

THE ORGANIZATION OF ROMAN BUILDING

DURING

THE LATE REPUBLIC AND EARLY EMPIRE

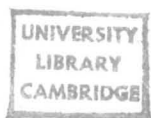
BY

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VOL. I

TEXT AND APPENDICES

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CONTENTS

Introduction		page v
Abbreviations and Bibliography		xi
Chapter 1	Building Contractors of the Republican Period	1
	Public building work	1
	Private building work	16
Chapter 2	Organization in the Imperial Period - (i) Manpower	32
	<u>Redemptores</u> and the 'contract' system	33
	Imperial organization and resources	40
	Public building outside Rome	72
Chapter 3	Organization in the Imperial Period - (ii) Materials	82
Chapter 4	Architects in the Roman World	98
Chapter 5	The Role and Composition of the Colleges	121
Chapter 6	Building Workers	140
Chapter 7	Building and the Roman Army	152
Conclusion		167
Appendix A	Miscellanea Epigraphica	169
Appendix B	Architects in the Roman World	171
Appendix C	Statistical Summary of the <u>Cognomina</u> borne by <u>architecti</u> , <u>mensores aedificiorum</u> and <u>mensores</u> in Rome and Italy	188

INTRODUCTION

When it is stated, for example, that "the Colosseum ... was built by Vespasian and his successors" (Oxford Companion to Classical Literature, p. 25) it is, of course, intended as a shorthand formula expressing the date and authorship of the amphitheatre; one does not imagine Vespasian helping to lay the foundations or Domitian carving capitals. The basic aim of this dissertation is to describe the various human elements that contributed to the erection of a building, and especially to shed light on the labour involved, the carpenters, masons, contractors etc., men who form a part of the largely silent majority of the people of classical antiquity.

The only full-length general survey of the subject is that of E. de Ruggiero, Lo stato e le opere pubbliche in Roma antica (Turin 1925), but as the title implies, this is limited to Rome herself. Moreover, it concentrates not so much on the labour as on the administration connected with building, such as the role of the censors and the Imperial Civil Service. An article of R. MacMullen, "Roman Imperial Building in the Provinces", HSCP, LXIV (1959), pp. 207-35, widens the geographical coverage and also extends the discussion to embrace topics such as the recruitment of labour and the provision of materials. But MacMullen tends there to make generalizations based on scanty evidence, while his concept of the role and function of the professional collegia in the early imperial period is faulty. Most recently, there has been published an important book by E. Badian, Publicans and Sinners: Private Enterprise in the service of the Roman Republic (Oxford 1972). Badian deals with the publicani in general; his discussion of building contractors is mainly limited to the period covered by the extant books of Livy. The work, however, provides an important survey of the nature of Republican.

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contractors which was, in my opinion, misunderstood by earlier scholars such as Frank.

Accounts of the many components of the manpower involved with building are on the whole restricted to the not unnaturally cursory articles in the handbooks; about the only element to have received lengthy scholarly discussion is the architect, of whom the best overall account is probably the article of I. Calabi Limentani in the Enciclopedia dell'Arte Antica Classica e Orientale, Vol. I (Rome 1958), pp. 572-8. Attention usually centres on the function, status and national origins of architects, but although these topics are important, it is also necessary to place the architect in his proper context vis à vis the administrative authorities, contractors and labour. Moreover, many epigraphic examples of architects, especially from hellenized provinces, have not found their way into any of the lists, and although the extra material provides comparatively little extra information on the position of the architect in general, it illustrates the fact that men like Apollodorus of Damascus were not typical of ancient architects. As for the various types of building worker, evidence is sparse, but even though few points of a general nature can be made, it is important not to forget these men both as individuals and as part of the chain that extended from the authorities, architects and overseers.

The collegia were first thoroughly examined, in all their aspects, by J.-P. Waltzing, Etude historique sur les corporations professionnelles chez les Romains (Brussels 1895-1900). Since then, much work has been done on their legal position, especially by F. M. de Robertis in Il diritto associativo romano dei collegi della repubblica alle corporazioni del basso impero (Bari 1938) and Il fenomeno associativo nel mondo romano (Naples 1955); de Robertis also made a study of the legal position of workers in Lavoro e lavoratori nel mondo romano (Bari 1963). Little attention has been paid, however, to the function of individual college

members, but a study of the membership of two of the largest building colleges, at Rome and Ostia, provides a solid basis for some of the assumptions and generalizations that have been made.

The evidence on which this dissertation is based is almost entirely literary for the Republican period, while for the Imperial, the evidence of epigraphy largely outweighs that of literature in terms of quantity, though not of solid information. There are, however, more gaps in the picture than there is paint; it cannot be safely assumed that evidence, from whatever source, that is extant for one particular geographical area or chronological period is necessarily valid for other areas or periods. The information provided by inscriptions, moreover, is two-edged, since it cannot always be determined whether what has survived is representative or atypical nor whether the absence of particular types of evidence for certain areas is accidental or significant.

I have deliberately excluded, for the most part, material from Egypt. Although the papyri produce much interesting information of a kind that is not found on extant inscriptions from the rest of the Roman world, it has long been recognized that in many respects Egypt is a special case, and it would be dangerous to assume that the organization of building there was similar to that in other provinces. A brief discussion of the administrative organization of building in Egypt can be found in A. K. Bowman, The Town Councils of Roman Egypt (American Studies in Papyrology, 11, Toronto 1971), pp. 90-6. I have also deliberately excluded the period of the later Empire when there was considerable Imperial control over all types of worker; the state's organization of builders and building in this period is covered by A. H. M. Jones, The Later Roman Empire 284-602: a social, economic and administrative survey (Oxford 1964), Vol. II, pp. 708-9 and 858-64.

I would add a note on the reason for the inclusion of the illustrations. The majority of them are not vital to the dissertation.

There are three photographs of unpublished inscriptions; about a dozen others show inaccuracies either in the published texts or in remarks made by scholars about them; and there are a few photographs of ancient illustrations of building scenes. In including the remainder of the photographs of inscriptions, however, I have been conscious of a remark of J. Suolahti apropos the Fabricii, that "non erano soltanto dei nomi, quali sono ora, aventi un numero specifico nel Corpus Inscriptionum Latinarum, ma erano esseri viventi" (Arctos, n.s. IV (1966), p. 71). It is my regret that I am able to include material from outside Italy in only one case.

I must also add a note here on my own two articles, "A Forgotten Altar of the Collegium Fabrum Tignariorum of Rome" and "Three Alba of the Collegium Fabrum Tignariorum of Rome". At the time of writing, I neither have the page-proofs nor am absolutely certain of the year in which they will be published. I have therefore referred to them in the notes by the page references of my own type-scripts. To assist future reference to the published articles themselves, I would note that the type-script of the former article is seventeen pages in length and of the latter eighteen pages.

There are several sources that I wish to thank for their financial assistance over the last three years; the Department of Education and Science, the Cambridge University Research Maintenance Fund, the Henry Arthur Thomas Fund and Trinity College, Cambridge. I would also thank Prof. S. Panciera who in his capacity as Professor of Greek and Latin Epigraphy in the University of Rome provided me with an additional grant to finance a visit to Italy.

In the course of the last three years, I have received advice and assistance from many quarters. I have had fruitful discussions of a wide-ranging nature with J. A. Crook, Dr. R. D. Duncan-Jones, Prof. M. I. Finley, Dr. W. H. Plommer (who was also a constant source of encouragement

and inspiration), and the late Prof. D. E. Strong. Dr. D. J. Breeze and Dr. B. Dobson answered some questions of detail concerning the Roman army; Prof. R. Meiggs discussed material from Ostia with me; and A. G. Woodhead, in addition to giving advice of a general nature, assisted me in connection with some Greek inscriptions. I have also received help in more concrete form. Dr. N. Asgari, of the Istanbul Museum of Archaeology, kindly sent me a résumé of the results of her work in the marble quarries of Proconnesus. Dr. B. Bader provided me with a copy of several of the unpublished files of the Thesaurus Linguae Latinae. M. H. Crawford allowed me to consult part of the page-proofs of his forthcoming book Roman Republican Coinage. Dr. E. J. Jory provided me with a print-out for numerous references from his computer index to CIL VI. J. B. Ward Perkins allowed me to consult the type-script of his series of Jerome Lectures which he delivered five years ago and which are soon to be published. Prof. S. Panciera and Dr. F. Zevi allowed me to consult and make use of unpublished epigraphic material from Rome and Ostia respectively. Prof. Panciera also provided me with the photographs that are my Plate I, fig. 1, Plate IV, fig. 3 and Plate XI, fig. 3, while the photographs that are my Plate VI, fig. 2 and Plate IX were provided by the Vatican Museum. And numerous libraries and museums, in this country and abroad, rendered me help of various kinds; in this connection, I would especially mention Dr. G. Molisani, of the Museo Capitolino in Rome, and Dr. I. Manzella, of the Vatican Museum. To all these people and bodies, I express my thanks.

Special record, however, must be made of my debt in four cases. First, I can only express admiration at the apparent ease with which Mrs. Felicity Wilkin handled a difficult manuscript and gratitude for the care with which she typed this dissertation.

Secondly, I would mention the staff of the Museum of Classical Archaeology in Cambridge, where a large part of my work was carried

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out - Mrs. G. Blake and Messrs. B. D. Thompson, E. E. Jones and F. Bennett - who in their various ways contributed all manner of assistance that led towards the completion of my work. Most of the photographs were printed by Mr. Thompson and Mr. Jones, and the former also made the tracing that is my Plate II, fig. 2.

Thirdly, the success of my ten weeks in Rome and other parts of Italy can in large measure be attributed to Prof. S. Panciera. I have already recorded my specific debts to him. I would here thank him for his numerous general acts of kindness and assistance on my behalf, which he rendered both during and after my visit to Italy.

Fourthly, to my supervisor, Miss J. M. Reynolds, I owe an enormous debt. She has been a constant and willing source of encouragement, helpful criticism, information and ideas, of which I can only hope that this dissertation has reaped full benefit.

Finally, I would express my thanks - and perhaps even an apology - would not be out of place - to my wife, Jean, and son, Alexander. Their positive contribution to the production of this dissertation may have been only small, but between them they provided the kind of domestic and family atmosphere that made my studies very much easier.

This dissertation is entirely my own work and no part of it is the outcome of work carried out in collaboration with others.

J. L. D. Pearse.

ABBREVIATIONS AND BIBLIOGRAPHY

The abbreviations employed by Année Philologique form the basis of my abbreviations of periodicals, but I have expanded some that seemed rather abstruse, introduced a few minor alterations (e.g. HSCP instead of HSCPh), and diverged completely in two cases, AE instead of An. Ep. and NS instead of NSA. Abbreviations of classical authors and their works are taken, with little variation, from the most recent Oxford Classical Dictionary (1966); where an author or work is absent from that dictionary, I have used the abbreviation employed by LSJ. Collections of papyri are abbreviated in accordance with the system laid down by E. G. Turner, Greek Papyri: an Introduction (Oxford 1968), pp. 156-71.

