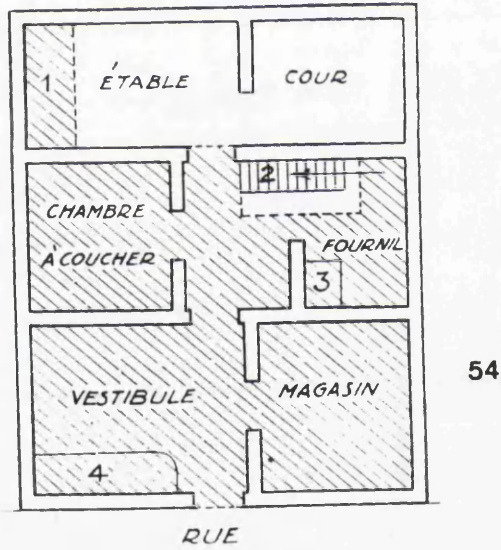
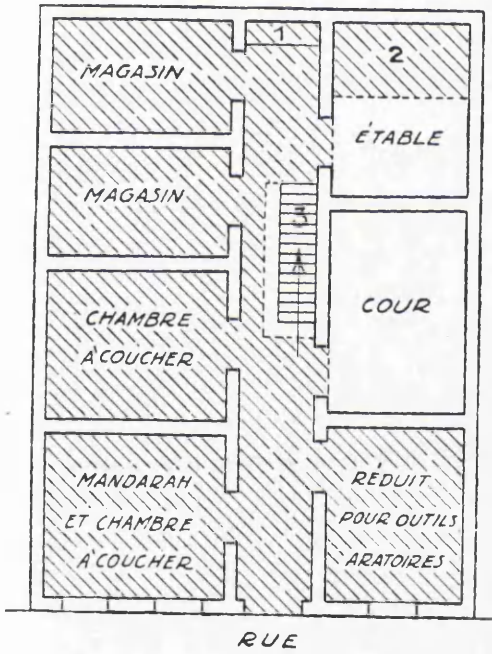
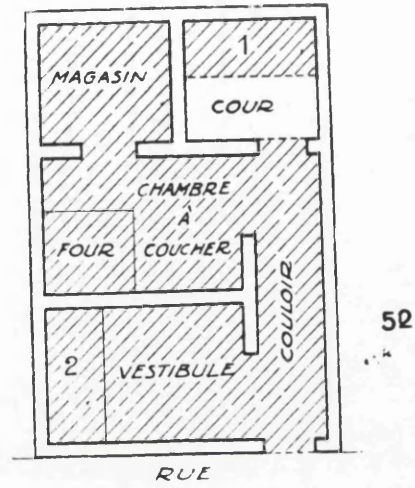
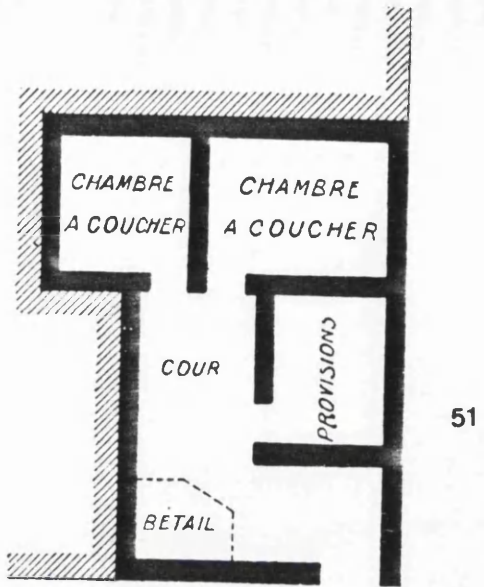


49



50

Plate XXI



***Architectural details:**

The modern builders still use the same ancient technique⁴, which they inherited, in building the walls of village houses, specially when they use mud brick. They erect outer-walls of modern houses (as ancient ones) thicker than the innerwalls which separate rooms. They build the foundation walls, which are along streets, thicker than the wall laid upon them. They build the walls with pronounced batter towards the top. They also inherited from their ancestors the same technique in strengthening the walls of houses. They lay the brick for the outside walls of houses in concave and batter courses. They also use for strengthening purposes different auxiliary building materials embodied in brick work, such as: timber, burnt-brick and stone. They insert wooden beams inside the brickwork of walls either vertically or horizontally along certain courses of the bricks in order to strengthen and bind the walls and for corner protection (Plates no.XXII-XXIII). They also use the wooden binders either in their natural state, or cut and shaped. They also use the stone and burnt brick as strengthening, protective and stabilizing material. They use the stone and burnt brick in the foundations and also in corners whenever there is heavy traffic. When there is considerable traffic in the streets, they lay some rows of burnt brick along the lower part of the wall to protect it from damage by passing traffic.

4) For the ancient technique, see Husselman, Op.Cit pp.33.

Sometimes they build a bench (mastabah), which serves a double job, as a protection for the foundation along the street and as a place where the people can rest and chat (plate no.XXIV-XXV). They also use the plaster, which consists of clay mixed with straw, to protect outer and inner surfaces of walls (Plates no.XXVI-XXVII).

Plate XXII
(corners protection)



Plate XXIII
(Corners protection)



2



3

Plate XXIV
(benches (masatb))



1



2

Plate XXV
(benchs (masatb))



3



4

Plate XXVI
(plaster)



1



2

Plate XXVII
(plaster)



3



4

Roofs and ceilings:⁵

The modern builders use their ancestors technique in constructing the roofs and ceilings of the rural houses. The common method of constructing these ceilings is by setting rafters made of either split tree trunks or split palm logs or thick branches of trees into holes in the upper walls. They set them apart or in parallel rows and cover them with mats. The mats are made either from reeds or sometimes stalks (grid) of palm held together by interwind ropes (plate no.XXVIII). Above the mats they lay a layer of mud plaster (mona) or straw covered with earth. They sometimes plaster the inner surface of ceilings like the rest of the room's walls (plate no.XXX fig.5), but most of the time the ceilings are without plaster (plate no.XXX fig.6).

One can assume that the usage of the roof is nearly the same as in ancient times. The flat roof is a pleasant place to sit and watch the life below⁶. Peple also use it as a place for storing grain (plate no.XXII), huge bundles of sticks and dry maize-stalks (plate no.XXXII) and finally some people use it for sleeping during the summer's nights.

5) Boak & Peterson Op.Cit.pp.26-7; Husselman, Op.Cit.pp.37-8; G.Husson, Op.Cit.63-5.

6) For the ancient houses see, P.Oxy.II 475.

Plate XXVIII
(ceilings)

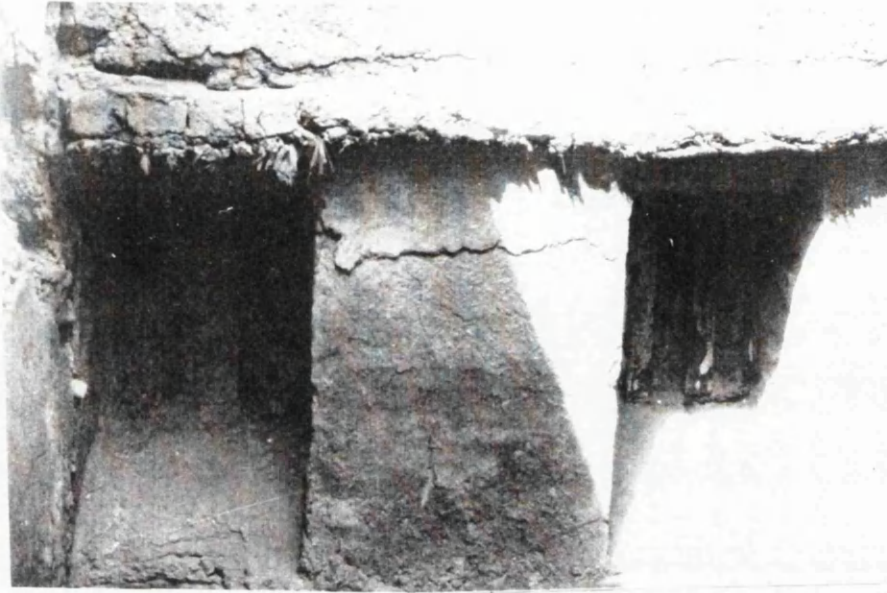


1

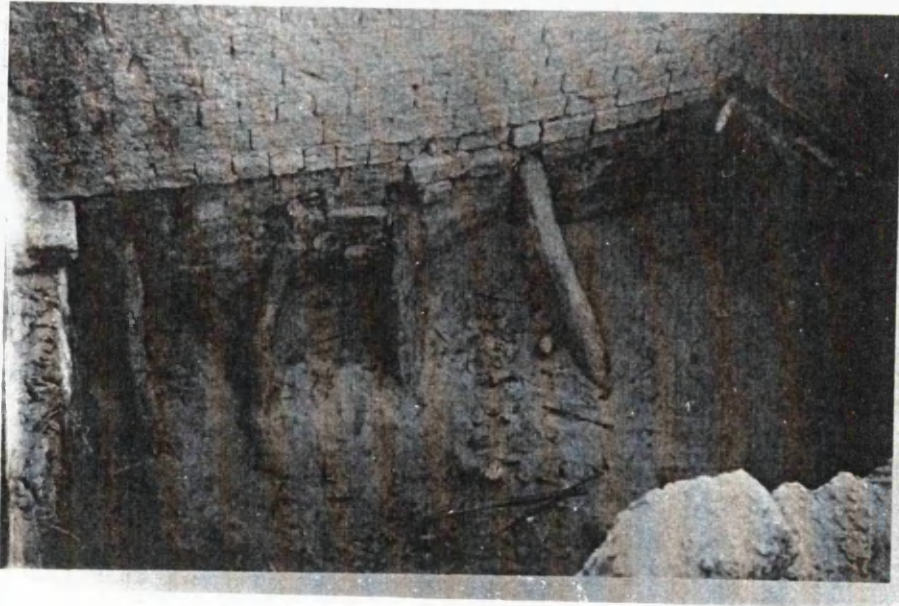


2

Plate XXIX
(ceilings)



3



4

Plate XXX
(ceilings)



5



6

Plate XXXI
(ceilings)

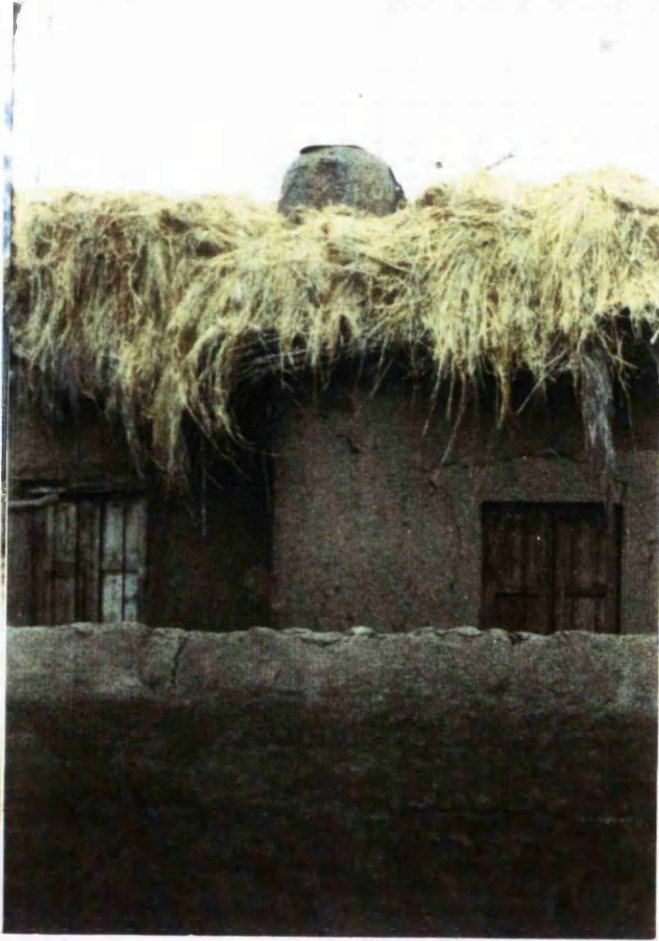


7



8

Plate XXXII
(ceilings and roofs)