The following list of abbreviations of works and articles has been drawn up partly to save space in the notes and partly to serve as a select bibliography. As a general rule I have included, in addition to standard works and collections of inscriptions, only those works and articles which contain a large measure of discussion of any aspect of this dissertation and which are cited three or more times in the notes. Other relevant works and articles are cited in full in the notes.

- | | |
|------------------------------------|--|
| Ashby | T. Ashby, <u>The Aqueducts of Ancient Rome</u>
(Oxford 1935) |
| Badian | E. Badian, <u>Publicans and Sinners: Private Enterprise in the service of the Roman Republic</u>
(Oxford 1972) |
| Becatti, <u>Arte e gusto</u> | G. Becatti, <u>Arte e gusto negli scrittori Latini</u> (Florence 1951) |
| Blake, <u>Roman Construction I</u> | M. E. Blake, <u>Ancient Roman Construction in Italy from the Prehistoric Period to Augustus</u>
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- Burford, GTBE A. Burford, The Greek Temple Builders at Epidauros (Liverpool 1969)
- CAH Cambridge Ancient History
- CIG W. Boeckh, Corpus Inscriptionum Graecarum (Berlin 1828-77)
- CIL Corpus Inscriptionum Latinarum (Berlin 1863-)
- CIMRM M. J. Vermaseren, Corpus Inscriptionum et Monumentorum Religionis Mithraicae (The Hague 1956-60)
- CIRB Corpus Inscriptionum Regni Bosporani (Moscow 1965)
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L. Cracco Ruggini, "Stato e associazioni professionali nell'età imperiale romana", Akten VI Kongr. Epigr. (Munich 1972) (Vestigia: Beiträge zur alten Geschichte, 17 (1973)), pp. 271-311

DE

Dizionario epigrafico di antichità romane
(Rome 1886-)

DS

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Degrassi, Scritti
vari

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Rangordnung

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Dubois, Carrières

M. C. Dubois, Etude sur l'administration et l'exploitation des carrières dans le monde romain (Paris 1908)

Durry

M. Durry, Les cohortes prétoriennes (Paris 1968)

EAA

Enciclopedia dell'Arte Antica Classica e Orientale (Rome 1958-66)

EE

Ephemeris Epigraphica: Corporis Inscriptionum Latinarum Supplementum (Rome and Berlin 1872-1913)

- ESAR T. Frank (ed.), An Economic Survey of Ancient Rome (New York 1933-40)
- Epig. Studien Epigraphische Studien (Bonn 1967-)
- FD Ecole Française d'Athènes, Fouilles de Delphes (Paris 1904-)
- FIRA S. Riccobono (ed.), Fontes Iuri Romani Anteiustiniani, 2nd. ed. (Milan 1941)
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CHAPTER 1

Building Contractors of the Republican Period

Public building work

One of the functions of the Roman censors under the Republic was to let contracts for the construction of new and the maintenance of existing public works¹. Our earliest certain record of such a contract is dated to 378², when Sp. Servilius Priscus and Q. Cloelius Siculus let a contract (locatum faciundum) for the building of a stone wall³. It is probable, however, that the censors' "approval" of the villa publica in 435 (villam publicam probaverunt)⁴ concerned its construction rather than its use by themselves, and in that case it is likely that they also let a contract for its construction, since the approving of work was usually undertaken by the magistrate or magistrates who had had official charge of it from the outset⁵. Other censoral building contracts are occasionally mentioned in what remains of our sources for the fourth and third centuries⁶, although it is for the period covered by Livy, 21-45, that we have most information. It is possible that Livy is guilty of anachronism when he uses the terminology of contracting in his accounts of the building activities of the early censors⁷, but Badian has recently defended him against that charge and concluded that "we can be quite sure ... that public contracts were being let, as a matter of course, by the fourth century B.C., and fairly confident that they were a century earlier and perhaps even under the kings"⁸. Badian has also rightly emphasized both that there was more building work going on in Rome than was let by censors and that it was normal practice for other magistrates to let building contracts, and not one occasioned by senatorial distrust of "the knights' companies"⁹. Livy not only records the construction of

numerous temples and some secular buildings from the very earliest times¹⁰, but also uses the language of contracting of almost all the magistrates in the fourth and third centuries as well as in the second. In 396, the dictator M. Furius Camillus let a contract for the building of Juno's temple on the Aventine¹¹. Sp. Carvilius Maximus, one of the consuls of 295, contracted for the building of a temple of Fors Fortuna¹². And although Livy's first specific reference to building contracts given out by aediles is dated in 196¹³, both he and other authors refer to building work undertaken by the plebeian and curule aediles in the fourth and third centuries¹⁴, and it is not unreasonable to suppose that this work was given out on contract; for it is worth noting that Livy actually uses the verb fecerunt in that part of his narrative where he records the start of the work of the aediles in 196 and refers to a contract only in the passage dealing with the dedication of the temple in question¹⁵, and as Brunt stated¹⁶, the use of a verb such as fecit must often hide the fact that the subject had only an official responsibility for the work and need not entail that he hired the labour and bought the materials. We know also that praetors let building contracts; although the first literary reference concerns a work in 144¹⁷, an inscription records that a praetor or propraetor in 201, C. Aurelius Cotta, gave out a contract which he approved as consul in the following year¹⁸. Although the loss of Livy's history from the year 167 deprives us of a continuous record of public building contracts for much of the second and the whole of the first century, we have enough information from other sources to show that such contracts continued to be let both by censors and other magistrates and that this was the normal Republican practice¹⁹. It is not, however, my purpose to discuss which magistrates let building contracts; it is sufficient to have shown that such contracts were a regular feature even in the early period. The central question here is: who took these contracts?

There is no evidence at all of the type of men who attended the auction

of contracts in the fourth and most of the third centuries. It seems, however, that the letting of contracts was much more sporadic then than later, and almost certainly the sums involved were smaller, so that it is likely that in the early period at least public contractors must also have had alternative sources of income²⁰. It is impossible, however, to determine whether contracts were let directly to small builders and individual artisans or to men whom we might call entrepreneurs, who then sublet the main contract in small portions. Certainly in the great temple building programmes in Greece in the fifth to early second centuries, the former practice prevailed²¹. It is possible that this was also true of Rome in the early period, when most of the building work was of a religious nature, but it would be dangerous to assume that such a practice continued when utilitarian secular works became more common at Rome from the early second century. Even the books of Livy which deal with the later period, however, contain only one passage which provides evidence for the nature of building contractors in Rome as opposed to public contractors in general, and that refers only to contracts for the upkeep of temples and not to new works. Livy writes²² that in 214 convenere ad eos [sc. censores] frequentes qui hastae huius generis adsueverant; these men urged the censors to let contracts just as if there were money in the treasury. It is clear, however, that the censors let all the types of public contracts at the same time, so that it is legitimate for us to examine other passages of Livy in which he refers either to contractors in general or to other particular types of contractor.

We read that in 215 there were men qui redempturis auxissent patrimonium²³, and there follows a story about three societates of nineteen men who offered to provide on contract (conducendum) food and clothing for the army on credit²⁴. Livy does not inform us of the social status of these men, but Frank²⁵ assumes and Badian²⁶ tries to show that they were equestrians,

although Nicolet²⁷ believed that it was impossible to decide one way or the other. In the sequel to the story, however, Livy terms one of the nineteen a publicanus²⁸ and also writes of the senate's unwillingness to offend the ordo publicanorum²⁹, and this last phrase might be compared with the comment which Livy made in his account of the letting of the contracts in 215, that patriotism at that time pervaded all the classes (ordines)³⁰. Clearly Livy believed that even at this period certain types of men regularly attended censorial auctions of public contracts³¹.

In his account of the next 30 years, Livy records several examples of building work that was let on contract by censors and other magistrates³², as well as contracts for the supply of clothes to the army, the sale of salt and the collection of the salt-tax³³. He furnishes no evidence, however, about the contractors themselves³⁴. Even when he records that in 195 food-supply contractors (redemptores) were firmly established in Spain during the wars there³⁵, there is no clue to their identity. It is only when we come to the censorship of 184 that we glean a little more information. In that year, L. Valerius Flaccus and M. Porcius Cato let a large number of building contracts, but at a price very favourable to the state: vectigalia summis pretiis, ultro tributa infimis locaverunt³⁶. According to Livy, the senate, overcome by the imprecations of the publicani, ordered the censors to relet the contracts. This they did, but only after removing ab hasta qui ludificati priorem locationem erant, and the final contracts were let at slightly lower prices (eadem paullum imminutis pretiis). Our interest here lies not so much in the reasons behind the dispute between the censors and the contractors as in the fact that competition for the contracts was intense enough to produce bidders who were willing to accept the harsh terms of the censors, even when some of their number had been debarred from the auction. Badian³⁷, however, goes a step further, and, relying on the evidence of Plutarch³⁸ that the original contracts had allowed the contractors "no profit" at all, attempts

to demonstrate that the bidders at the second auction were forced to take both revenue contracts and contracts for ultra tributa (which would have included building contracts) in order at least to break even overall. This "shows ... that there was as yet no strict specialization within the field of the publica: in principle, clearly, the collection of revenues and the furnishing of supplies require different methods and a different organization. But companies were apparently willing to combine the two."³⁹ This is an interesting and important conclusion, and one which is not prima facie unlikely for the period before the large revenue contracts became available. The positive evidence on which it is based, however, is solely that of a phrase in Plutarch - *συστέλλων τοῖς μισθοῖς τὰς ἐργολαβίας* - which in fact does not state that the contracts were unprofitable, although its precise meaning is uncertain⁴⁰. We cannot safely conclude that a lowering of the prices at the second auction deprived the contractors for the ultra tributa of all profit. Moreover, if the squeeze were put on the contractors, they would undoubtedly have put the squeeze in turn on those who actually carried out the work involved in the contracts. Attractive though it is, Badian's conclusion is not founded on fact. It should, however, be emphasized not only that Livy again describes the contractors as publicani but also that the censorship of 184 was in general noted for its severity towards the equites⁴¹.

Livy for the first time directly links the publicani and the equites in his account of the censorship of 169. In that year, C. Claudius Pulcher and Ti. Sempronius Gracchus were particularly harsh in their review of the equites, and according to Livy they added fuel to the fire by issuing an edict ne quis eorum qui Q. Fulvio A. Postumio censoribus [= 174] publica vectigalia aut ultra tributa conduxissent ad hastam suam accederet sociusve aut adfinis eius conditionis esset⁴². The veteres publicani appealed in vain to the senate, and although a tribune interceded for the contractors, the two censors just managed to win the

crucial vote and, presumably, enforced their edict. This account is important in three ways: (a) Livy indicates that the publicani were drawn from the equites, (b) it appears that they had considerable influence, and (c) we learn that a man might be a socius or adfinis in a contract, which takes us back to the three societates of the nineteen supply contractors in 215. Clearly we must now decide how far we can trust Livy's terminology at any particular period.