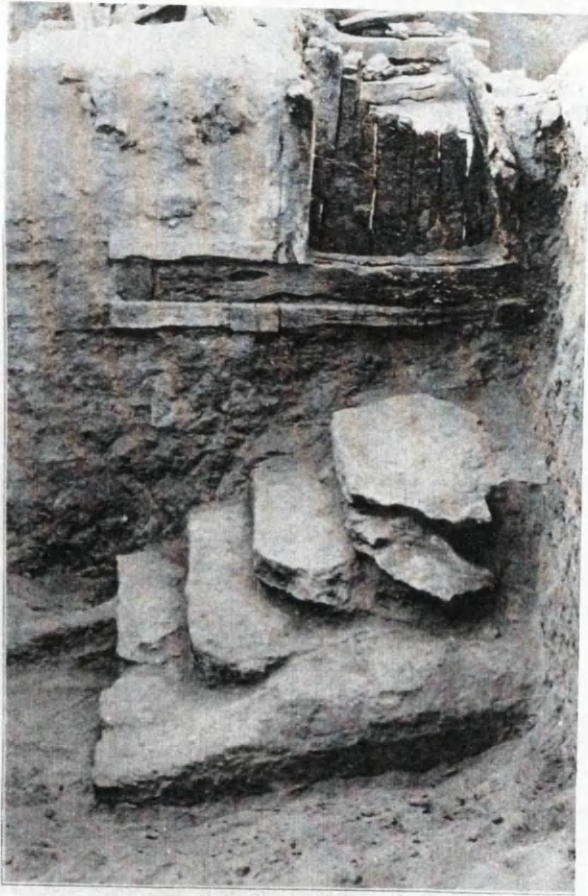


9



10

plate XXXIII
(steps and stairs)



1



2

Plate XXXIV
(steps and stairs)

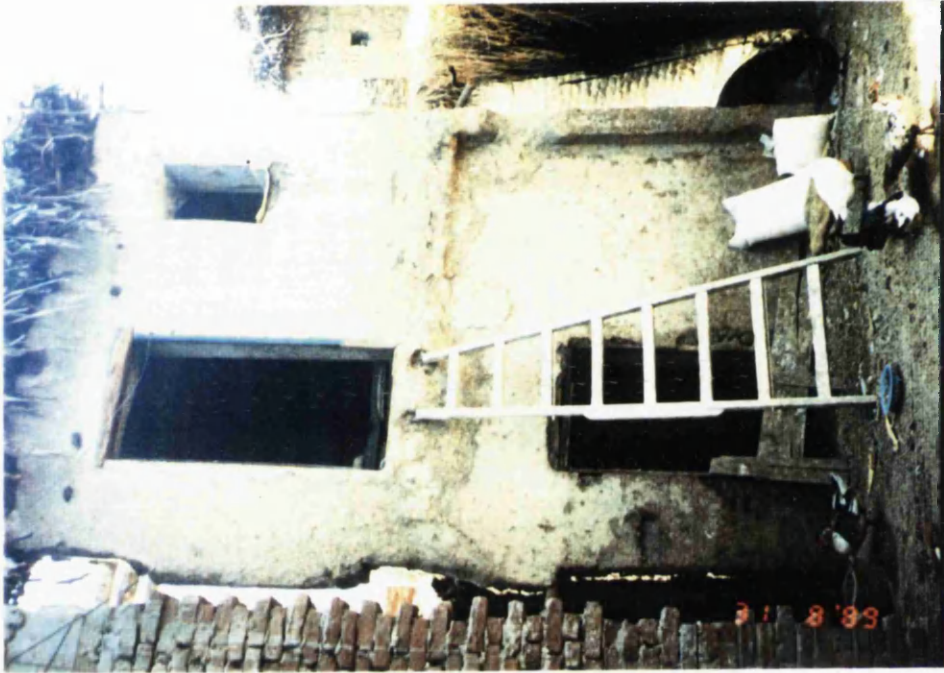


3



4

Plate XXXV
(wooden ladder)



5



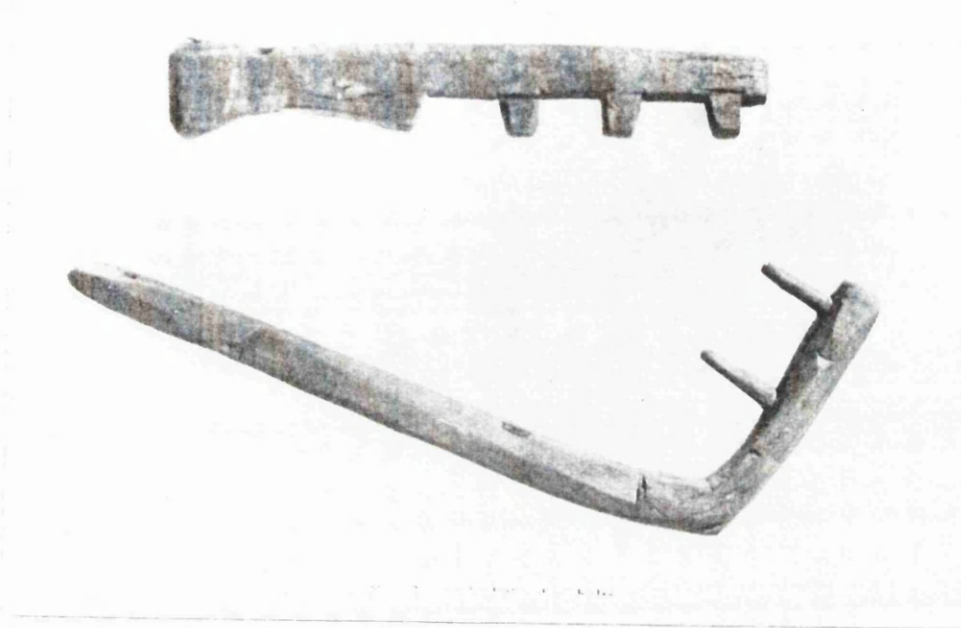
6

Doorways and doors⁹

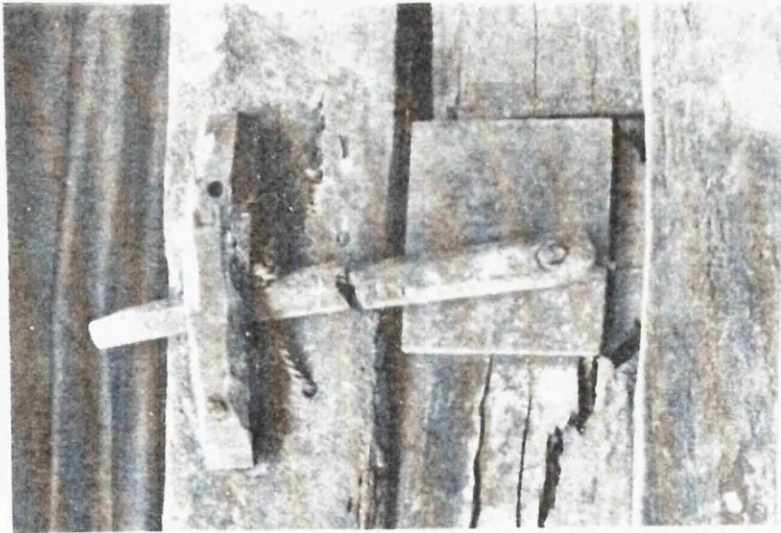
Some doors and doorways in modern rural houses are very similar to the ancient ones or almost the same. Some inner doors of some modest houses are made from the local timber and their shapes are very similar to the ancient doors (plates no. XXXVII-XL). The ancient method of locking doors also survives. Some modern outer doors are equipped with a wooden bolt in a case (almost in the same shape as the ancient locks). From outside the bolt can be manipulated by a wooden key inserted through a rectangular slot just above the bolt case (plate XXXVI). Some doors also have latches on the inner face (plates XXXVI, XXXVIII). The rope for lifting the latch is strung through a hole in the latch and then passed through a hole in the door itself. Its inner end is knotted to prevent its being pulled completely through.

9) For the ancient house see: S.Yeiven, Op.Cit.pp173-77, Husselman, Op.Cit.pp.40-44; G.Husson, Op.Cit.pp.93-109.

Plate XXXVI
(doors and locks)

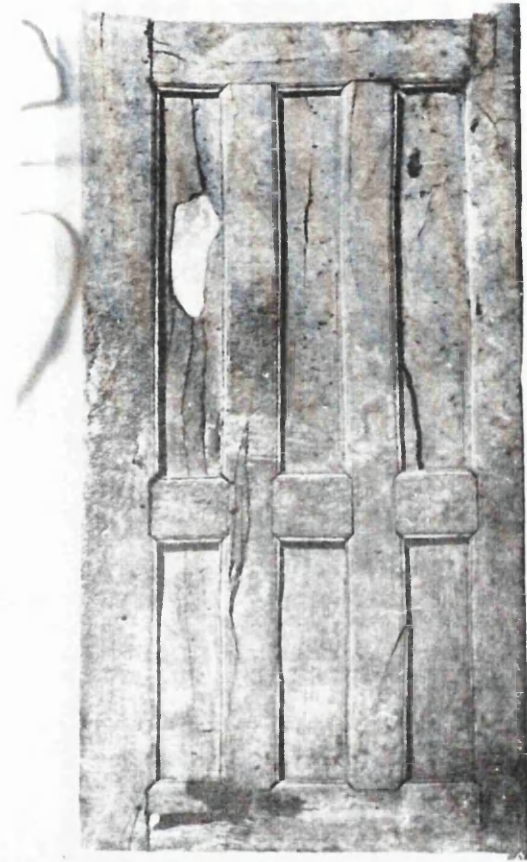


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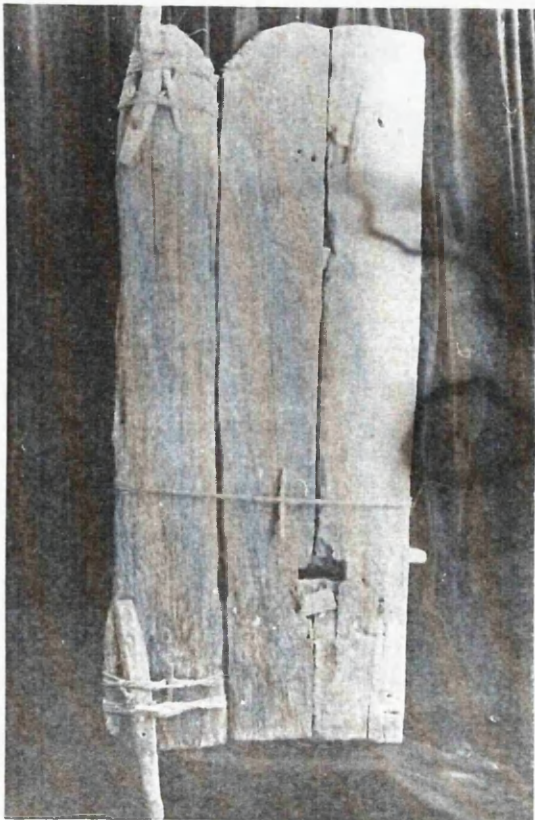


2

Plate XXXVII
(doors and locks)



3



4

Plate XXXVIII
(doors and locks)



5



6

Plate XXXIX
(doors and locks)



7



8

Plate XL
(doors and locks)



9

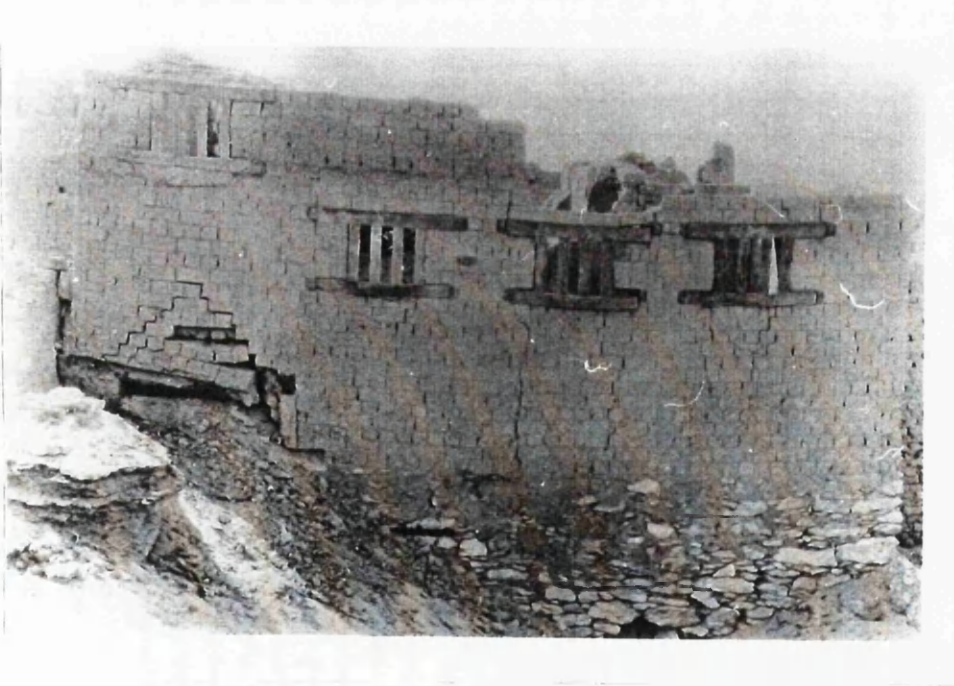


10

Windows:¹⁰

As a rule the windows serve to admit light and ventilation. The shapes of ancient windows still exist in modern rural Egyptian houses. Some windows sit high in walls, as they normally did in antiquity, directly beneath the ceilings of the rooms. Some windows are simply openings in the wall with horizontal bars set both above and below the opening. Vertical bars are more commonly used. Most of the modern windows of the rural houses have shutters, but they do not have glass.

plate XLI
(windows)



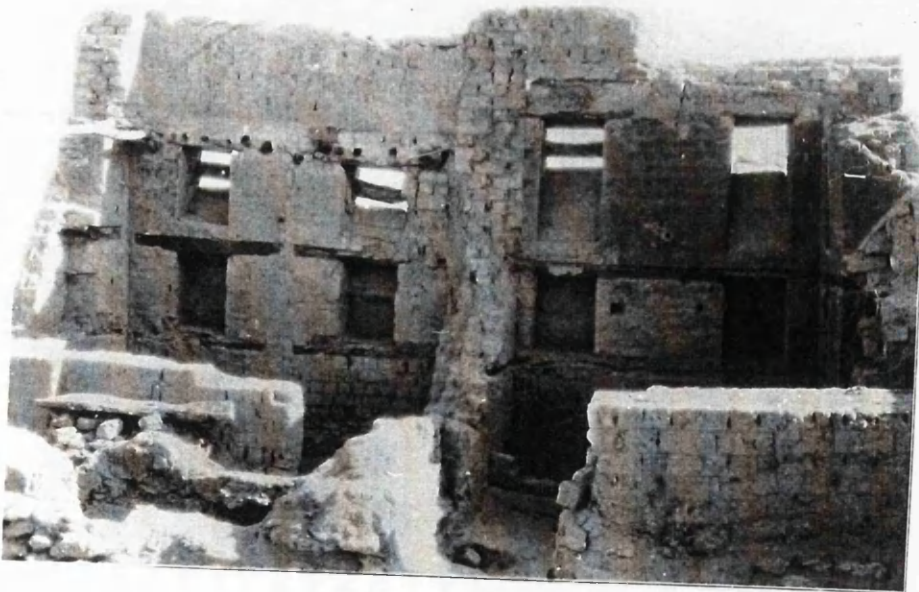
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10) Husselman, Op.Cit.pp.44-46;G.Husson, Op.Cit.pp.109-119.

Plate XLII
(windows)



2

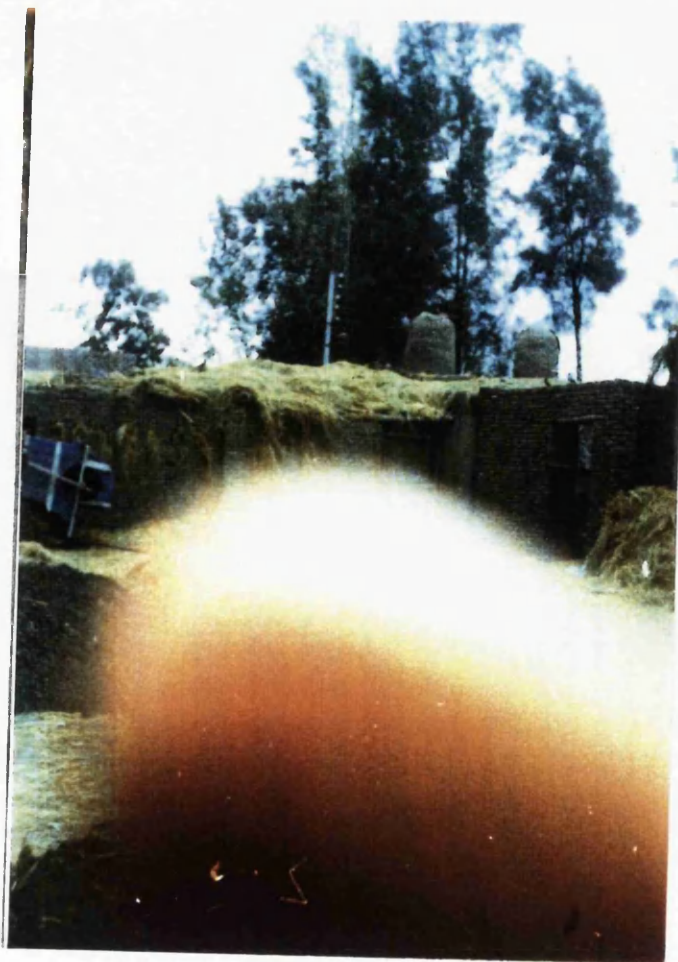


3

Plate XLIII
(windows)



4

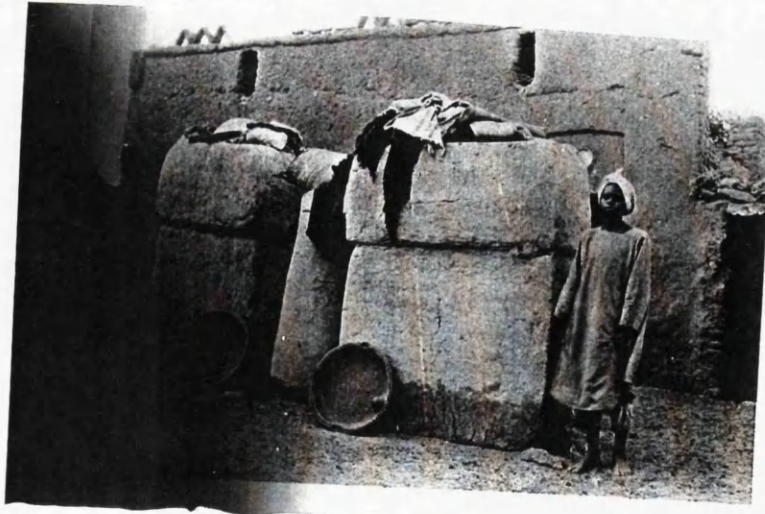


5

Plate XLIV
(windows)



6



7

Plate XLV
(windows)



8

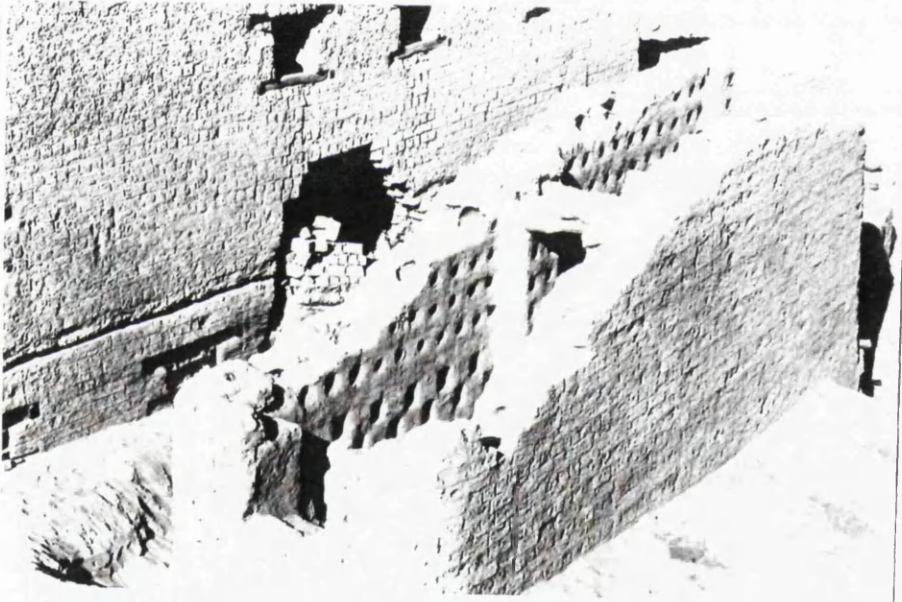


9

Dove-house:¹¹

Dovecotes are spread all over the Egyptian countryside. They are built on upper floors of some houses or stand as separated towers. Husselman¹² rightly says that although there are variations in details of construction, the dove houses in Egypt today remain essentially those of 2000 years ago.

plate XLVI



1

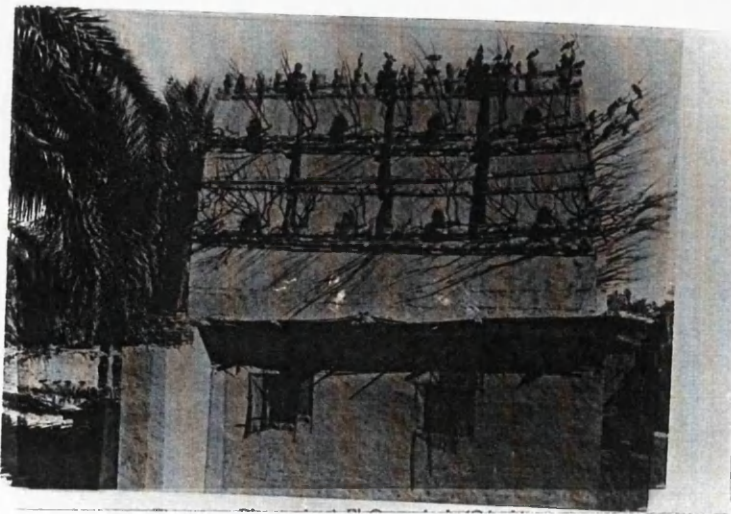
11) For the ancient see Boak, Peterson, Op.Cit.p.24; G.Husson, Op.Cit.pp.224-226.

12) Husselman, The Dovecotes of Karanis, TAPA.84 (1953) p..81-91.

Plate XLVII
(pigeon cotes)



2



3

Courtyards:¹³

Every house has its inner courtyard. Some houses have inner and outer courtyards. The inner courtyard is usually in the centre of the house with the other rooms grouped around it. Some inner courtyards are partly roofed, but the majority are unroofed. The outer courtyards are usually situated at one end or at the side of the house, where there is direct access to a street or a passageway. Some outer courtyards are enclosed by walls. Sometimes there are trees in inner and outer courtyards. The courtyard is the centre of domestic activity in rural areas. Food is prepared and cooked there. Cooking is done on a simple fireplace constructed usually of courses of mud brick, set up against the courtyard's wall 20-30 cm apart. The fuel is placed between the brick courses (plates no. XLIX, L). In addition to the fire place there is usually an oven in the courtyard for baking and cooking (plates no. XLIX, L). Jars and bins for storage of grain and other food stuffs are part of the usual equipment (plate no. LI). Water pots (jars) are also put on stands in the courtyards (plates no. XXXIX, XL). Animals are usually kept in courtyards, and pens for small animals and troughs for their food are common. Herodotus¹⁴ had been struck by the Egyptian

13) Boak & Peterson, *Op.Cit.* pp.34-37; Boak, *Soknopiaou Nesos*, pp.8-9; Husselman, *Op.Cit.* pp.49-54; G.Husson, *Op.Cit.* pp.29; pp.45-55; pp.77-80; pp.147-150.