Scholars generally appear to accept Livy's testimony that public contracts were taken by groups of men as far back as the second Punic war, although Badian goes further than most in asserting that "the publicani were an integral part of the res publica as far back as we can observe it or trace it back"⁴³. One of the main differences of opinion centres on the motives of the publicani of this period. Frank and Hill⁴⁴ discern a "class war", with the publicani attempting to obtain political power, while the senate "distrusted" the "equestrian companies", which Frank⁴⁵ even believed were not able to take non-censorial contracts. Badian, on the other hand, though agreeing that the publicani increased their power enormously in this period, denies that there was, or even could have been, any "attempt by a business class to gain political power"⁴⁶ and rejects Livy's ordo publicanorum both in the late third and early second centuries⁴⁷. Badian's position seems to be the sounder. Of greater importance here, however, are the type of men who took public contracts and the amount of money involved in them. As I have shown, Livy himself describes the publicani of this early period as equites, which suggests that he thought they were men of considerable substance. But whether we accept this, with Badian, Frank and others, or prefer to suspend judgment, with Nicolet, it is clear, as Brunt wrote⁴⁸, that "substantial interests were already engaged in the public contracts". We have no record of the exact value of any contract of this period, although it is probable that the censors of 184 spent six million denarii on the sewers⁴⁹. Livy does inform us, however, that the censors

were granted by the senate for building operations in 179 and 169 one year's vectigal and half a year's vectigal respectively⁵⁰. The monetary value into which this has been translated by scholars differs widely, but Brunt⁵¹ believed that Frank's figure of 2 million denarii for a year's vectigal⁵² was a considerable underestimate, while Badian⁵³ also assigned a much higher value than Frank to the supply contracts that were let in the second Punic War. But even though we may agree with Brunt⁵⁴ that the 45 million denarii spent on the aqua Marcia in 144 was an extraordinary commitment (and one, incidentally, that followed the highly profitable conquests of Greece and Carthage), it is clear that the censorial building contracts of this period involved no mean amount of money. And to them, of course, must be added the contracts let by other magistrates. Although it is true that building contracts were let by the censors for ready cash (praesens pecunia)⁵⁵, it is possible that contractors were allotted only half their money when they took the contract, with the remainder being paid when the work was approved⁵⁶. In any case, they were undoubtedly required to provide sureties, perhaps to the full value of the contract⁵⁷. We should also remember that in 215 and 214 contractors were willing to take contracts on credit⁵⁸. Consequently, contractors must have had considerable assets at their disposal, and probably enough for them to qualify as equites⁵⁹.

We can, however, go further than concluding simply that the men involved were wealthy. There were by the second quarter of the second century more public contracts, both building and other, to be won than in the early period, so that the amount of work that was continuously and regularly available was greater⁶⁰. It is also possible that individual contracts were larger and so took longer to execute; certainly the building contracts let in 169 were not completed in time for the censors to approve them within their statutory 18 months' term of office⁶¹. It is likely that this regularity and large scale of contracts produced among the contractors a degree of organization of the resources necessary for their execution, and

it has become commonplace to talk of the "equestrian companies" of the second century⁶². The term 'companies' is perhaps a convenient translation of Livy's societates, but it seems to me to be a misnomer when applied to the activities of the building contractors. It is possible that it is the more detailed evidence which is extant of the organization of the tax-farming 'companies' of the first century that has been responsible for its application to contractors of every type; a glance even at Badian's comprehensive book reveals that the bulk of our evidence concerning the publicani after the middle of the second century relates to tax-farmers rather than building contractors⁶³. But Badian, unlike Frank and others, although he throughout uses the term 'company' to describe the organization of contractors of every type, nevertheless defines his meaning and makes a very vital point about the function of these 'companies': "whether or not permanently constituted, what they contributed was not organization in the sense of skilled personnel ... [but] capital and top management, based on general business experience"⁶⁴. It is important that this should be borne in mind in any discussion of 'building companies' of the Republican period. These were in no way comparable to, for example, a modern Wimpey, with its numerous and various departments. Livy's socii and adfines - did they really differ from each other in any precise technical or legal way?⁶⁵ - would surely in the case of building work have mainly helped to provide the necessary surety, as well as perhaps contributing towards any expenses that were not immediately covered by the state. The work itself would have been let out on numerous small contracts, for the carving of capitals, the cutting of wood etc.⁶⁶. The societates could scarcely have maintained regularly the personnel that would have been necessary for the various facets of building work; that would have been financially both costly and unwise, especially if they were not assured of obtaining a particular type of contract. Although it is true that modern building companies also sublet much of their work, they nevertheless maintain permanently

a sizeable labour force of their own. I would suggest that although an individual building contractor in the Roman Republic may have usually redirected particular types of contract to the same particular group of men, these were not on the whole members of his permanent 'staff', which may simply have consisted of agents. And his association (societas) with other contractors was probably never permanent and was in any case made in order to raise money, not labour. It is unfortunate that no example of a Roman censorial contract that was let for a new work is extant. It seems to me, however, that the events of 169 especially show that the men who attended the auctions were important and influential; they were clearly not small-scale contractors. Their importance and function can perhaps be better comprehended if we term them not contractors but entrepreneurs. They put at the disposal of the state their knowledge of how and where to get jobs done, and they truly acted as 'go-betweens' by taking from the state the responsibility for providing services which were vital to its continued existence but in which it was not the role of the ruling class to engage, at least openly⁶⁷.

To some extent, this discussion of 'entrepreneurs' and their 'partnerships' has preceded part of the evidence on which it is based. It will be useful, however, for the distinctions which I have made to have been already drawn before I review the evidence for public building contracts and contractors in the final century of the Republic.

The seventeenth chapter of the sixth book of Polybius is described by Frank as the locus classicus for a description of the activity of the contractors in the middle of the second century⁶⁸. Apart from the details which he gives about the various types of contract, Polybius states not only that the censors let large numbers of contracts *διὰ πάσης Ἑλλάδας*, but that almost everyone was involved either in the sale of the contracts or in the work⁶⁹ that arose out of them. The statement that censorial

contracts extended over the whole of Italy must be an exaggeration, at least as far as building work is concerned. Livy informs us of some building work outside Rome that was let by censors, notably in 174⁷⁰, but the 'town' concerned in each case seems to have been a colony or at least non-independent, so that it is not surprising that the contracts were let by the censors at Rome⁷¹. It is unfortunate that we lose Livy's account after 167, so that we cannot be sure for how long the censors continued to let building contracts outside Rome or whether they also extended their activities to municipia. Certainly by the first century, however, inscriptions reflect the changes that occurred after the Social War, revealing that building contracts were then let by local magistrates⁷². Nevertheless the fact that in the 170's some of the contracts let at Rome concerned work in other parts of Italy strengthens, I feel, the argument that the entrepreneurs provided not labour but capital and experience; for they would surely have sublet them to local contractors and workers. Polybius' other statement, that almost everybody was involved in the contracts, is usually taken to refer only to the equites⁷³. As Badian noted⁷⁴, however, the work (ἐργασίαι) would certainly have involved 'ordinary' people in the building and other trades; what seems to have been a boom in building in the first 60 years of the second century⁷⁵ could not have been executed without their skill and labour. Nicolet⁷⁶, moreover, underlines the fact that the equites are not specifically mentioned; Polybius used the term τὸ πλεθός. On the other hand, it is interesting to note the groups into which he divided the interested parties: the contractors themselves (ἀγοράζοντες τὰς ἐκδόσεις), their partners (κοινωνοί), those who stand surety (εγγυάσθαι) and those who pledge property on behalf of the contractors (τὰς οὐσίας δίδοναι)⁷⁷. Not only does this terminology parallel Livy's socii and adfines, but it clearly shows that Polybius is here thinking mainly of men of considerable

substance, even though they may not all have actually been equites; for can we really believe that included in these categories were the ordinary builder, whether labourer or craftsman, or even "the small employer" who managed a few slaves⁷⁸?

Plutarch and Appian record with reference to public building works that many contractors (ἐργολαβόι) and craftsmen (τεχνίται, χειροτέχναι) obtained work from Gaius Gracchus⁷⁹, and there is plenty of evidence that large numbers of building contracts at Rome were let by censors and other magistrates after the Gracchan period⁸⁰. We cannot, I think, place much weight on Plutarch's distinction between contractors and craftsmen, but some firm evidence about contractors does survive from this period. In discussing Verres' handling as praetor of the maintenance of buildings, Cicero produces the testimony of two men who assert that they had paid sums of money to Verres, presumably so that he would allocate them contracts⁸¹. One of them, Cn. Fannius, is specifically described as an eques Romanus; the other, Q. Tadius, was a relative of Verres' mother and was probably also an eques⁸². And in the notorious story which immediately follows about the contract for the upkeep of the temple of Castor, we meet at least two more contractors. The man who originally took the contract from the consuls in 80 was P. Iunius⁸³; his precise status is not given, but although he had equestrian relatives⁸⁴, Cicero describes him as a homo de plebe Romana⁸⁵. Nor do we know the status of the man whom Verres set up to take the new contract at an inflated price, Habonius or Rabonius⁸⁶. Cicero, however, makes a very interesting comment about him. Verres did not carry out the task of approving his work until four years after the date originally fixed for its completion, and Cicero states: hac condicione, si quis de populo redemptor accesisset, non esset usus⁸⁷. Cicero clearly means by this phrase a contractor who was not in Verres' pocket. But can we also take it literally and deduce that members of the populus, as well as equites

attended the auctions of public contracts? This would, I suggest, be supported by the description of the original contractor, P. Iunius, as a homo de plebe Romana. It is true that the contract was only small; the work involved simply replacing the temple's columns, and a cost of even only 40,000 sesterces was apparently a generous estimate⁸⁸. Nevertheless, it seems that the interested parties were not only men with equestrian connexions, even equites themselves, but men of a lower social status as well.

We have certainly one and possibly two examples of freedmen as public contractors on a fragmentary inscription of probably the early first century⁸⁹. The four individual contracts for the repair of parts of the via Caecilia that survive were let by the otherwise unknown urban quaestor T. Vibius Temundinus, who was acting in the capacity of curator viarum⁹⁰. Among the contractors, who are here termed mancupes⁹¹, are L. Rufilius L.L.l. ---stis and a man with the cognomen Pamphilus, for whom Huelsen and Degrassi have restored the status of freedman⁹². The third contractor was T. Sepunius T.f., whose tribe was either the Oufentina or Quirina⁹³; the name of the fourth contractor does not survive. It is interesting that there are here recorded side by side both free and freed contractors of work that was clearly let at Rome. The value of the contracts, moreover, seems to have been high, perhaps 150,000 sesterces in the case of Rufilius and 600,000 or more in the case of Sepunius⁹⁴, which suggests that the contractors had considerable resources at their disposal. In view of this, the suggestion of Arangio-Ruiz⁹⁵ that we resolve Pamphilus' title as mancupi et ope(rario) is most unlikely; Nicolet's mancupi et ope(ris) [magistro]⁹⁶ also seems preferable to deriving ope(ris) from opera. It would be interesting to know whether or not these men were local contractors who went to Rome to attend the auction. The nomen Rufilius is not at all common⁹⁷, but Nicolet believed, though on rather slim evidence, that Sepunius was a

Campanian nomen⁹⁸. I have tried unsuccessfully to locate a town on the via Caecilia which was enrolled in either the Oufentina or Quirina tribe⁹⁹. Although we cannot determine, therefore, if either of these two men was simply a local contractor or one operating in and from Rome, it nevertheless seems clear that none of the four was a small-time contractor.