14) Herodotus, *Histories*, Book II Ch.36.

farmer's practice of keeping domestic animals inside their houses. He says that the Egyptians are the only people to do so. The modern Egyptian farmers also keep their animals inside their houses. They stable them either in the courtyard or in a stable. This may explain why we do not have lease contracts for donkeys' stables during the Roman period.

plate XLVIII



Plate XLIX



2



3

Plate L



4



5

Plate LI



6



7

Plate LII



8



9

Finally the decorative motif:¹⁵

Some modern houses or parts of some houses are whitewashed and have some painting; the pattern of the painting on the walls bears religious significance.

plate LIII



1

15) Rubenshon, JDI 20 (1905), pp.6-7, p.15-25, Boak & Peterson, Op.Cit.pp.32-34; Boak, Soknopaiou Nesos, pp.9-10.

Plate LIV



2



3

Plate LV



4



5

Plate LVI



6

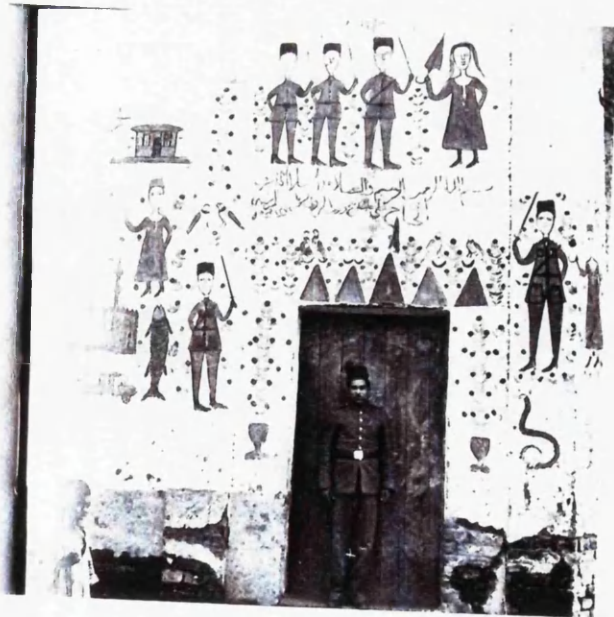


7

Plate LVII



8



9

To sum up the discussion, the modern rural Egyptian houses are a striking illustration of the survival of building patterns and techniques from ancient times. In the Egyptian countryside, changes in domestic architecture have begun to appear only recently, following the constructing of the Asswan High Dam, which discontinued the annual Nile flood and its regular supply of mud which had for many centuries provided the villagers with their main building material at practically no cost. The urbanizing movement is also very rapid all over the countryside for the following reasons: a) The spread of education among the villagers. b) When some of the labourers, who work abroad, return to their villages, they demolish their old houses and build new modern houses with all amenities. They used to use the burnt brick which has now been replaced by the concrete and cement brick in accordance with government regulations which prohibit the taking of mud (earth) from the agricultural lands.

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- 4) Soul-house, Rifeh, (Idem, p.196).
- 5) Soul-house, Rifeh, (Idem, p.198).
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- 42) Plan of a house (84 sq.m.), village, El Santah, Garbiyah.
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- 52) Plan of a house (51 sq.m.), Deir Barawa, Beni Souef, (Idem, p.126 fig.4).
- 53) Plan of a house (108 sq.m.) El Dawalta, Beni Souef, (Idem, p.129).
- 54) Plan of a house (89.5 sq.m.), Karr Abboud, Fayum, (Idem, p.127 fig.5).
- 55) Plan of a house (48 sq.m.) Kom Abou Cheyl, Assiout, (Idem, p.124 fig.3).
- 56) Plan of a house, Chebine el Qanater, Qalioubiah, (Idem, p.28 fig.2).

Corner protection: Plates XXII-XXIII

A) Greco-Roman:

- 1) Wooden protection for corner, Karanis, (Boak & Peterson, Karanis (1924-8) plate XVIII fig.36).
- 2) Wooden Protection for corner, Karanis, (Idem, plate XLII fig.84.)

B) Modern:

- 3) Wooden protection, Beni Abba, Sharqiah.

Benches (masatb) as a device for protecting the wall from heavy traffic:

A) Greco-Roman:

- 1) Mud brick paving in front of house B., Karanis (Boak & Peterson, plate XVII fig.34). This type still exists nowadays and the people use it for sitting and for protecting walls.

B) Modern:

- 2) A bench in front of a house, Beni Qasem, Beni Souef,

(Lozach & Hug, II plate XVIII fig.1).

- 3) A man sitting on the bench (mastabah), Kom Abd el Nour, Beni Souef, (Idem, II plate XVII fig.1)
- 4) Benches, Kom Abd el Nour, Beni Souef, (Idem, II plate XVIII fig.2).

Plaster as Device for protection:

A) Modern:

- 1) Corners and lower part of the wall of the first house from right suffer wear from the traffic, a village near Rosette (Rashid), (Idem I plate II fig.1)
- 2) Corner and lower part of the wall of the second house from the right suffer wear from the traffic, a village, from Aga division (Daqahilah), (Idem, I plate II fig.2).
- 3) Lower parts of walls of houses suffer wear from the traffic, Beni Qasem, Beni Souef, (Idem, I plate XVIII fig.1).
- 4) Some parts of wall's plaster have fallen down from the traffic, Beni Abbad, Sharqiah.

Ceilings and roofs: plates XXVIII-XXXII

A) Greco-Roman: XXVIII-XXIX

- 1) The ruined roof of room BC.72H.area G. Karanis, (Boak & Peterson, plate XIX fig.37).
- 2) The roof over pen B.5 K.area G., Karanis, (Idem, plate XIX fig.38).
- 3) Roof construction in room BC 72 F and G area G. Karanis, (Idem, plate XX fig.).
- 4) A collapsed roof in C47J, Karanis, (Husselman, plate XXVI a).

B) Modern: plate XXX-XXXII

- 5) Ceiling of a room in a house of reed which was plastered and washed, Beni Abbad, Sharqiah.
- 6) Ceiling of stable of reed, a trunk of a whole tree can also be seen, Beni Abbad, Sharqiah.
- 7) Ceiling of a balcony of a house, Beni Abbad Sharqiah.
- 8) The large branches of trees and maize stalks can be seen in the ceiling of the balcony. Beni Abbad, Sharqiah.
- 9) Scene of a terrace with rice-straw and storage bin, Damas, Miet Gammer, Daqahliah.
- 10) Several storage bins on the roof, El Aganiyin, Fayum, (Lozach & Hug, II plate V fig.1).

Steps and Stairs: Plate XXXIII-XXXV

A) Greco-Roman: plate XXXIII

- 1) Steps lead to the entrance of house C 88 Karanis

(Boak & Peterson, plate XL fig.80).

- 2) Stairway between underground rooms of house I 108, Soknopaiou Nesos, Boak, Sok.Nes., plate X fig 19).

B) Modern: plates XXXIV-XXXV

- 3) A mud brick stairway, Beni Abbad, Sharqiah.
- 4) A mud brick stairway was protected by wooden planks, Beni Abbad Shaeqiah.
- 5) A ladder leads to a room on the second floor, Beni Abbad Sharqiah.
- 6) A ladder leads to the terrace, Damas Miet Gammer Daqahliah.

Doors and locks: plates XXXVI-XL

A) Greco-Roman: plates XXXVI-XXXVII

- 1) Keys for manipulating door bolts, Karanis, (Husselman, plate 54a).
- 2) Latch for a door, Karanis, (Idem, plate 56a).
- 3) The outer face of door found in B. 198 D. Karanis, (Idem, plate 56a).
- 4) The outer face of palm wood door found in A 254, Karanis, (Idem, plate 53a).

B) Modern: plates XXXIX-XL

- 5) The outer face of a door with wooden lock, Beni Abbad, Sharqiah.
- 6) The inner face of the same door with iron latch.
- 7) The door's room in a house (see 3), Beni Abbad Sharqiah.
- 8) The outer door of a house, Beni Abbad, Sharqiah.
- 9) The door's room (see 3) Beni Abbad Sharqiah.
- 10) A primitive door, Ouadi Toumilat (Lozach & Hug, I plate VI fig.1).

Windows: plate XLI-XLV

A) Greco-Roman: plate XLI-XLII

- 1) The outer face of windows of house C42, Karanis, Boak & Peterson, plate XXXIV fig.6).
- 2) The inner face of windows of house C47, Karanis, (Idem plate XXXII fig.63).
- 3) The window of house C47, Karanis, Idem plate XXXIV fig.68).
- 4) A window with wooden bar, Karanis, (Idem, plate XLII fig.83).

B) Modern: plates XLII-XLV

- 5) A primitive window, Damas Miet Gammer Daqahliah.
- 6) Small holes serve as windows, village in Qalioubiah, (Lozach & Hug, I plate III fig.1).
- 7) High small windows in a house, El Koubaniyah, Asouan, (Lozach & Hug, II plate X fig.2).
- 8) Different windows in their size, shape and level, Beni

Abbad Sharqiah.

9) Windows with iron bars, Damas Miet Gammer Daqahliah.

Dovecote: plate XLVI-XLVII

A: Greco-Roman: XLVI

1) A dovecote in the courtyard of house C65, Karanis, (Boak & Peterson, plate XXXIII fig.65).

B) Modern:

2) A dovecote , Msaret Arafah, Fayum, (Lozach & Hug, I plate XX fig.1).

3) A dovecote, El Qanawiyah, Qenah, (Idem, II plate XXI fig.1).

Courtyards: plates XLVIII-LII

A) Greco-Roman: plates XLVII-XLVIII

1) An oven in courtyard of house BC 72 area G., Karanis, Boak & Peterson, plate XXVIII fig.55).

2) A small fireplace (kanon) of burnt brick in C 65 L, Karanis (Husselman, plate 75a).

3) A free standing fire place (kanon) in B 509, Karanis, (Idem, plate 75b).

B) Modern: plate XLIX-LII

4) Fire place (kanon), and oven in the inner courtyard of a house, Beni Abbad Sharqiah.

5) Fire place (kanon) and oven in the inner courtyard in a house, Beni Abbad, Sharqiah.

6) Storage bins in outer courtyard of a house, Beni Abbad, Sharqiah.

7) Storage bins and domestic birds in outer courtyard of a house, Beni Abbad, Sharqiah.

8) A pump in a walled courtyard, Damas Miet Gammer, Daqahliah.

9) The walled courtyard is used as a stable for animals, Beni Abbad, Sharqiah.

Decorative motif: plates LIII-LVII

A: Greco-Roman: plates LIII-LV

1) Painting of God Heron in room E, House B 50, Karanis, Boak & Peterson, plate XXIV fig.48).

2) Painting of Harpocrates in house C 65, Karanis (Idem plate XXXVI fig.71).

3) Painting of Isis and Harpocrates on the wall of the room E of House B 50, Karanis, Idem, plate XXV fig.49).

4) Wall painting on the north wall of room II 204 D Soknopaiou Nesos, (Boak, Sok.Nes., plate IV fig.6).

5) Painting on the wall of the room II 204, Soknopaiou

Nesos, (Idem, plate IV fig.7).

B) **Modern:** plates LVI-LVII

- 6) The painter and his painting, Nag Hammadi (G.Schildt, The sun boat, a voyage discovery, translated by A.Blair, London (1957) p.96).
- 7) Painting on a wall of a house of pilgrim (hag), Hawaret Addlan, Fayum, (Lozach & Hug, plate XIX fig.1).
Painting on a pilgrim's house (G.Leik fig.8 p.19).
- 8) Painting of a Meca pilgrim's house at Nag Hammadi, (G.Schildt, p.96).

Conclusion

Under the Roman rule, the house property market in Egypt was influenced by the following factors: a) The vendor may have chosen to offer the house for sale because he wanted to make a profit. b) He may have had to dispose of his house property for less profitable reasons, if he could no longer afford to keep it; especially if he had several houses or nominal shares in different parts in the city or the village, or if a dispute broke out between joint owners or neighbours over boundaries, or rights of way, or if the co-owner cast a covetous eye upon the other parts of a house. c) He may have been obliged to sell his property to release himself from debt. d) He may also sell his house and lands in one area and move to another one. In most cases he will probably buy a larger property in the new residence. e) He lives in a city and his house or his share in a house is in another village. f) The purchaser wants to consolidate his property in one area or to make a profit.

The following factors play a part in the estimation of the value of the house property and building land. a) The location: The evidence shows that there are great differences between the prices of building lands, depending on whether they are in cities or in villages. The prices in the cities are higher than those in the villages, but sometimes the prices of some rural houses are higher than

the values of the urban houses. B) The size: Although the dimensions of the houses are rarely stated in documents, one can say that the parties of the contracts took into account the size of house property. There are large variations between the sizes of houses. The rural houses are generally larger than the urban houses. c) The design, construction and condition are also taken into consideration by the parties of the contract. d) The value of the money and economic condition: No doubt the effects of severe economic disruption at all levels in some periods during the period under consideration were reflected in the prices of houses. It is more probable that the small land owners during these periods were obliged to sell or mortgage the whole or part of their properties. The market might then be full of private houses offered for sale in addition to large amount of the government's property. The prices might have decreased. These periods would be golden periods for the wealthy speculators who invested their money in purchasing the house properties.

e) The building materials: The parties of the contract took into account the building materials of the house property. The evidence tells us that the price of the brick was accounted either per hundred or per thousand. There was a steady increase in prices of brick, but the quantity, the quality, and the size are factors that influence their prices. Using stone as building material raises sharply the value of the houses. The price of a stone column (264 dr.)

is more than the prices of several houses in some villages in the Fayum nome. The scarcity of wood in Egypt had its effect on its price. The price range varied from between 4 dr. and 210 dr. per tree. The price was calculated either per tree or per branch or per cubit or per piece. The prices of some trees were higher than the price of some houses in the Fayum nome. Also the prices of reeds vary according to the size and the type of reeds. The price was estimated per bundle (50 reeds). The variations of prices of the gypsum may be due to the difference of the quality. The variations of the value of the glue may be due to either the kind of the glue or the purchase quantity. The price of glue increased sharply in the late third cent. A.D.

f) The costs of transportation of building materials either by land or by river vary according to the distance between the place of the work site and the place of the materials. The transporter received a daily wage. The wages were paid either in money or in kind or both in money and in kind.

g) The craftsmen were paid either per day, or per number of bricks, or number of stones, or square cubit of stone, or per column, or for the whole job. They received their wages in money or both in money and in kind (bread, lentils, wine). The daily wages vary according to the nature of the work. The craftsmen were usually paid more than the farmers. The wages steadily increased: we find the

daily wages of the third cent.A.D. 4 times higher than the wages of the first cent.A.D. Finally the wages of some very skilful craftsmen are higher than the prices of the materials which they used.

For the prices of houses and building lands, the evidence comes mainly from five nomes. There is no balance between the evidence from each nome. The Fayum nome produced more references than all other nomes together. Although the first century documents give us a lot of evidence, the price is very often either not stated or lost. The reason for not stating the price may be that the document is either a translation from demotic into Greek or a subscription or a docket of a demotic contract.

When co-owners or neighbours want to sell their shares of houses or houses, they have to notify the co-owner(s) and neighbours about their wish to sell their house property in accordance with the edicts of the prefects.

The government offered its house properties for sale by auction. The purchaser of the government's house property pays not only the offered price but also additional payments (6.25 %).

The evidence suggests that the ownership of houses does not mean that the owners had a large or high social status. The ratio of the sale of houses is very high compared with sales of other objects and the prices in many cases are not higher than the prices of other objects (slaves, camels, and donkeys), indeed the prices of things

are sometimes higher. It is difficult to generalize about the upward trend of prices of houses. For in the beginning of the second century A.D., there are some high prices as well as low prices and this situation carries on right to the end of the century. We have some very exceptional cases, for example: In P.Oxy.III 513 from Oxyrhynchos, the price of a house was 600 dr. plus additional payment, which after more than two years was resold for 1800 dr. plus additional payment. In Antinoopolis the price of a share of a house is 600 dr. (P.Lond.III 1664c p.157), and after 12 days only, the share was resold for 700 dr. (P.Lond.III 1664f p.166). However the prices in many cases did not increase sharply in that direction and the sellers might sacrifice and sell their property under some unknown circumstances. In general the average of the first two centuries is less than the average of the third century. As a result of the scarcity of evidence for the prices of houses, it is not easy to know when the house prices were sharply increased or the inflation was felt, but from the prices of other objects one can say that the inflation started to take off in the second half of the third century A.D.

Leases of houses and business premises existed during the Ptolemaic period both officially and unofficially. The available evidence gives us some indication about the existence of a rental market in rural and urban areas from the very beginning of the Roman period. We do not have any lease contracts from the period between 30 B.C.-A.D.94,

while we have a large number of antichretic loans with the right of habitation. The people may have avoided a special unknown law which might have existed from the Ptolemaic period by adopting oral agreements or antichretic loans with right of habitation.

Several reasons may be behind leasing a house or a part of a house or business premises: studying in another city, moving temporarily to another place to improve the economic situation, doing business, sorting out legal and administrative problems, economic crises obliged all or some of the inhabitants of some areas to move to other more prosperous areas, and finally the practice of trade. The rents of houses, animal sheds and business premises may vary for the following reasons: condition, size, location, the capacity of the machines, and the economic condition of the area. The level of rents for the animal sheds and business premises is usually higher than the rents for the houses and even some prices of houses. The level of rents in urban areas is usually higher than in rural areas, but sometimes the level in some villages is higher than in cities. In some cases when the parties renewed the contracts, the rents were increased, while in others they were not increased. From the first glance, one can easily see the steady increase of the level of the rents, but if one carefully checks the references, one finds that: a) in all cases there is no full description of the premises, b) there is no mention concerning the sizes of the premises,

c) in most cases there is no mention concerning the condition of the premises. Therefore it would be mistaken to say that there is usually a steady increase in the level of the rents from the available references. This is because: a) some early rents are higher than the later ones, b) the evidence survived by accident. The level of the third century is higher than that of the first two centuries. The level of rents is very reasonable compared with the level of daily wages. The rents in many cases are less than the poll-tax.

The study shows that there are many similarities between the ancient and modern houses in Egypt. Many ancient features (designs, plans, parts of the house and their uses, and building materials) exist in modern rural houses. This is not surprising, given that the living conditions, and also the economic and social structures of rural Roman Egypt and rural Egypt today, have not undergone any significant changes. Only in this century, with the arrival of electricity, tractors and lorries, modern technology and farming methods, have things begun to change, and the traditional Egyptian village, together with its traditional village house, may gradually change beyond recognition.

BIBLIOGRAPHY

- M.K.Abd El-Aliem, *The Jews in Egypt during the Ptolemaic and Roman period*, Cairo, 1968 (arabic).
- A.Alt, *Noch einmal ΠΥΡΓΟΣ Wirtschaftsgebäude*, *Hermes* 55 (1920) pp.334-336.
- V.Arango-Ruiz, *Un Kômogrammateus concussionario e il 70 del Gnômon*, *BIDR* 63 (1960) pp.263-279.
- E.C.Baade, *Jurisdictions in Roman Egypt*, Ph.D. Yale 1975.
- A.Badawy, *A history of Egyptian architecture: the first intermediate period, Middle Kingdom, and second intermediate period*, Berkeley 1966.
- A.Baldini, *La rivolta Bucolica e l'usurpazione di Avidio Cassio (Aspetti del principato di Marco Aurelio)* *Latomus* 37 (1978) pp.634-678.
- L.Bandi, *Conti privati nei papiri dell'Egitto Greco-Romano*, *Aeg.* (1937) pp.349-451.
- W.D.Barry, *Faces of the crowd: Popular Society and politics of Roman Alexandria 30 B.C-A.D.215*, Ph.D. Michigan 1988.
- J.Bataille, *Les Memmonia: Recherches de papyrus et d'épigraphie grecques sur la nécropole de la Thèbes d'Égypte aux époques hellénistique et romaine*, Cairo 1952.
- H.I.Bell, *Some private letters of the Roman Period*, *Rev. Egypt.* 1 (1919) pp.199-209.
- , *A musician's contract*, *JEA* 10 (1924) pp.145-146.
- , *Economic crisis in Egypt under Nero*, *JRS* 28 (1938) pp.1-8.
- , *Antinoopolis: A Hadrianic foundation in Egypt*, *JRS* 30 (1940) pp.133-147.
- , *Anti-semitism in Alexandria*, *JRS* 31 (1941) pp.1-18
- , *Brother and sister marriage in Greco-Roman Egypt*, *RIDA* 2 (1949) pp.83-93.

- , A happy family, Fest W.Schubart zum 75 Geburtstag 1953, pp.38-47.
- A.Berger, Die Strafklauseln in den Papyrusurkunden, Leipzig 1911.
- , Wohnungsmiete und Verwandtes in den gräko-ägyptischen Papyri, Z.Vg.R.Wiss.29 (1913) pp.321-415.
- A.Bernard, Les Inscriptions Grecques et Latines du colosse de Memnon, Cairo 1960.
- J..Bingen, Documents provenant des archives d'Héroninos, CE 49 (1950) pp.87-107.
- A.E.R.Boak and E.E.Peterson, Karanis: Topographical and Archtictural Report of Excavations during the Seasons 1924-28. Ann Arbor 1931.
- A.E.R.Boak, Karanis: The Temples, Coin Hoards, Botanical and Zoological Reports, Seasons 1924-31, Ann Arbor 1933.
- , Soknopaiou Nesos: The University of Michigan Excavations at Dimê in 1931-32, Ann Arbor, 1935.
- , The population of Roman and Byzantine Karanis, Historia, 4 (1955) pp.157-162.
- , Egypt and plague of Marcus Aurelius, Historia 8 (1959) pp.248-50
- S.V.Bolla, Untersuchungen zur Tiermiete und Viehpach im Altertum, München (1940).
- D.Bonneau, Le fisc et le Nil, Paris 1971.
- , Le Fêtes Amesysia, CE 49 (1974) pp.366-379.
- , P.Sorb.Inv.2371, Scritti in Onore di O.Montevecchi,1981, pp.49-56.
- , Les fêtes Amesysia et les jours épagomènes (d'après la documentation papyrologique et égyptologique, ASAE 70 (1984/5) pp.365-370.
- , Aperçu sur l'origine de villes Antiques en Égypte d'après la Documentation papyrologique, L'Origine des Richeses dépinsées dans la Ville Antique, Aix-en Provnce Marseille 1985 pp.233-241.
- A.Bowman, The town councils of Roman Egypt, Toronto 1971.