The only building contract that survives on stone from the Roman world was let outside Rome, at Puteoli in 105¹⁰⁰. Both the work involved - the building of a wall with a gateway in front of the temple of Serapis - and the value of the contract - probably 1,500 sesterces - were small. The contractor¹⁰² was C. Blossius Q.f., who is also described as idem praes, that is, he acted as his own surety¹⁰³. As a praes, he was required to offer praedia, which seem to be defined as landed estates in Italy¹⁰⁴, so that it appears that he was a man of substance. His nomen makes it very likely that he was also a local¹⁰⁵. The function and social status of the four men whose names are appended to the contract is uncertain. They were probably either partners of Blossius¹⁰⁶ or, perhaps more likely, additional sureties¹⁰⁷. Three of them were certainly freeborn, while the fourth, Ti. Crassicius¹⁰⁸, may simply have lost his filiation during the refashioning of the inscription in the early Empire¹⁰⁹. It is not unlikely that they were all men of property and local citizens.

There are one literary and three epigraphic examples of Republican contractors which have received scant attention from scholars and must be discussed briefly here. The elder Pliny records¹¹⁰ that the redemptor tutelae Capitolii in 179 was M. Aufidius. Although the precise nature of the contract is not known, it is probable that it was let by the censors¹¹¹. Aufidius is found only once as a magisterial nomen in the period up to 150, but there are several examples of it in the late second and early first centuries¹¹². It is possible, therefore, that

M. Aufidius was an eques.

The first inscription, whose text is variously given by its editors, is probably to be dated to the early first century¹¹³. It is not clear what type of redemptor C. Hostius was; we cannot assume that he was a building contractor, and he may not even have specialized¹¹⁴. It is interesting, however, that he was a member of one of the two superior urban tribes¹¹⁵. The resolution of the title of his socius monumenti has been variously made, although it is generally agreed that that man was a magister in a private collegium¹¹⁶. It is interesting that Perperna's cognomen, Quadra¹¹⁷, was an architectural term for a plinth or foundation stone¹¹⁸, but we can hardly use this to connect Hostius with the building trade; not only does quadra have other meanings, one of which - 'a small bit' - is perhaps more appropriate in connection with a cognomen¹¹⁹, but we do not know what, if any, association there was between Hostius and Perperna. The one certain piece of useful information that this inscription carries for us is its testimony that this late Republican contractor was a free-born citizen and member of an honourable urban tribe.

The second, more famous, inscription is likewise of limited value to our discussion; it records that a M. Vergilius Eurysaces was a pistor and redemptor¹²⁰. Eurysaces was probably a freedman, to judge from his cognomen and the absence of paternity from the inscription, and it is possible that he had a baking contract with the relevant magistrates of Rome¹²¹. Certainly the splendid reliefs on his and his wife's tomb show a large mill and bakery at work, and the very scale of the monument would suggest that he was a man of means¹²². We must not, however, place too much emphasis on the status of this contractor. It is unlikely that baking contracts, important though they were to the life of Rome, held the same appeal to an entrepreneur as building contracts; they were probably not as valuable. On the other hand, although it is

not surprising that this baking contractor was probably a freedman, it is not a priori unlikely that a freedman building craftsman would have had the expertise and resources necessary to enable him to establish his own building 'concern'. The concept of the 'equestrian company' must not be allowed to blind us to that possibility.

The final inscription¹²³ is very fragmentary; neither its purpose nor the name of the redmtor (sic) which it records is certain. Gatti¹²⁴ believed that it concerned a public work. I would add the suggestion that the contractor lacked a cognomen - the termination -atius is very rare for cognomina¹²⁵ but quite common for nomina (for example, Cluatius, Trebatius) - and was therefore a man of free birth¹²⁶. Nothing more of value, however, can be derived from this inscription.

There are, finally, two more pieces of information about public building contractors of the Republican period. First, redemptores continue to be mentioned in our sources until the very close of it, and appear in the Lex Iulia Municipalis as a normal part of the system¹²⁷. And secondly, in a short passage which refers to the Republican period, Frontinus¹²⁸ informs us not only that the maintenance of individual aqueducts was let out on contract - we would expect that, since contracts were let for the maintenance of other public buildings - but also that the contractors (redemptores) were obliged to keep a fixed number of slave labourers (servi opifices), whose names were to be registered in the public records, at the ready in every region of Rome. It is possible that these contracts provide a special case. First, the upkeep of the aqueducts was of prime importance; since Rome never had a sufficient supply of good water until at least the reign of Claudius, it was vital that any damage should be repaired as quickly as possible. Secondly, the aqueducts were apparently in constant need of attention, so that the contractors' gangs would never have been idle¹²⁹. Thirdly, the same contracts, requiring the same type of work, would have been let

regularly, and one wonders whether they tended to fall to the same men every time. We should not, therefore, necessarily assume that the entrepreneurs who took contracts for new public buildings likewise maintained their own regular labour force.

There seems to have been a boom in private building in the last century of the Republic, and Badian suggests¹³⁰ that this work was probably handled by much the same people as the public contracts. It will be profitable, therefore, to consider in detail the evidence for the private sector, which is almost wholly confined to Cicero's Letters.

Private building work¹³¹

Only two men are specifically termed architectus by Cicero in his Letters, Cyrus¹³² and Corumbus¹³³, although it is interesting that Cyrus is never so described when he is mentioned in connection with building work. Cyrus was undoubtedly employed by Marcus in 60, on work connected with a villa, probably at Arpinum¹³⁴; by Quintus in 56, on a house in Rome¹³⁵; and possibly by Clodius in 52¹³⁶. It is also generally believed¹³⁷ that he was employed by Marcus in 55, but the reading on which that belief is based - eaque quae Cyrea sint - not only does not entail such employment but was also rejected by Shackleton Bailey in favour of the easier eaque quae circa sunt¹³⁸. We learn from a letter of 53 that Cyrus had a freedman, Vettius Chrysippus¹³⁹, and we can deduce that Cyrus probably also bore the nomen Vettius. The exact status of Cyrus, however, is not known. Treggiari used the fact that Vettius "is rare as a magisterial nomen in the Republic" to suggest that Cyrus was probably a freedman¹⁴⁰, but a somewhat stronger argument for that would be his Greek cognomen¹⁴¹ and the fact that Cicero never uses his nomen when naming him¹⁴². If he were a freedman, his nomen reveals that neither of the Cicero brothers was his patron. Promis¹⁴³ suggested that he was the freedman of P. Vettius Chilo, whose tax-farming operations are recorded in the Verrines¹⁴⁴, but we might equally connect

him with the praetor of 59¹⁴⁵ or even the citizen T. Vettius who was the architectus of a gate at Grumentum in 45¹⁴⁶. We also know that in 59 Cicero urged Atticus to call in a certain Vettius to make repairs to a wall of his palaestra on the Palatine¹⁴⁷; Park¹⁴⁸, Treggiari¹⁴⁹ and Tyrrell and Purser identify this man as Vettius Chrysippus, but Shackleton Bailey noted that he might also be Cyrus¹⁵⁰. It seems to me, however, that we should identify him with neither of these two. To the best of my knowledge Cicero in the Letters never fails to use the cognomen when naming men who are otherwise known to have been liberti except in the case of his secretary M. Tullius, of whom he only uses the praenomen and nomen¹⁵¹ or the nomen alone¹⁵². Tullius, however, is described in the first of these passages as meus necessarius, in the second as scriba meus, and in the third and fourth passages as scriba; in the fifth passage, there was no need to describe him further since he had already been named in that letter. We should also note that he is referred to as meus servus scriba in another paragraph of that letter where he is not named¹⁵³. I would therefore suggest that M. Tullius was a special case and that the Vettius in question was neither Cyrus nor Chrysippus but an ingenuus, perhaps the patron of Cyrus¹⁵⁴. If this is correct, it is not without interest that the Cicero brothers employed on building work three men from the same familia.

The other certain architectus, Corumbus, was employed by Cicero on his villa at Tusculum in April 44¹⁵⁵. Some commentators¹⁵⁶ describe him as the slave or freedman of Balbus, others¹⁵⁷ simply as his slave, while Shackleton Bailey gives the ambivalent "Balbus' Corumbus". The text - Corumbus Balbi nullus adhuc - perhaps favours the theory that he was a slave. His master is generally considered to be L. Cornelius Balbus¹⁵⁸, an identification which is probable in view of the numerous references in the Letters to this Spaniard¹⁵⁹; for it is likely that the Balbus concerned was a well known man since he is given no other

name here¹⁶⁰. It is interesting to find Cicero again employing an architectus from outside his own familia, on this occasion probably that of an associate; it is not, unfortunately, clear whether Balbus was lending him the services of Corumbus or whether the latter was working under some sort of contract, made either by himself or his master¹⁶¹. It is clear, however, that Corumbus' talent as an architectus was well known, since Cicero wrote of him: est mihi notum nomen; bellus enim esse dicitur architectus¹⁶². Another interesting point is that Corumbus appears to have been engaged independently of the building workers (structores), who were already at Tusculum and indeed had had time to go to Rome and back for corn¹⁶³. It is unfortunate that we do not know the precise reason for Corumbus' engagement.

Several other men recorded in the Letters are frequently described by commentators as architects. We read that in 56 Marcus urged his brother de forma Numisiana ... recogitasse¹⁶⁴. No details are given, but since the word forma occurs not uncommonly in Latin literature in the sense of 'building plan'¹⁶⁵, it is reasonable to conclude that a certain Numisius had drawn up a plan for Quintus' consideration¹⁶⁶, so that it is not unlikely that he was in fact an architect. The use of an adjective formed from a nomen clearly marks Numisius as at least of freedman status, and I would argue that it shows that he was probably an ingenuus¹⁶⁷. If that is correct, Numisius provides something of a balance to the two possible Greek or Greek Eastern architects, Cyrus and Corumbus¹⁶⁸. The nomen Numisius was especially common in southern Italy¹⁶⁹, and it is interesting to find two inscriptions dateable to the reign of Augustus which record a citizen Numisius as architectus of the theatre at Herculaneum¹⁷⁰. A connection between the two is a tempting suggestion, though of course one far from capable of proof, but it is interesting that we have here a third man employed by one of the Cicero brothers probably as an architect who had no direct

connection with his familia¹⁷¹.

When Cicero visited the Manilian estate of his brother in 54 during the latter's absence in Gaul, he found Diphilum Diphilo tardiore¹⁷². Diphilus was engaged on the rebuilding of the villa there; mention is made of the completion of a colonnade, pavements, arched roofs and certain rooms, while balnearia, an ambulatio and an aviarium remained to be built. The work involved was clearly extensive. Cicero was pleased with its general progress - he even agreed that an unauthorized change (made presumably by Diphilus) from Quintus' original plan was an improvement¹⁷³ - but he ordered some work to be done afresh, commenting sarcastically: aliquando perpendiculo et linea discet [sc. Diphilus] uti, and Diphilus' reputation has consequently never recovered. To ensure that the work was completed speedily and properly, he appointed one Caesius to keep an eye on (curare) Diphilus¹⁷⁴. Most commentators and translators make Diphilus an architect¹⁷⁵, but Fabricius¹⁷⁶ uses the term "Baumeister" and Park¹⁷⁷ "contractor", presumably because of Diphilus' inability to use a plumb-line and tape correctly. Cicero, however, is no less likely to have made that remark about an architect than about a contractor; it does not necessarily imply that Diphilus erected all the columns with his own hands - I have already noted how extensive the whole work was - but could mean that he had simply failed in his duty to check that they were properly placed¹⁷⁸. Cicero again remarked on Diphilus' incompetence when he described Quintus' estate at Arcanum, with its statues, exercise-ground etc., as "worthy of ever so many Philotimuses, not Diphiluses"¹⁷⁹. Philotimus, who is described by Williams in the Loeb edition as an architect, was a freedman of Terentia, at least by 50¹⁸⁰; his role in other building work undertaken by Marcus, for whom he also acted as dispensator and manager of the town house, seems to have been confined to overseeing the upkeep of property¹⁸¹. Whatever his exact part in the work at Arcanum, Philotimus seems to be

the first man involved with the building work of the Cicero brothers whom we know to have been connected with their family. It is possible that Diphilus too was a freedman or slave¹⁸²; certainly his Greek name suggests it. But while the tenor of the relevant letters suggests that he was well known to Quintus, we do not know what connection he had, if any, with the brothers.

In 45, Cicero decided to erect a fanum in memory of his daughter Tullia, and in March of that year he wrote to Atticus: equidem neque de genere dubito (placet enim mihi Cluati)¹⁸³. Translators and commentators alike make Cluatus an architect, but it is quite likely that a skilled stone-mason could have designed and erected the type of monument which Cicero desired¹⁸⁴. Two months later, before the choice of site for the fanum had been definitely settled, Cicero wrote to Atticus to ask him to encourage and stimulate Cluatus (cohortari, exacuere): nam etiam si alio loco placebit, illius nobis opera consilioque utendum puto¹⁸⁵. The word opera need not have here the connotation of physical work¹⁸⁶, but even if Cicero did envisage that Cluatus himself would work on the fanum, it does not preclude the possibility that he was an architect¹⁸⁷. The use of the nomen, whose Oscan origin is noted by Gummerus¹⁸⁸, would suggest that Cluatus was a freeman¹⁸⁹; unfortunately we do not know how he was engaged by Cicero, but since Cicero was writing to Atticus from Astura, we can perhaps conclude that Cluatus worked at Rome¹⁹⁰.

In July 44, Cicero wrote to C. Trebatius Testa from Velia: Rufio, medius fidius, tuus ita desiderabatur ut si esset unus e nobis. Sed ego non te reprehendo, qui illum ad aedificationem tuam traduxeris.¹⁹¹ Commentators generally¹⁹² describe Rufio as an architect, and although it is not certain that he was employed by Cicero on building work, his ability was clearly highly valued by Testa, and his recall from Velia to Rome might suggest that he was a 'professional', such as an architect, rather than a contractor. His status is uncertain. Several commentators¹⁹³,

however, identify him with the C. Trebatius Rufio who had joint responsibility for erecting at Rome the tombstone of one Q. Cornelius Q.f. which is perhaps to be dated to the late Republic, or at least the late first century¹⁹⁴. But even if this is correct, he might still have been either a slave or a freedman in 44.

* Vettius Chrysippus has already been mentioned in connection with his patron Cyrus¹⁹⁵. Probably the earliest evidence of him is in a letter written by Cicero in 53 to Trebatius, who was then with Caesar in Gaul¹⁹⁶; Chrysippus had brought a message from Trebatius to Cicero. It is not known why Chrysippus was in Gaul. Park suggests¹⁹⁷ that he had been "perhaps drawing plans for building the Basilica Julia (?)", a suggestion repeated by Treggiari¹⁹⁸, who goes on to state that "in 45 B.C., he had on hand the arrangements for Caesar's triumph". This latter statement is based on a passage of Quintilian¹⁹⁹ in which the orator mentions a jest of a certain Chrysippus that the wooden models of captured towns carried at the triumph of Fabius Maximus were the cases used a few days earlier for the ivory models at Caesar's triumph. Even were the two identical, however, it would not necessitate that Chrysippus had anything to do with those arrangements; he could have made the joke without the aid of 'inside information'. But Treggiari concludes²⁰⁰: "It is likely that Vettius remained in close touch with Caesar and his party and with Cicero and formed a link between the two during the years of civil war. Cyrus [sic!]²⁰¹, then, may have been important both as an architect and go-between: if we knew that it was indeed he who was commissioned by Caesar to design some or all of his public works, a more emphatic judgement might be made." Treggiari is surely stretching the evidence too far. Moreover, she seems to have overlooked the fact that the man used by Caesar in connection with his plans to enlarge Rome bore the nomen Caecilius or Pomponius, not Vettius²⁰². We must regard Chrysippus' employment by Caesar as far

from proven. He is twice mentioned, however, in connection with building work of Cicero; in 45, he reported to Cicero on the possible alterations to a house, perhaps the domus Sullana at Naples²⁰³, while in the following year he was summoned to Puteoli when two of Cicero's tabernae there had collapsed and others were cracking²⁰⁴. He also brought news to Cicero in Epirus about his house in Rome in 48, but it seems that it did not concern building work²⁰⁵. Chrysippus, then, was at least twice employed by Cicero in a capacity which was possibly that of architect, and it is tempting to call him such in view of the known 'profession' of his patron. It is also possible that he was a "junior partner or employee" of Cyrus whose "firm" he took over in 52²⁰⁶; for it is not unlikely that Chrysippus learned, or improved his knowledge of, his trade while working for his patron, and other slaves or freedmen probably worked for either or both of them. We must not, however, get this out of proportion; there is no evidence that their 'firm' - or 'firms'; Chrysippus may after all have set up by himself - was either large or small, very profitable or providing only a level of subsistence. Indeed, Cyrus himself seems to have been employed side by side with an independent contractor and his structores²⁰⁷, and I have already noted that the architect Corumbus appears to have been engaged separately from structores²⁰⁸. We must, I think, be content with Chrysippus' close connection with at least one other architect, his possible Greek origin, and the fact that he provides another example of a man from outside Cicero's familia whose services Cicero engaged on more than one occasion.

There are several other references to builders and building work in the Letters. In April 56, Cicero visited the site of Quintus' house in Rome and reported: res agebatur multis structoribus: Longilium redemptorem cohortatus sum; fidem mihi faciebat se velle nobis placere²⁰⁹. The use of the nomen shows that Longilius was at least a libertus, and I would argue that the absence of a cognomen marks him out as an ingenuus²¹⁰.

Longilius had clearly taken a contract from Quintus, and is probably the man to whom Marcus on his brother's behalf had paid half the contract price in March 56²¹¹. Unfortunately, neither the status of the structores, whom we should not necessarily assume were slaves, nor the precise significance here of the adjective multi is known; a dozen men working together on the building site might easily qualify for that description²¹². Nor does Longilius reappear in the Letters²¹³. We cannot determine, therefore, whether he took the contract for the whole house or only for a specialized part of it, although Cicero's reference two years later to expolitiones and redemptores, apparently in connection with the same house²¹⁴, might support the latter possibility²¹⁵. Nor can Longilius' exact role be determined. It is clear that a plan (forma) had been drawn²¹⁶, but it is by no means certain that its author was Longilius since it is possible that either Numisius or, perhaps more likely, Cyrus was responsible²¹⁷. We can tentatively conclude, however, that Longilius was a man who in the field of building work operated, as his means of livelihood, a concern with perhaps a permanent labour force. It would be interesting to know both what type of worker composed that force and whether Longilius took public, as well as private, building contracts.

Cicero records three other building projects, proposed or undertaken in 54, for which he names the men involved. In September on the Arcanum, Mescidius and Philoxenus were introducing some sort of irrigation system²¹⁸, and Mescidius had also agreed with Quintus (transegis) to dig another canal on the nearby Bovillan estate at a price of 3 sesterces a foot²¹⁹. Philoxenus seems to have been either a slave or a freedman; Mescidius, who bears a very rare nomen²²⁰, was possibly an ingenuus. Most commentators describe the two as contractors²²¹. Park²²² also states that they "may have been permanent employees of the Arpinum estates or they may have been called in from outside". It is, perhaps, unlikely that Mescidius was a "permanent employee" in view of the fact that he was

not a member of Quintus' familia, although it is possible that both were contractors. The nature of the work-force for Mescidius' second job, however, is interesting in this connection. Cicero had summoned Cillo from Venafrum but the latter had been delayed because the collapse of a tunnel there had killed four of his conservi et discipuli²²³. The implication of the passage is that these men were to provide the labour for the work for which Mescidius had contracted. Cillo is described by Park²²⁴ as a "contractor independent of the familia" who "employed at least four other slaves". Treggiari²²⁵ describes him as "both master contractor [and] labourer", who "held the contract and was in charge of operations" on the irrigation project of Quintus. "Whether he was a slave working independently on his master's behalf ($\chi\omega\rho\iota\varsigma$ $\alpha\lambda\epsilon\omega\nu$) or one of Quintus' own slaves (which seems unlikely if a contract was necessary) we do not know." Both seem to have overlooked the fact that it was not Cillo but Mescidius who took the contract; Cillo (and probably his men) were merely summoned (arcessere) to provide the heavy manual labour. It is possible that Cillo and his men had been working independently as $\chi\omega\rho\iota\varsigma$ $\alpha\lambda\epsilon\omega\nu\tau\epsilon\varsigma$ at Venafrum, since neither Quintus nor Marcus is known to have owned property there, but it seems to me more likely that they were slaves of Quintus, recalled when required for work on his estate²²⁶. In any event, it is interesting that Mescidius did not himself provide the necessary labour; perhaps we should conclude that he was not so much a contractor as a specialist surveyor who contracted only his own professional skill and relied for his labour on locally-owned slaves. If so, his possible free status and certain independence from Quintus' own familia acquire even more interest.

From the same letter, we learn that Quintus' vilicus, Nicephorus, took a contract (conductorem fuisse) in connection with the aedificatiuncula that Quintus was building at Laterium²²⁷. The value of it was 16,000 sesterces, and the tenor of the letter suggests that it was for the whole

building. Park²²⁸ places Nicephorus under the heading of "Contractor, Member of Familia" and comments: "the owner does not trust his vilicus to conduct an expensive piece of work unless the vilicus will take the contract and assume the responsibility. This apparently means that most extra jobs on an estate would be done by contract." She seems to believe that Nicephorus was a freedman, and Treggiari²²⁹ too thought that the mere fact that a contract was made creates the "possibility" that he was a libertus. I would suggest, however, that it makes it a certainty; as Treggiari herself says, how could a slave make a contract with his own master?²³⁰ I would also suggest, however, that a contract was made between the freedman and his master not for the reason given by Park but because the building work came outside the normal duties of a vilicus, and Nicephorus saw an opportunity to make some money from it for himself. It would be interesting to know both whether or not Nicephorus used labour from Quintus' own familia and whether he had any previous experience of building contracts or could take this one because he had the contacts through whom he knew it could be executed.