- , Egypt after the Pharohs 332 BC-A.D.642 from Alexander to the Arab conquest, London 1986.
- W.Boochs, Die Finanzverwaltung im Altertum, Sankt Augustin 1985.
- R.Bogaert, Les banques affermées de l'Égypte romaine, Studi C.Sanfilippo, III 1983 pp.39-61.
- Bouché-Leclercq, Histoire des Lagides, 4 vols. Paris 1903-1907.
- H.Braunert, IΔIA , Studien zur Bevölkerungsgeschichte des Ptolemäischen und römischen Ägypten, JJP 9/10 (1955/6) pp.211-328.
- , Die Binnenwanderung. Studien zur Sozialgeschichte Ägypten in der Ptolemäer-und Kaiserzeit, Bonn 1964.
- , Ein neuer Wohnungsmietvertrag aus der Bonner Papyrussammlung, F.Örtel zum 80 Geburtstag gewidmet, Bonn 1964 pp.34-46.
- L.Bringmann, Die Frau im Ptolemäisch-Kaiserzeitlichen Ägypten, Bonn 1939.
- E.Bresciani, Madinat Maadi, Milano 1966/67.
- E.H.Brewster, A weaver life in Oxyrhynchus his status in the community, Classical Studies in honor of J.C.Rolfe, 1931 pp.19-45.
- H.Cadell, P.Genève 60, BGU II 456 et le problème du bois en Égypte, CE 51 (1976) pp.331-348.
- A.Calderini, OI EΠI ΞΕΝΗΣ, JEA 40 (1954) pp.19-22.
- R.E.Campbell, An archaeological study of Egyptian houses particularly those from from Hellenistic period, Ph.D.Durham 1984.
- G.Casanova, Epidemie e fame nella documentazione greca d'Egitto, Aeg.64 (1984) pp.163-201.
- L.Casson, Travel in the ancient World, London 1979.
- G.Chalon, L'édit de Tiberius Julius Alexander, Olten et Lausanne 1964.
- P.Chantraine, Grec AIΘPION ,Rech..Pap.3 (1964) pp.5-15

- H.Cockle, Pottery manufacture in Roman Egypt, JRS. 71 (1981) pp.87-97.
- W.E.H.Cockle, State archives in Graeco-Roman Egypt. from 30 B.C.to the reign of Septimius Severus, JEA 70 (1984) pp.106-22.
- W.Dahmann, Η Βία , im Recht der Papyri, Diss Köln 1968.
- W.A.Daszewski, Corpus of Mosaics from Egypt, I Mainz 1985.
- G.Davis, The town house in Ancient Egypt, Metropolitan Museum Studies I (1928). pp.233-255.
- R.W.Davies, The investigation of some crimes in Roman Egypt, Ancient Society 4 (1973) pp.199-212.
- D.Delia, Roman Alexandria, studies in its social history Ph.D. Columbia 1983.
- P.Derchain, Une origine égyptienne d'emploi du mot $\theta\alpha\lambda\lambda\acute{o}\varsigma$ =cadeau dans les papyrus grecs d'Égypte, CE 30 (1955) pp.324-326.
- A.Dowrakowska, Quarries in Roman Provinces, Warszawa 1983.
- J.Drath, Untersuchungen zum Wohnungseigentum auf Grund der gräko-ägyptischen Papyri, Diss. Marburg-Lahn 1970.
- P.Drewes, Die Bankdiagraphe in den gräko-Ägypten Papyri, Diss.Erlangen 1970 = JJP 17 (1974) pp.95-155.
- H.J.Drexhage & J.Sünkes, Einige Beobachtungen und Materialien zum Hausbesitz im Fayum (I Jh.n), Anagennesis, 2 (1982) pp.51-68.
- H.J.Drexhage, Vorarbeiten zu einer Wirtschaftsgeschichte des römischen Ägypten (I) Preise, Mieten, Pachten, Kosten und Löhne in römischen Ägypten bis zum Regierungsantritt Diokletians, Unveröffentlichte Habilitationsschrift, Münster 1985.
- , Eigentumsdelikte im Römischen Ägypten, ANRW.II 10,1 (1988) pp.952-1004.
- , ...Scimus, quam regionesque..., zu den Preisvariationen im römischen Ägypten, Münstersche Beiträge zur Antiken Handelsgeschichte, 7 (1988) pp.1-11.
- , Zur Preisentwicklung im römischen Ägypten von ca 260 n.chr bis zum Regierungsantritt Diokletians,

Münstersche Beiträge zur Antiken Handelsgeschichte,
6,2 (1987) pp.30-45.

C.Dubous, L'olivier dans l'ancienne Égypte, Rev.Phil.1925,
pp.60-83; 7 (1927), pp.7-49.

R.P.Duncan-Jones, The price of wheat in Roman Egypt under
the Principate, Chiron 6 (1976) pp.241-62.

-----, The Choenix, the artaba and modius, ZPE 21
(1976) pp.43-52.

-----, The size of Modius Castrensis, ZPE 21 (1976)
pp.53-62.

-----, Variation in Egyptian grain measures, Chiron
9 (1979) pp.347-375.

K.Durst, Zubehör und Unternehmen im Recht der Papyri,
Giessen 1938.

S.Eitrem, A few remarks on σπονδή, θαλλός, and other extra
payments in papyri, Symb.Osl. 17 pp.26-48.

L.H.Feldman, The orthodoxy of the Jews in Hellenistic
Egypt, JSS 1960 pp.215-237.

H.E.Finkh, Das Zinsrecht der gräko- ägyptischen Papyri,
Diss.Erlangen 1962.

K.Fitzler, Steinbrüche und Bergwerke in Ptolemäischen und
Römischen Ägypten, Leipzig 1910.

R.M.Fleischer, Measures and containers in Greek and Roman
Egypt, M.A London 1956.

G.Flore, Sulla bibliothêkê tôn egktêseôn, Aeg.8 (1927)
pp.43-88.

H.Fowler, A note on fractions of an artab.ZPE 51 1983)
pp.273-4.

P.M.Fraser, Ptolemaic Alexandria. 3 Vols.Oxford 1972.

L.Friedländer, Roman life and manners under the early
Empire, 4 Vols. (1965), translated by L.A.Magnus,

A.Fuks, The jewish revolt in Egypt (A.D.115-117) in the
light of the papyri, Aeg.33 (1953) pp.131-158.

-----, Aspects of the jewish revolt in A.D.115-117, JRS
51 (1961) pp.98-104.

- K.S.Gapp, Lease of a pigeon house with brood, TAPA 64 (1933) pp.89-97.
- , The universe famine under Claudius, HTR. 28 (1936) pp.258-265.
- A.Gara, L'economia dei crediti in natura (Egitto), Studi Letteratura e Storia dell'Antichità 60 (1982) pp.69-82.
- , Aspetti di economia monetaria dell'Egitto romano, ANRW 10,1 (1988) pp.912-951.
- E.K.Gazda, Karanis: An Egyptian town in Roman times, Ann Arbor, 1983.
- V.Geginat, Prodoma in den Papyri aus dem Ptolemäischen-römischen Ägypten, Köln 1964.
- H.Geremek, Karanis; communauté rurale de l'Égypte romaine au II-III siècle de notre ère. Warszawa 1969.
- H.Gerstinger, Zwei neue Wohnugemietverträge aus Herakleopolis Magna der sammlung Payrus Erzlerzog Rainer in Wien, JÖByz 3 (1954) pp.55-65.
- J.E.Gilliam, The plague under Marcus Aurlius AJP.82 (1961) pp.225-251.
- O.Grabe, Die Preisrevolution im 4. Jahrhundert und ihre Ursachen, nachgewiesen an Ägypten, Jena 1923.
- D.Hagedorn, Zum Amt des διοικητή^ς im römischen Ägypten, YCS 28 (1985) pp.167-210.
- J.Hasebrök, Nοcmals ΠΥΡΓΟΣ Wirtschaftsgebäude, Herm.57 (1922) pp.621-823.
- H.Heinen, Sur le régime du travail dans l'Égypte ptolémaïque au III siècle avant J.C., Hommages C.Préaux Bruxelles (1975) pp.656-662.
- W.Hellebrand, Arbeitsrechtliches in den Zenon Papyri, Fest.P.Koschaker, Weimar III (1939) pp.341-267.
- J.Hengistl, Private Arbeitsverhältnisse freier Personen in den hellenistischen Papyri, Diss.Freiburg 1973.
- , Einige Juristische Bemerkungen zu drei Töpferei-Mieturkunden, Studi Biscardi, Milano IV 1983 pp.663-673.

- , Die enoikesis, The XIXth Int.Cong.Pap.Cario 1989.
- J.Hermann, Σπονδή und σπονδαί, Studi in Onore di E.Volterra, Milano III (1971) pp.135-142
- , Edikt des C.Avidius Heliodorus ZSS 92 (1975) pp.260-266.
- , Zur ΩNH EN ΠΙΣΤΕΙ des hellenistischen Recht, Symposion 1985 pp.317-324.
- D.Hobson, Women as property owners in Roman Egypt, TAPA 113 (1983) pp.311-21.
- , House and household in Roman Egypt, YCS 28 (1986) pp.211-229.
- M.Hombert & C.Préaux, Recherches sur le Recensement dans l'Égypte Romaine, 1952.
- M.Humbert, La juridiction du Préfet d'Égypte d'Auguste à Dioclétien, F.Burdeau, Aspects de l'Empire Romain, Paris 1964 pp.98-147.
- N.Hohlwein, L'Égypte romaine, Bruxelles 1912.
- , Déplacements et tourisme dans l'Égypte romaine, CE 15 (1940) pp.253-278.
- K.Hopkins, Brother and sister marriage, CSSH. 22 pp.303-354.
- G.R.Hughes, Notes on Demotic Egyptian leases of property, JNES. 32 (1973) pp.152-160
- F.Hultsch, Griechische und Römische Metrologie, Graz 1971.
E.H.Husselman, The granaries of Karanis, TAPA 83 (1952) pp.56-73.
- , The Dovecotes of Karanis, TAPA 84 (1953) pp.81-81.
- , Karanis Excavations of the University of Michigan in Egypt 1928-1935: Topography and Architecture, Ann Arbor.1979.
- G.Husson, Recherches sur le sens du mot προάστειον dans le grec d'Égypte, Rech.Pap.4 (1967) pp.187-200.
- , Carreaux de fenêtres dans les papyrus grecs, CE 47 (1972) pp.278-282 =JJP 19 (1983) pp.153-162.

- , Autour des maisons d'Égypte papyrologica, CE 50 (1975) pp.207-214.
- , Un sens méconnu de thuris et de fenestra, Proceedings Oxford 1975 pp.177-182.
- , La maison privée à Oxyrhynchos aux trois premiers siècles de notre ère, Ktema I (1976) pp.5-27.
- , Note sur la formation et le sens du composé pronésion, CE 51 (1976) pp.167-168.
- , Traditions Pharaoniques attestées dans l'architecture domestique de l'Égypte grecque, romaine et byzantine, Proceedings New York, (1981) pp.519-526.
- , Kaminos dans les papyrus grecs, Archeologia, 30 (1979) pp.17-20.
- , L'Habitat monastique en Égypte, Hommages à la Mémoire de S.Sauneron, 1979, pp.191-207.
- , P.Giss.Univ.10 II 13 ἐν μωείῳ, CE 57 (1982) pp.118-119.
- , OIKIA Le vocabulaire de la maison privée en Égypte d'après les papyrus grecs, Sorbonne, 1983.
- E.G.Huzar, Alexandria ad Aegyptum in the Julio-Claudian age, ANRW II 10,1 (1988) pp.619-668.
- A.C.Johnson, Roman Egypt to the reign of Diocletian, Baltimore 1936.
- , Roman Egypt in the third century, JJP 4 1950 pp.151-158.
- , Egypt and Roman Empire, Ann Arbor 1951.
- , Epibolê of land in Roman Egypt, Aeg.32 (1952) pp.61-72.
- H.I.Jolwicz, Case law in Roman Egypt, Journal of the Society of Public Teachers of Law, 1937 pp.1-16.
- P.Jouguet, La vie municipale dans l'Égypte romaine, Paris 1911.
- U.Kahrstedt, Kulturgeschichte der römischen Kaiserzeit, 1958.