There are several building projects of Marcus for which we have the names of neither the architect nor the contractor²³¹. It would seem, however, on the evidence available that, although the two brothers undertook a large amount of building work, both relied mainly, perhaps exclusively, for the more skilled personnel on men from outside their own familiae. This employment of "freelance men" as Treggiari²³² described them, is found also, in the case of Marcus, in the fields of medicine and education²³³. None of the 'professionals', however, can be truly said to have been regularly employed by the two brothers²³⁴, although it is probable that Cyrus was a close friend of Marcus since he made him his joint heir²³⁵. This is not, however, a reflection on their ability (except in the case of Diphilus), nor should we suppose, as Briggs²³⁶ did, that Cicero was "not an easy man to deal with" simply

because he employed several different architects; not only were some of them employed simultaneously for different jobs²³⁷, but they were also surely free to accept work from other sources and may not always have been available to the Cicero brothers. But although Marcus and Quintus seem not to have had skilled 'professionals' in their own familiae, the impression from the Letters is that they could easily obtain their services either through friends or by other unspecified means²³⁸. One of the letters which refers to Cluatus suggests that others had submitted to Cicero plans for the fanum²³⁹, and Cicero himself was apparently very much au fait with builders and building²⁴⁰; he was also well aware of the dangers of attempting to build without the advice of an architect²⁴¹. It is unfortunate, especially in the case of the ingenui, that the terms of their employment are not known, but it is noteworthy that in the majority of cases the 'professional' seems to have been engaged independently of the contractor and the labour, and we must clearly be wary about using such terms as a 'firm of architects'.

Our certain knowledge about the contractors whom the brothers engaged is likewise unhappily meagre. Longilius appears to have been an ingenuus with perhaps his own permanent labour force, but nothing more about him or the nature of his 'concern' is known. There are also a few occasions when we learn that workmen (fabri, structores) were engaged on a project²⁴², but it is not clear whether they were working for a contractor or were members of Cicero's familia. Indeed, it is not all plain to what extent either of the Cicero brothers maintained on any of their estates groups of men for employment on general building work. Cillo and his group probably come into such a category at Arpinum; while in 46 Marcus asked L. Papirius Paetus to take fabri to inspect a house, probably at Naples, which he was proposing to buy, but even here it is possible that the fabri belonged not to Cicero but to Paetus²⁴³. Nor do we know whether Quintus' vilicus Nicephorus proposed to execute his contract with labour drawn from the

estate at Laterium. It is not unlikely that the brothers followed the practice suggested by the agricultural writers and maintained permanently on their staff only a limited number of what might be termed general building workers, who could be used throughout the year on a variety of repair jobs and small new undertakings, as well as on other duties around the estate according to necessity, but that they went to outside contractors for larger works that required a wide range of skills²⁴⁴. Labour, even (or perhaps especially) slave labour, costs money²⁴⁵, and the Cicero brothers did not undertake sufficiently regular large-scale building programmes to make the permanent maintenance of a skilled building labour force an economic proposition.

There are, finally, two references from outside Cicero that must be considered here. The elder Pliny²⁴⁶ records that C. Sergius Orata, in the early first century, made a practice, as well as great profit, out of buying country houses, fitting them with heated baths (balneae pensiles) and then selling them. This was clearly one of his 'businesses'²⁴⁷, and he must surely have maintained his own labour force for it. Although the work was specialized and presented quite a different proposition from public building contracts, it is interesting to have this example of a 'businessman' operating on a large scale in even a limited sector of the building industry. The second reference is somewhat similar; Plutarch²⁴⁸ records that Crassus, noticing the regularity with which buildings in Rome collapsed as a result of fire, bought over 500 slave architects and builders (ἀρχιτέκτονες καὶ οἰκοδόμοι) and then purchased at a trifling price houses that were on fire or were threatened by fire, and thus came to own most of Rome. The anecdote as told by Plutarch is a little strange; there would have been no profit for Crassus unless he sold or rented the property which his team had restored, but this is not mentioned by Plutarch. But although it would be reckless to put complete trust in all the elements of the story, especially the figure of 500, Pliny's tale

about Orata suggests that it has some basis in fact. Although the work involved would once again have been somewhat specialized, the gangs of both Crassus and Orata might be compared to those that the contractors for the maintenance of the aqueducts were obliged to keep.

* * * * *

It is difficult to form from the available evidence a clear picture either of the building contractors or of the whole organization of building in the second and first centuries. Perhaps the most serious gap in our knowledge concerns the nature of the contracts that were let by censors and other magistrates. In the case of the Basilica Aemilia, for example, did the censors let a single contract for the whole work, several large contracts (for clearing the site, transporting materials etc.), or a multitude of small contracts covering detailed work (the carving of capitals, fluting of columns etc.)? Another important absentee from much of the evidence of this period is the architect. It is possible that for certain types of building, especially perhaps private work, builders themselves would have been able to provide the necessary architectural knowledge, although we should note that the Cicero brothers seem to call in a technical expert for all their projects, while Cicero himself was aware of the folly of making the false economy of not employing an architect²⁴⁹. On the other hand, much of the public building work undertaken at Rome in the second and first centuries was of a type for which at the time there was no lengthy tradition of building (for example, drains and aqueducts), and for which precise details would have been required before work could commence. Moreover, magistrates would surely have needed 'professional' guidance about the approximate price for which they could expect to let contracts, especially for uncommon types of work²⁵⁰.

Individuals are associated as architects by the literary sources with

particular buildings erected at Rome in the late Republic: Hermodorus of Salamis and the temples of Jupiter Stator and Mars, C. Mucius and the temple of Honos and Virtus, Valerius of Ostia and a theatre²⁵¹.

We should not necessarily be suspicious of such personalization.

Inscriptions attest that it was the Greek practice for a single ἀρχιτέκτων to have had overall technical charge of complete building projects, including drawing up plans²⁵², while 'sub-architects' (ὑπαρχιτέκτονες) had responsibility for overseeing the details of individual parts of the work²⁵³. Moreover, a recently published inscription from Rome²⁵⁴ suggests that a L. Cornelius L.f. served Q. Lutatius Catulus throughout the fifteen years that the latter was in charge of restoring the Capitolium and Tabularium, first as praefectus fabrum and later as architectus. We do not know how an architect was appointed for a public project; there is no trace at Rome of the permanent official architects that seem to have existed in some Hellenistic cities²⁵⁵. Literary evidence suggests that a system of competitive tender operated, at least in the sphere of private building, but it is not unlikely that some architects were appointed on the strength of their reputation. Hermodorus, for example, may have been brought to Rome from Greece by Q. Caecilius Metellus Macedonius for the specific purpose of designing the temple vowed by the latter. But however the appointment of an architect was made, it would seem that it was separate from and prior to that of the contractors.

Even if magistrates were equipped with an architect's detailed plans for a project before the auction, we should not assume that the contracts which they let were either detailed or small. Certainly that such contracts could be let and recorded in the official archives is shown not only by the surviving evidence for classical and hellenistic Greece but also by the Lex Futeolana, the extraordinary detail of measurements and materials in which must surely have been calculated beforehand by an architect, although admittedly the scale of the work was very small. On the other

hand, the contracts that are recorded for the via Caecilia are totally lacking in detail, although here it might be argued either that the details were recorded in the official archives but not on stone or that there was no need to specify details.

It is against this background that our evidence for the contractors must be set. This suggests that the men who attended magistrates' auctions, both in the second and first centuries, were not of mean importance but could be ranked among the equites. It is probable, in my opinion, that such men would have been interested not so much in small building contracts as in something of the size of the army supply contracts which were let in the Hannibalic and Spanish wars or of the tax and mining contracts which were let from about the middle of the second century. To some extent, it matters not whether the details were spelled out in the contracts or were specified later; of greater importance is the probability that the contracts were large and that the contractors were not themselves 'professionals'. The task of the contractors was to provide for the state services which the state could not provide itself. There was no state labour force, even for maintenance work; if there had been, it would have been unnecessary to let contracts. Nor did the state in the last two centuries of the Republic have the control of the supply of building materials that it was to acquire, at least for some materials, during the Empire²⁵⁶. It is true that Rome had a good supply, with easy transport, both of timber and of the type of stone that was most commonly used on Republican buildings in Rome²⁵⁷, but there is no evidence of state control of the working of forests or quarries. Moreover, although marble, from both Carrara and overseas, became increasingly employed at Rome from the middle of the second century onwards, the use in this period of any one marble was too sporadic for the state profitably to have undertaken the organization of its cutting and transport. This was precisely the sort of operation that was best executed through the experience and

contacts of the entrepreneurs.

There is little positive evidence of the recruitment of building labour. Our sources contain the occasional record of a particular craftsman's being brought to Rome²⁵⁸, but this practice was probably confined to highly skilled individuals. Much building work, especially of the utilitarian type, requires brawn as much as brain, and it is usual to assume that there existed in Rome, especially from about 150 onwards, a pool of unemployed which could be tapped for large building projects. Although there is little positive evidence for such a pool, it would be surprising if much of the 'heavy work' was not undertaken by casual labour. At the same time, it is probable that there also existed 'concerns' that provided regular and skilled services connected with building; Longilius and his structores may well have fallen into this category. Even if private building and repairs provided them with their regular work, it is not unlikely that they undertook work on public projects also. I would suggest, however, that any public work which they undertook was generally sulet to them through the entrepreneurs; for it seems to me impossible that men like Longilius were the sort who attended censorial auctions or formed the societates of which Livy and Cicero write. Whether the entrepreneurs 'controlled' such groups in any way we cannot determine; whatever the relationship between them, however, I would suspect that the entrepreneurs had sufficiently good contacts to enable them to turn particular types of work in the best direction.

CHAPTER 2

Organization in the Imperial Period - (i) Manpower

"The usual assumption has been that at Rome work on public buildings, instead of being let to private contractors, was placed more and more in the hands of imperial freedmen and gangs of imperial slaves ... [But] evidence for the survival of the contract system till 80 A.D. is supported by references to redemptores for imperial projects throughout Italy."¹

"[In Asia Minor] the work upon a building was not carried on by a contractor who in turn found the workmen and the materials, but by the public overseers who had to deal separately for their materials ... and with the individuals or groups of workmen."²

I have argued that during the Republic there was little or no state organization of the resources that were necessary for the execution of building projects. The censors or other responsible magistrates relied to a large extent on the experience and contacts of the publicani to whom they let contracts. There is plenty of evidence that contracts continued to be let during the Empire. At the same time, however, it is clear that within the Imperial³ Civil Service there was gradually developed a branch which had a certain responsibility for public works and that there was also an organizing of building materials and, to some extent, of manpower under the management of Imperial staff. It will become increasingly evident that we must not only define what we understand by 'contract system' but must also distinguish between Imperial public projects and public projects organized and financed at a local level. I propose in the first part of this chapter to discuss the organization of Imperial works, but it will be useful first to consider some of the evidence for 'building contractors' during the

imperial period.