- S.Kambitsis, Un nouveau texte sur le dépeuplement du nome Mendésien: P.Thmouis 1, coll.104-105, CE (1975) pp.130-40.
- A.Kasher, Some comments on the Jewish uprising in Egypt in the time of Trajan, JJS 27 (1976) pp.147-158.
- , The Jewish attitude to the Alexandrian gymnasium in the first century, AJAH (1976) pp.148-161.
- , The Jews in Hellenistic and Roman Egypt: The struggle for equal rights, Tübingen 1985.
- R.Katzoff, Sources of Law in Roman Egypt, ANRW 13,1980 pp.802-844.
- , Precedent in the courts of Roman Egypt, ZSS 89 (1972) pp.256-292.
- C.H.Kim, Form and structure of the familiar Greek letter of recommendation, Ph.D.Missoula 1972.
- J.R.Knipfing, The Libelli of the Decian persecution, HTR 16 (1923) pp.345-390.
- H.Kreller, Erbrechtliche Untersuchungen auf Grund der gräco-ägyptischen Papyrusurkunden, Leipzig 1919.
- J.Krengel, Der Geldwert in Ägypten in der Zeit des Prinzipats- ein neues statistisches Verfahren zur Inflationsberechnung in einer antiken Wirtschaft, GM 37 (1980) pp.67-91.
- J.Krüger, Über Stadt und Gau Oxyrhynchos, Literatur, Topographie, Verwaltung, Ph.D. FU Berlin 1987 (unpub.).
- B.Kübler, Antinoopolis, Aus dem alten Städteleben, Leipzig 1914.
- E.Kühn, Antinoopolis, Göttingen, 1913.
- H.Kühnert, Zum Kreditgeschäft in hellenistischen Papyri Ägyptens bis Diokletian, Diss.Freiburg 1965.
- H.Kupiszewski, Surveyorship in the law of Greco-Roman Egypt, JJP 6 (1952) pp.257-268.
- , Juridicus Alexandriae, JJP 7/8 (1953/1954) pp.187-204.

- , Quelques remarques sur les vocabula
ANTIXPHEIΣ, APPA, ΠΑΡΑΦΕΡΝΑ, dans le Digest, JJP.18
(1974) pp.227-238.
- , Römisches Provinzialrecht in Ägypten,
Fest.F.Oertel, (1974) pp.68-80.
- , Antichrese und Nutzpfund in den Papyri,
Fest.für M.Kaser, Köln (1988) pp.133-149.
- M.Launey, Recherches sur les armées hellénistiques
2 Vols. Paris 1949/50.
- M.Lauria, Il Gnomon dell' Idios Logos AAN 75 (1965) pp.61-
153.
- E.Levy, Review of A.Manigk= Gläubigerbefriedigung durch
Nutzung, Berlin 1910, Beiträge zur Erl.d.deutschen
Rechts 55 pp.810-817.
- N.Lewis, ΜΕΡΙΣΜΟΣ ΑΝΑΚΕΧΩΡΗΚΟΤΩΝ: An aspect of the Roman
oppression in Egypt, JEA 23 (1937) pp.63-75.
- , On timber and Nile shipping, TAPA 90 (1960)
pp.137-141.
- , Four Cornell papyri, Rech.Pap.3 (1964) pp.25-35.
- , Compulsory public services of Roman Egypt, Firenze
1982.
- , Sur deux papyrus de la Sorbonne, JJP 13 (1961)
pp.87-89.
- , Life in Egypt under Roman rule, Oxford 1983.
- Lucas, Ancient Egyptian materials, London 1962.
- F.Luckhard, Das Privathaus in Ptolemäischen und römischen
Ägypten. Giessen, 1914.
- Lumbroso, Recherches sur l'économie politique d'Égypte
sous les Lagides, Turin 1870.
- P.D.MacDearmon Witt, The judicial function of the Strategus
in the Roman period, Ph.D.Duke Univ.1977.
- R.MacMullen, Nationalism in Roman Egypt, Aeg. (1964)
pp.179-199.
- J.P.Mahaffy, The Empire of the Ptolemies, London 1895.

- H.Maehler, Häuser und ihre Bewohner im Fayum in der Kaiserzeit, Aeg.Trev. II (1983) pp.119-137.
- , Review of G.Husson, OIKIA Le vocabulaire de la maison privée en Égypte d'après les papyrus grecs, Sorbonne 1983, Bibliotheca Orientalis, 44 (1987) PP.687-91.
- A.Manigk, Gläubigerbefriedigung durch Nutzung, 1910.
- , Gräcko-ägyptisches Pfandrecht, ZSS 30 (1908) pp.272-328.
- V.Martin, Relevé topographique des immeubles d'une métropole (P.Gen.inv.108), Rech.Pap.2 (1962) pp.37-73.
- D.Meeks, Les Fêtes Amesysia, essai d'etymologie, CE.49 (1974) pp.380-383.
- R.Meiggs, Trees and timbers in the Ancient Mediterranean World, Oxford 1982.
- D.Meredith, The Romans in the Eastern desert, JEA 38 (1952) pp.94-119.
- P.Mertens, Les services de l'état civil et le contrôle de la population à Oxyrhynchus au III siècle de notre ère, 1958.
- P.Meyer, Die Libelli aus der decianischen Christenverfolgung, Berlin, 1910.
- , Papyrusbeiträge zur Römischen Kaisergeschichte: I Vice Praefecti Aegypti, Klio (1907) pp.122-137.
- , Zum sogenannten Gnomon des Idios Logos aus E.Seckels Nachlass, Verlag der Akad. der Wiss. in Kommission bei Walter, Berlin 1928.
- , Διοίκησις und Ἴδιος Λόγος, Fest. O.Hirschfeld, Berlin pp.130-163.
- K.Michalowski & others, Tell Edfo, III Cairo 1939.
- G.Mickwitz, Geld und Wirtschaft in Römischen Reich des IV Jahrhundert n.chr., Helsingfors 1932.
- Milne, History of Egypt under Roman Rule, London 1924
- , Greek and Roman tourists in Egypt, JEA 3 (1916) pp.76-80.

- , The ruin of Egypt by Roman mismanagement, JRS 17 (1927) pp.1-13.
- , Egyptian nationalism under Greek and Roman rule, JEA 14 (1928) pp.226-234,
- L.Mitteis & U.Wilcken, Grundzüge und Chrestomathie der Papyruskunde, Leipzig 1912.
- J.Modrzejewski, Additional provisions in private legal acts in Greco-Roman Egypt, JJP 7/8 (1953/4) pp.211-229.
- O.Montevicchi, Ricerche di Sociologia nei documenti dell'Egitto greco-romano, III, Le Compra-vendite di edifici, Aeg.21 (1941) pp.93-151.
- , Dai papiri inediti della Raccolta Milanese, Aeg.21 (1941) pp.283-296.
- , La Papirologia, Turin 1973.
- , L'Amministrazione dell' Egitto, ANRW 10,1 1988, pp.412-471.
- R.L.B.Morris, A study in social and economic history of Oxyrhynchus for the first two centuries A.D., Ph.D. Duke Univ.1975.
- H.Müller, Untersuchungen zur ΜΙΣΘΩΣΙΣ von Gebäuden im Recht der Gräko-Ägyptischen Papyri, Köln 1985.
- J.C.Naber, Observatiunculæ ad papyros Iuridicæ, Mnemosyne, 53 (1925) pp.417-445.
- C.A.Nelson, Status declarations in Roman Egypt, Amsterdam 1979.
- I.Noshy, The arts in Ptolemaic Egypt:A study of Greek and Egyptian influences in Ptolemaic architecture and sculpture, London 1937.
- , Egypt under the rule of the Ptolemies, 4 vols. Cairo 1981 (arabic)
- M.Nowicka, La maison privée dans l'Égypte ptolémaïque, Warsaw, 1969.
- , Papyrologica: sur les instruments du peinture CE 53 (1978) pp.150-157.
- , La peinture dans les papyrus grecs, Archeologia, 30 (1979) pp.21-28.

- J.F.Oates, Review of H.Braunert= Die Binnenwanderung, Bonn 1964, Bibliotheca Orientalis 23 (1966) pp.263-266.
- , Fugitives from Philadelphia, Essays C.B.Welles 1966 pp.87-95.
- F.Örtel, Die Liturgie, Studien zur Ptolemäischen und Kaiserlichen Verwaltung Ägyptens, Leipzig 1917.
- W.Otto, Priester und Tempel im hellenistischen Ägypten, 2 Vols. Leipzig 1905-8.
- G.M.Parassoglou, Imperial estates in Roman Egypt, Amsterdam 1978.
- , On the Idios Logos and fallen trees AFP 24/25 (1975) pp.90-99.
- J.Partsch & O.Lenel, Gnomon des Idios Logos, Sitz. der Heid. Akad. Wiss. 1920.
- J.Partsch, Review of A.Manigk: Antichretische Grundstückshaftung im gräko-ägyptischen Recht, Fest. K.Güterbock dargebracht von früheren und gegenwärtigen Angehörigen der Fakultät Königsberg, Berlin 1910, pp.283-301, APF 5 (1913) pp.510-511.
- , Review of A.Manigk: Gläubegerbefriedigung durch Nutzung, Berlin 1910, AFP 5 (1913) pp.511-513.
- O.M.Pearl, Census document from Karanis, 1953 pp.335-355.
- , Short text from Karanis Aeg. 33 (1953) pp.315-330.
- W.Peremans, Le commerce et l'industrie, le transport sur terre et la flotte, Stud.Hellenistica, 5 1977.
- P.W.Pestman, Some aspects of Egyptian law in Greco-Roman Egypt, Egypt and the Hellenistic World, 1983 pp.261-302.
- F.Petrie, Egyptian architecture, London 1938.
- Plaumann, Der Idioslogos, Berlin 1919.
- S.Polzien, The origin and competence of the praktor xenikon, JJP 5 (1951) pp.217-227.
- S.Pomeroy, Woman in Roman Egypt, H.P.Foley, Reflections of Woman in Antiquity, London 1981, pp.303-322 ANRW 10,1 (1988) pp.708-723.

- G.Pöthke, Epimerismos: Betrachtungen zur Zwangspacht in Ägypten während der Prinzpatszeit, Bruxelles 1969.
- C.Préaux, La stabilité de l'Égypte aux deux premiers siècles de notre ère, CE 31 (1956) pp.311-333.
- F.Preisigke, Städtisches Beamtenwesen im römischen Ägypten, Diss Halle 1903.
- , Girowesen im griechen Ägypten, Strassburg 1910.
- , Das Wesen der βιβλιοθήκη ἐγκτησέων, Klio,12 (1912) pp.402-460.
- , Die Begriffe ΠΥΡΓΟΣ und ΜΤΕΓΗ bei der Hausanlage, Hermes 54 (1919) pp.423-432.
- F.Pringsheim, The Greek sale by auction, Scritti in Onore di Contardo Ferrini Milano IV (1949) pp.284-343
- , The Greek law of Sale, Weimar 1950.
- , Der griechische Versteigerungskauf, Gesammelte Abhandlungen, Heidelberg II (1961) pp.262-329.
- , Stipulationsklausel, Gesammelte Abhandlungen, Heidelberg II 1961 pp.194-256.
- M.Pucci, Alexandria ad Aegyptum A.D.117-119, SCI 5 (1979/80) pp.195-205.
- , La rivolta ebraica al tempo di Traiano, Pisa 1981.
- D.W.Rathbone, The Heroninos archive and the estate of Aurelius Appianus, Ph.D Camb. 1986. (unpub.)
- , The weight and measurements of Egyptian grains, ZPE 53 (1983) pp.265-275.
- J.Rea, P.Lond.inv.1562 verso: Market taxes in Oxyrhynchus, ZPE 46 (1982) pp.191-209.
- T.Reil, Beiträge zur Kenntnis des Gewerbes im hellenistischen Ägypten, Leipzig 1913.
- O.Reinmuth, The prefect of Egypt from Augustus to Diocletian, Klio,34 (1935).
- T.Reinach, Un code fiscal de l'Égypte romaine: Le Gnomon de l'idiologue, Nouv. Rev. de Droit. français et étrang.43 (1919) pp.583-636; 44 (1920) pp.5-134.