Redemptores and the 'contract system'

There are to my knowledge 21 inscriptions of the imperial period on which men term themselves, or are termed by others, redemptor⁴. In some cases, the type of contract with which the man was concerned cannot be determined, but 14 seem to be definitely connected with one or more aspects of the building trade and it is possible that the remainder were as well. The social or economic position of most of them is difficult to assess, but it is clear that they do not all fall into a single clearly defined group and must therefore be considered individually.

P. Cornelius P.l. Philomusus is described as pictor scaenarius idem redempt(or) on the inscription recording the monimentum (sic) that he made for himself and his family⁶. It would seem that he was a 'scene-painter' who also acted as a contractor, in which capacity he was presumably responsible for providing not simply his own labour (locatio operarum) but certain services that perhaps included obtaining the necessary paints, scaffolding and even other painters (locatio operis faciendi)⁷. Obviously we cannot determine how regularly he took such contracts nor whether he maintained any permanent staff. Nor can we date the inscription, which is now lost; although scaenarius was late literary Latin for scaenicus⁸, the word might have been common in everyday use at an early date. The freed status and probable Greek origin of Philomusus do not necessarily indicate that he was poor, but the fact that he was able to claim no distinction for himself other than his occupation would suggest that he was not a man of much importance. Nevertheless, it is interesting to have this example of a contractor who was also a workman⁹.

There are three epigraphic examples of a redemptor marmorarius, one at Rome¹⁰, one at Puteoli, dated 62¹¹, and one at Lepcis Magna, dated

around 120¹². It is not clear whether these men were contractors for the obtaining and delivery of marble or for work in marble, or even for both. The marble trade became very highly organized in the imperial period, and stocks were established both in the quarries and at centres where there was a large demand¹³. It is possible that these redemptores were concerned solely with the importing (or exporting) of marble; certainly Puteoli would still in 62 have been the port at which foreign marble destined for Rome would have been unloaded. That seems to me, however, to have been rather the province of the negotiator marmorarius and λιθηνόροι, of whom we have a few examples¹⁴. Moreover, the man at Lepcis Magna is described as redemptor (sic) marmorarius templi Liberi Patris, which suggests that he had responsibility for everything connected with the marble that was required for the building of the temple, including the recruitment of labour¹⁵. But whatever their precise function, it is interesting to have three examples of contractors who specialized in the field of marble. Of the three, C. Avillius Decembris was almost certainly a freedman since he describes his wife, Vellia Cinnamis, as cont(ubernalis)¹⁶; the status of Q. Cassius Artema is restored by Henzen as [l(libertus)], which is not unlikely in view of his Greek cognomen¹⁷; while it is not possible to determine the status of the third man, although his name, M. Vipsanius Clemens, suggests that he was a descendant of an enfranchisee of Agrippa¹⁸. Specialization among contractors is also to be seen on an inscription found near Velitrae, which records that Ti. Claudius Cela[dus] was a redemptor intestinarius¹⁹; the uses of intestinarius and intestinum²⁰ suggest that Celadus took contracts for the carpentry which put the finishing touches to a building. Celadus does not give his status, but this, together with his own and his wife's Greek cognomen, suggests that he was a freedman rather than a son of a libertus of Claudius²¹. It is possible, therefore, that Celadus began his working life as a slave faber intestinarius²², but the size of

the funerary monumentum as well as of his familia suggests that he had prospered as a contractor.

There are at least two other examples of men who took contracts for part of a work. Several redemptores are grouped together on an inscription which records the erection of a cella proma near Thuburbo Maïus²³. It is not clear what their precise individual responsibilities were, but they seem to have worked under a general overseer (exactor), while their Punic names reveal their local origin. The joint appearance of a Punic and Latin text suggests that the inscription is not to be dated later than the first century. At Capua, a dedication was made to the genius [the]atri by Luceius Peculiaris, who describes himself as redemptor prosc[a]eni, from which it would seem that Peculiaris had taken the contract for the building of the theatre's proscænium²⁴. I would suggest that this was not the only building contract which Peculiaris took, but whether he maintained a permanent 'staff', including perhaps the men depicted in the building scene on the dedicatory relief (Plate VII, fig. 5), cannot of course be determined. We do not know the date at which the theatre at Capua was built, but another Capuan inscription which describes a man as exactor operum publ(icorum) et theatri a fundamentis is probably to be dated to the late first or second century²⁵. C. Albius Torquatus, a redemptor (sic) operis, whose tombstone was erected at Cerfennia probably in the second or even third century (Plate VII, fig. 2)²⁶ was possibly another man who took contracts for portions of a work, but his 'title' is vague and inconclusive. It is difficult to assess the status, social or economic, of these men, but there is nothing to suggest that they were other than local contractors. A glimpse of their type can perhaps be caught in a passage of Horace in which he describes the noise and bustle of Rome:

festinat calidus mulis gerulisque redemptor,
torquet nunc lapidem, nunc ingens machina tignum²⁷.

Of the other redemptores, Q. Parfidius Primus was employed for the construction of a private villa near Narnia in 218²⁸. It is interesting that the inscription also records agente Pauliniano; if we are to take this in the sense of curam agente, one wonders what working relationship there was between the contractor and Paulinianus. A fragment of an epistyle from Cumae records L. Cocc--- | redem[tor?]²⁹. A freedman L. Cocceius Auctus is recorded as an arcitect(us) (sic) at Puteoli, probably in the reign of Augustus³⁰, while Strabo³¹ records that a Cocceius built two tunnels on the Neapolitan coast in the late first century B.C. The three were possibly identical - it would certainly be interesting to have an example of an architectus who was also recorded as a redemptor - but, although the letters of the Cumae inscription were described by Mommsen as "pulchrae et magnae", which makes an Augustan date for them possible, a 'family' relationship is perhaps equally likely³². The nature of the Cumae inscription, however, does suggest that Cocc[ei]us was in some way connected with building work. At Rome, a L. Mucius Felix acted as redemptor in connection with a navis harenaria³³. I would reject the suggestion of Loane³⁴ that he supplied "sand for various building projects" since at the start of the tabella we read sub L. Arruntio Stella; a man of that name was entrusted with the cura of games by Nero in 55³⁵, and if the two are the same it is likely that Felix brought up the Tiber sand to be used in the arena where those games were held³⁶.

From Lanuvium comes a dedication to Juno that was made by Q. Olius Princeps, redemptor oper(um) publicorum Lanivinarum (Plate VII, fig. 3)³⁷. The use of the plural suggests that Princeps (whose status was not recorded) took contracts regularly from the city of Lanuvium; perhaps they concerned the maintenance of the many temples there³⁸. And at Rome, Q. Haterius Tychicus, a redempt(or), at his own expense erected, [numini] domus Aug(ustae) sacrum, a marble shrine and signum of Hercules³⁹. The

inscription provides no further information about Tychicus or the date of his dedication, but he is commonly identified with the principal honorand of the famous tomb of the Haterii whose cognomen is not, unfortunately, extant⁴⁰. The latter Haterius appears to have been associated with, and was perhaps one of the contractors for, five buildings, including the Colosseum, which were erected in the last quarter of the first century⁴¹. Although the identification is wholly beyond proof, it is highly attractive and would provide another example of a redemptor who regularly undertook work (admittedly of an unknown extent) on public buildings; the scale of the monumentum would also suggest that he was a man of means⁴².

There is one final group of redemptores on whom much of the discussion about imperial contractors is usually centred. The description redemptor ab aerar(io) is used of two men in the same columbarium at Rome, P. Turpilius A.l. Phronim(us) and P. Turpilius A.l. Niger⁴³. We do not know what sort of contractor these two men were, but there is plenty of evidence that the heads of the aerarium were responsible for letting contracts and for making payments⁴⁴, and this is presumably to what the description refers. De Ruggiero⁴⁵, who assumed that these two were building contractors, believed that contracts let by the heads of the aerarium concerned works that were not founded by the Emperor, but it appears that de facto, if not de iure, Emperors were able to dispose of money in the aerarium⁴⁶. The last three epigraphic redemptores bear similar 'titles'. [Ti. Clau]dius Aug.l. Onesimus is described as [rede]mptor operum Caesar., probably on his tombstone at Rome which is to be dated to the late first or early second century⁴⁷. P. Mucius Nedymus is called redemptor oper. Caesarum, also on a tombstone, at Reate (Plate VII, fig. 4)⁴⁸; Nedymus was probably a freedman since, apart from the fact that he bears a Greek cognomen, his daughter took her nomen from her mother (who was herself a liberta), which suggests that the

marriage was not a iustum conubium nor Marcella his legal daughter at the time of her birth because he had not yet been freed⁴⁹. Finally, L. Paquedius Festus describes himself as redemptor operum Caesar. et publicorum (sic) on a dedication made on 3 July 88 to the Bona Dea, whose temple he had rebuilt in return for her help in repairing part of the aqua Claudia Augusta⁵⁰. These must be the men to whom the statement of Frank quoted at the start of this chapter refers.

Considerable mileage is usually made from the Imperial freedman status of Onesimus and from the fact that he held the chief office in the collegium fabrum tignariorum at Rome⁵¹. We must, however, exercise caution here. Although it is possible that those positions helped him to win contracts for Imperial projects, we should remember that neither of the other two redemptores who bear a similar description was either an Imperial freedman or a member of the collegium fabrum tignariorum. Moreover, that collegium was during the first two or three centuries of the Empire a free body formed mainly for social purposes, and was not a tool in the hands of the Emperors⁵². We must also be wary about assigning an official status to the 'title' redemptor operum Caesarum. Although it may describe exactly the activities of the contractors of whom it is used, in the same way as redemptor operum publicorum Lanivinarum, it is possible that it was adopted for its honorific value, and may even have been a form of self-advertisement⁵³. However regularly any of these three won contracts for Imperial projects - and the description of Festus shows that he certainly took other public contracts - it is inconceivable that a redemptor held a permanent position on the Imperial staff since that would have nullified the purpose of competitive tenders and contracts. Nor should we deduce, as did Strong⁵⁴, that the description reveals the establishment by the Flavians of an Opera Caesaris, or Department of Works, that was separate from the Maintenance Department. Festus had repaired part of the aqua Claudia, and we should note that

even at the end of the first century the curatores aquarum followed the Republican practice of letting contracts to redemptores for the maintenance of aqueducts even though they could execute some of the work through the two official gangs⁵⁵. Festus was presumably one of these contractors.