- R.Rémondon, Ἀπορικόν et Μερισμός ἀπόρων, ASA 51 (1951)
pp.221-245.
- E.A.Reymond, Studies in the late Egyptian documents
preserved in the John Rylands Library: II Dimê and
its papyri: An introduction, JRL 48 (1965/66)
pp.433-466.
- , Studies in the late Egyptian documents preserved
in the John Rylands Library: III Dimê and its papyri:
Demotic contracts of the first century A.D., JRL 49
(1967/8) pp.464-495.
- S.Riccobono, Il Gnomon dell' Idios Logos, Palermo 1954.
- , Das römische Reichsrecht und der Gnomon des
Idios Logos, Erlangen 1957.
- H.Rink Strassen und Viertelnamen von Oxyrhynchus, Diss.
Giessen 1924.
- C.H.Roberts, An army doctor in Alexandria, Festschr.
W.Schubart zum 75 Geburtstag, 1953, pp.112-115.
- M.R.Rodziewicz, Alexandria III: Les habitations romaines
tardives d'Alexandrie à la lumière des fouilles
Polonaises à Kôm el Dikka, Varsovie 1984.
- R.Rossi, ΨΑΟΙ ΤΟΠΟΙ, Aeg.30 (1950) pp.42-56.
- M.Rostowtzeff, Greek sightseers in Egypt, JEA 14 (1928)
pp.13-15.
- , Roman Exploitation of Egypt in the first
cent.A.D., JEBH I (1929) pp.337-364.
- , Social and economic history of the Roman
Empire, Oxford 1957.
- O.Rubensohn, Aus griechisch-römischen Häusern des Fayum,
Jahrb.der Deutsch.Arch.Inst.20 (1905) 1-25.
- H.A.Rupprecht, Studien zur Quittung im Recht der gräco-
ägyptischen Papyri, München 1971.
- , Die Bebaiosis: zur Entwicklung und den
Räumlich-Zeitlichen Varianten einer Urkundsklausel
in den Gräco-Ägyptischen Papyri, Studi in Onore di
C.Sanfilippo, Milano III 1983 pp.611-226.

- , Voraussetzungen, Umfang und Herkunft des Vorkaufsrechts der Gemeinschaftler nach den Papyri, Symposium 1979, Athens 1981, Köln-Wien 1983 pp.289-301.
- , Zum Vorkaufsrecht der Gemeinschaftler nach Papyri, Scritti in Onore di O.Montevecchi (1981) pp.336-445.
- A.Samuel, Six papyri from Hamilton College, JJP. 13 (1960) pp.33-51.
- D.H.Samuel, P.Berl.inv.8797 and P.Gen.3: Tow versions of a dispute over an inheritance, ZPE 37 (1980) pp.255-259.
- M.San Nicolò, Stathmouchos RE.2 Reihe, III 2 1929 cols.2178-82.
- , Zu dem Schutze gegen damnum infectum bei nachbarlichen Verhältnissen im Liegenschaftsrecht der Papyri ZSS 61 (1941) pp.402-406.
- , Ägyptisches Vereinswesen zur Zeit der Ptolemäer und Römer, 2 Vols. München 1972.
- S.Schmidt, Zur Krise in der Getreideversorgung Roms im Jahr 68 n.Chr. Topos und Realität: einige Bemerkungen zu Sueton, Nero 45,1, Münstersche Beiträge zur antiken Handelsgeschichte,8 (1989) pp.84-106.
- H.D.Schmitz, Τὸ ἔθος und verwandte Begriffe in den Papyri, Köln 1970.
- H.Schmitz, Die hellenistisch-römischen Stadtanlagen in Ägypten Diss.Bonn 1921.
- , Die Bauurkunde in P.Vindob. Gr.12565 im Lichte der Ergebnisse der deutschen Hermopolis Expedition, Münchener Beiträge zur Papyrusforschung und Antiken Rechtsgeschichte, 19 (1934) pp.419-428.
- W.Schmitz, Ἡ πίστις in den Papyri, Diss. Köln 1964.
- M.Schnebel, Landwirtschaft im hellenistischen Ägypten I Munich 1925.
- Schönbauer,Paramone, Antichrese und Hypothek , ZSS 53 (1933) pp.422-458
- V.B.Schuman, The seven obol drachma of Roman Egypt, CPh.47 (1952) pp.214-218.

- , P.Gen.inv.108; P.Osl.III 111, Rech.Pap.4
(1968) pp.171-173.
- A.R.Schütz, Der Typus des Hellenistisch-ägyptischen Hauses,
im Anschluss an Baubeschreibungen griechischer
Papyrusurkunden, Würzburg-Aumühle, 1936.
- A.B.Schwarz, Hypothek Und Hypallagma, Leipzig 1911
- , Die öffentliche und private Urkunde im
römischen Ägypten, Leipzig 1920.
- J.Schwartz & H.Wild, Qasr Qarun, Dionysias, Cairo I 1948.
- J.Schwartz, En marge du dossier d'Apollonios le Stratège,
CE 37 (1962) pp.348-358.
- A.Segrè, Il mutuo e il tasso d'interesse nell Egitto
greco-romano, Atene e Roma, 5 (1927) pp.119-138.
- , The status of the Jews in Ptolemaic and Roman
Egypt, JSS 4 (1944) pp.375-400.
- , Antisemitism in Hellenistic Alexandria JSS 8
(1946) pp.127-136.
- E.Seidl, Rechtsgeschichte Ägyptens als römischer Provinz.
Sankt Augustin 1973.
- S.E.Sidebotham, Roman economic policy in Erythra Thalassa
30 B.C.-A.D.117, Leiden 1986.
- P.J.Sijpestein, Customs duties in Graeco- Roman Egypt,
1987.
- , Theognostos alias Moros and his family,
ZPE 76 (1989) pp.213-218.
- D.Simon, Studien zur Praxis der Stipulationsklausel,
München 1964.
- K.A.D.Smelikand & E.A.Hemelrijk, Egyptian animal worship
in Antiquity, ANRW.17,4 (1983) pp.1852-2000.
- E.B.Smith, Egyptian architecture as cultural expression,
London, 1938.
- A.J.Spencer, Brick architecture in Ancient Egypt, Guilford
1979.

- K.Strobel, Einige Bemerkungen zu den historisch-archäologischen Grundlagen einer Neuformulierung der Sigillatenchronologie für Germanien und Rätien und zu wirtschaftsgeschichtlichen Aspekten der römischen Keramikindustrie, Münstersche Beiträge zur Antiken-Handelsgeschichte, 6,2 (1987) pp.75-115.
- P.R.Swarney, The Ptolemaic and Roman Idios Logos, Toronto 1970.
- A.Swiderek, Deux papyrus de la Sorbonne relatifs à des travaux effectués dans des temples de l'Héracléopolite JJP 11/12 (1957/8) pp.59-91.
- , La propriété foncière privée dans l'Égypte de Vespasien et sa technique agricole d'après P.Lond.131 R., Wroclaw 1960.
- , Ioudaikos Logos, JJP 16/17 (1971) pp.45-62.
- G.F.Talamanca, Ricerche sul processo nell'Egitto Greco-Romano. 2 vols. Milano 1974-1978.
- M.Talamanca, Contributi allo studio delle vendite all'asta nel mondo classico Roma, 1954.
- R.Taubenschlag, Das Recht auf εἰσοδος und ἐξοδος in den Papyri, AFP 8 (1927) pp.25-33= Opera minora II pp.405-417.
- , Afterpacht und Aftermiete im Rechte der Papyri, ZSS 53 (1933) pp.234-255=Opera minora II pp.471-495.
- , ΓΕΝΗΜΑΤΟΓΡΑΦΙΑ in Greco-Roman Egypt, JJP.4 1950 pp.77-82= Opera minora II 695-701.
- , The herald in the law of the papyri, AHDO 5 (1951) pp.189-194= Opera minora II pp.151-157.
- , Rechtsverhältnisse an der Grenzmauer im Recht der Papyri, Studi in Onore di U.E.Paoli, 1955 pp.683-4= Opera minora II pp.419-422.
- , The law of Greco-Roman Egypt in the light of the papyri 332 B.C.-A.D.640, Warszawa 1955.
- V.A.Tcherikover, The decline of the Jewish Dispersion in Roman Egypt, JSS 16 (1963) pp.1-32.
- H.Thierfelder, Die Geschwisterehe im hellenistisch-römischen Ägypten, Münster, 1960.

- J.Theodore. Peña, P.Giss.69: evidence for the supplying of the stone transport operations in Roman Egypt and production of fifty foot monolithic column shafts, JRA.2 (1989) pp.126-132.
- J.D.Thomas, A petition of the Prefect and related Imperial Edicts, JEA 61 (1975) pp.
- , Review of H.Braunert: Binnenwanderung, Bonn 1964, JEA 53 (1967) pp.189-191.
- , The epistrategos in Ptolemaic and Roman Egypt, 2 Vols Opladen 1975-1982.
- D.J.Thompson, Memphis under the Ptolemies, Princeton 1988.
- L.R.Toepel, Studies in administrative and economic history of Tebtynis in the first century A.D., Ph.D.Duke Univ.1973.
- E.G.Turner, Roman Oxyrhynchus, JEA 38 (1952) pp.79-93.
- , Oxyrhynchus and Rome, HSPh.79 (1975) pp.1-24
- G.Üxull-Gyllenband, Der Gnomon des Idios Logos, Berlin 1934.
- P..Viereck, Philadelphia, Leipzig, 1928.
- K.Visky, Die Miete und Pachtverträge der Wirtschaftskrise des dritten Jahrhunderts, JJP 19 (1983) pp.27-40.
- , Spuren der Wirtschaftskrise der Kaiserzeit in den römischen Rechtsquellen, Budapest 1983.
- S.P.Vleming, Some notes on artabe in Pathyris, Enchoria 9 1979 pp.93-100.
- , Masse und Gewichte in den demotischen Texten, LÄ III (1980) pp.1209-1214.
- , The artabe, and Egyptian grain measures Proc. New York pp.537-545.
- G.Wagner, Les Oasis d'Égypte à l'époque grecque, romaine et byzantine d'après les documents grecques, Le Caire 1987.
- S.Wallace, Taxation in Egypt from Augustus to Diocletian, Princeton 1938.

- F.Weber, Untersuchungen zum gräko-ägyptischen Obligationenrecht, München 1932.
- E.Weiss, *Communio pro diviso und pro indiviso in den Papyri*, AFP 4 (1908) pp.330-365.
- , Die erbrechtliche Stellung des römischen Staatschatzes und der Gnomon des Idios Logos, ZSS 53 (1933) pp.256-274.
- L.Wenger, Die Stellvertretung im Recht der Papyri, Leipzig 1906.
- K.Wessely, *Ius Lapides Transportandi III cent.*, Studi Bonfante II pp.17-18.
- L.C.West, The cost of living in Roman Egypt, CPh. 11 pp.293-314.
- L.C.West & A.C.Johnson, *Currency in Roman and Byzantine Egypt*, Princeton 1944.
- W.L.Westermann, The castanet dancers of Arsinoe, JEA. 10 (1924) pp.134-144.
- , Entertainment in villages of the Greco-Roman period, JEA.18 (1932) pp.16-24.
- , The prefect Valerius Eudaemon and indigent liturgist, JEA 40 (1954) pp.107-111.
- J.Whitehorne, The strategi of Roman Egypt, ANRW.II 10,1 (1988) pp.598-617.
- L.Wierschowski, Heer und Wirtschaft, das römische Heer der Prizipatszeit als Wirtschaftsfaktor, Bonn 1984
- U.Wilcken, Der ägyptische Konvent, APF 4 (1908) pp.366-422.
- K.Wilhelmson, Zum römischen Fiskalkauf in Ägypten, *Acta et Commentationes Universitatis Tartuensis*, 18 (1930) pp.1-19.
- B.A.Wittenburg, Zur Qualität des Olivenöls in der Antike, ZPE 38 (1978) pp.185- 189.
- H.J.Wolff, Das Recht der griechischen Papyri Ägyptens in der Zeit der Ptolemäer und des Prinzipats, Vol.II München 1978.
- U.Wollentin, Ὁ κίνδυνος in den Papyri, Diss Köln 1961.

- S.Yeiven, Private architecture in Fayum villages of the Roman period. M.A.London.1929.
- H.Youtie, Supplies for soldiers and stone-cutters, ZPE 28 (1978) pp.251-254.
- L.C.Youtie, Last examples of ΕΞΟΠΤΟΣ, ZPE 50 (1983) pp.59-60.

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