Although it is not, perhaps, surprising to find that contractors connected with the building trade continued to exist in the imperial period, at least in Italy⁵⁶, it is important to have established it in the case of public works in view of the statements quoted at the start of this chapter. Although they do not fall into a single particular category, it is clear that the majority were men whose livelihood centred on locationes operis faciendi, for which they may have maintained some sort of permanent labour force. It is this which constitutes, in my opinion, a 'contract system'. Projects, even Imperial projects, were not executed with the resources of manpower that were at the constant service or under the direct control of the state, but private contractors continued to play, at least in Italy, an important role in the provision of both labour and materials. This does not entail, however, that these contractors were comparable with the publicani of the Republican period, which seems to be the assumption behind the statement of Frank; indeed, comparison between the publicani and the redemptores operum Caesaris is dangerous unless one can show (which I think is not possible) that the latter were entrepreneurs rather than building specialists. And it is equally dangerous, I believe, to conclude that the 'contract system' continued only until the end of the first century simply because of the fact that, of the three epigraphic examples of redemptores operum Caesaris, two certainly and the other possibly are to be dated to that century. Apart from the inherent inadequacies of an argumentum ex silentio, this view takes no account of the other redemptores, of the fact that the Imperial household was unable to provide from within its own ranks all

the labour necessary for building projects, or of the evidence of the collegium fabrum tignariorum. It is to an examination of Imperial resources that I now turn.

Imperial organization and resources

There is no reason to suppose that the Republican practice of letting contracts for the maintenance of Rome's public buildings ceased in the early part of Augustus' reign. With the virtual demise of the censorship as a regular magistracy, it was probably the aediles to whom this responsibility fell; certainly it was as aedile that Agrippa restored the sewers, several aqueducts and other buildings, admittedly at Octavian's request⁵⁷. In addition, Augustus attempted at first to persuade senators to use either their own money or the spoils of military campaigns on the repair of roads and buildings⁵⁸. Their response, however, was apparently not good⁵⁹, and it was probably this, combined perhaps with a desire to put the maintenance of Rome's public services on a more efficient basis, which led Augustus to create permanent 'Boards', headed by senatorial officials, for the maintenance of the roads (20 B.C.), aqueducts (11 B.C.), public buildings and shrines (date uncertain) and the banks and bed of the Tiber (14 or 15)⁶⁰. Of the organization of all except the second of these Boards, we know almost nothing, although it seems that some contracts continued to be let for the repair of roads⁶¹. Frontinus' monograph about the 'Water Board', however, casts valuable light both on its officials and the resources at their disposal.

Among the personnel permanently allotted to the curator aquarum and each of his two adiutores was one architectus⁶². The precise status of these three⁶³ technicians is uncertain⁶⁴, but it is less important than the fact that their services were constantly available to the curator and his assistants. This is a significant change from the situation under the Republic when the censors and other magistrates apparently

enjoyed no such source of technical advice in the permanent employ of the state. We should note, however, that Frontinus believed that curatores should consult not only the architecti in the official statio but those outside it as well⁶⁵. The curatores also had at their disposal a permanent labour force. As quasi-curator aquarum after his aedileship in 33 B.C., Agrippa established a private familia for the maintenance of aqueducts; on his death, it was inherited by Augustus, who made it state property⁶⁶. This gang of 240 men was supplemented in the reign of Claudius by one 460 strong⁶⁷. These familiae comprised both specialists (castellarii, circitores, silicarii and tectores) and other workmen, under the general oversight of praepositi⁶⁸. It is not clear why these gangs were instituted; the private redemptores had after all been required to maintain a fixed number of slaves for work on the aqueducts both inside and outside the city⁶⁹. Perhaps it was felt that greater security and flexibility would result if the workers were under the direct control of state officials; it may also have been cheaper. The use of contractors was not abolished, however, but continued side by side with the state gangs at least until the curatorship of Frontinus at the end of the first century; for he states that a curator should aestimēt ... quae per redemptores effici debeant, quae per domesticos artifices⁷⁰, and we also read of the employment of redemptores ad rivos reficiendos⁷¹. This suggests that contractors continued to be regularly employed; since Frontinus makes no complaint against them, the dual system perhaps lasted well into the second century. No indication is given of the scale of work which the curator decided should be executed through redemptores⁷², but if L. Paquedius Festus is indeed to be numbered amongst them⁷³, it is likely that the contracts were not all small.

Although the aqueducts were perhaps a special case in view of their importance and the frequency with which they apparently required

attention⁷⁴, it is not unlikely that the curatores in charge of the other Maintenance Boards enjoyed the services of permanent official labour forces comparable to the familiae of the Water Board. At the least, I suspect that they were provided with a technical expert such as an architectus. It is usually suggested that the two epigraphic examples of an ab opera publica, both of them public slaves, were attached to the staff of the curator operum publicorum⁷⁵, but there are no other extant epigraphic examples of any similar 'official' maintenance workers. If this suggestion is sound, it would represent a substantial change from the system operative under the Republic in that the state officials would no longer have been dependent on the publicani.

During the closing years of the Republic, there had been a tendency for large new public works at Rome to be erected under the authorship of eminent figures rather than of particular magistrates⁷⁶, although it seems that magistrates such as the urban quaestors and perhaps the aediles attended to run-of-the-mill projects⁷⁷. This state of affairs probably continued during the early Empire. Although there is no evidence that in the imperial period any particular regular magistrate had responsibility for new public works, this may be due to chance; we should perhaps not expect such information to have survived. We do know, however, that, as he had done with regard to the restoration of buildings, Augustus at first attempted to persuade eminent figures to use their money on new monumental works⁷⁸. This course was presumably adopted in line with his policy of not wanting his position to be too openly pre-eminent; for in the early years of his reign, appearances counted for much. He met with some success. Agrippa was particularly munificent⁷⁹, and Suetonius records several new buildings that were erected in the reign of Augustus by leading senators⁸⁰. On the whole, however, senators and others in Rome seem to have been reluctant to use their money for such purposes⁸¹. When the Basilica Aemilia was burned in 14 B.C., its

rebuilding was carried out, according to Dio Cassius⁸², only nominally by Aemilius Paullus but really by Augustus and friends of Paullus. And although Tacitus states, when Aemilius Lepidus asked the senate in 22 for permission to beautify that same building, that public munificence was still fashionable⁸³, we must remember that Lepidus was proposing to improve a work that had originally been erected by an ancestor, something which was regarded during the Republic as a duty. Moreover, the known examples of such munificence at Rome, in the field of both new works and restorations, are extremely few in number after the early imperial period and are on the whole works such as aedicula and horrea rather than amphitheatres or porticoes⁸⁴. It is noteworthy that apart from Agrippa on the Pantheon⁸⁵ and two pairs of early imperial consuls on arches⁸⁶, the only names that appear in the nominative on building inscriptions of Rome are those of members of the Imperial family⁸⁷, while the senate is recorded as the executor of a work at Rome on only three inscriptions; in two cases, the work was the restoration of a temple⁸⁸, in the other the erection of an aediculum⁸⁹. But if the Emperors had effective responsibility for the erection of most new public buildings at Rome from an early stage, it is clear that in the first century at least they generally continued to work through the old constitutional channels. For example, although Augustus is recorded in the nominative on the inscription commemorating the rebuilding of the pons Aemilius in 12 B.C., it is also recorded that the work was executed ex s(enatus) c(onsulto)⁹⁰. There is also ample evidence that throughout the first two or three centuries of the Empire the senate continued to decree honorific arches, temples and statues to the Emperors, decrees which are often recorded on the extant inscriptions⁹¹. And Suetonius records that Tiberius consulted the senate about the construction and restoration of public buildings⁹². We should not assume that their motive was entirely self-interest, a desire to fashion the appearance of res publica.

restituta. There seems to have been a genuine attempt, at least in the early stages, to involve the senate in the work of government and administration, and it is worth emphasizing the fact that the various curatores in the Maintenance Boards were drawn from the ranks of the senate, and were not (at least initially) Imperial appointees. But, however much they worked through the senate, it is clear that the Emperors had effective responsibility for initiating most of Rome's new public buildings, and as in all the facets of the Imperial government there was an increasing tendency for the senate to become a rubber stamp or even to be completely by-passed. An indication of this tendency in building matters can perhaps be seen in the terminology on the termini erected by the curatores riparum et alvei Tiberis; until the middle of Tiberius' reign, they were erected ex s(enatus) c(onsulto); from the reign of Claudius, this became invariably ex auctoritate imperatoris⁹³.

There are only a few cases in which we know how the erection of new public buildings at Rome was organized, and even this limited evidence has given rise to conflicting statements by scholars. "In the early period, commissions for new Imperial building projects were only infrequently entrusted to imperial slaves and freedmen"⁹⁴; "in and around Rome, supervisors were for the first two centuries more often imperial freedmen, thereafter men of high rank"⁹⁵. The literary sources provide two instances of men appointed to oversee particular Imperial projects in Rome, and in both cases the work was that of rebuilding or restoration. In 70 Vespasian appointed an equestrian, L. Vestinus, for the job of restoring the Capitoline temple after the fire⁹⁶, and Suetonius records that Titus, also after a fire in the city, provided material and appointed several equestrians for the task of speedy rebuilding⁹⁷. We also have notice of similar appointments for Imperial work outside Rome; Malalas records that

senators were sent out to Antioch to superintend building work financed by Gaius⁹⁸, and a freedman of Claudius, Narcissus, was in charge of the draining of the Fucine Lake⁹⁹. Our sources also associate men with the erection of particular buildings or the execution of related work without specifying that they acted as official curatores. Severus and Celer played a major role in the work on the pleasure gardens of the Domus Aurea of Nero and also proposed to dig a navigable canal from Lake Avernus to the Tiber estuary¹⁰⁰; they would appear to have been 'professionals', perhaps engineers, rather than 'administrators', but their status is entirely unknown¹⁰¹. Rabirius is named by Martial in connection with the building of Domitian's palace, of which he may have been the architect¹⁰²; the use of the nomen reveals that he was at least a freedman, but he was clearly not a member of the Imperial familia. Dio Cassius specifically states that an ἀρχιτέκτων, Apollodorus, built (κατεσκευάσθη) three works of Trajan at Rome, the forum, Odeum and gymnasium¹⁰³. Cleander, an Imperial libertus, is said to have built baths at Rome in the name of Commodus¹⁰⁴; it is probable that he financed their construction, or was even the official overseer of the work, although he has been described as an architect¹⁰⁵. Finally, Sextus Iulius Africanus, whose name shows that he had no connection with the Imperial familia, states that he built (ἀρχιτεκτονέειν) a library at Rome for an Emperor, perhaps Severus Alexander¹⁰⁶; the choice of verb suggests that he was an architect. We might also note that Augustus is said to have joked about the procrastination of his architectus who was delaying the completion of his forum, which suggests that that man had some overall charge¹⁰⁷. And Otho used as his signal that the men backing his conspiracy against Galba were armed and ready the message that his architectus et redemptores were waiting for him¹⁰⁸; again we might wonder whether the architectus often took full charge of a work, although Suetonius' version of this story illustrates the

danger of attempting to put exact interpretations on this sort of evidence, since he records that the message was that the architecti had arrived¹⁰⁹. There is one final group of men that should also be considered here, the epigraphic exactores and curatores. The words exactor and exactio seem in general to carry the connotation of superintendence rather than personal action¹¹⁰. In the case of the exactor thermarum Traianarum¹¹¹, it is probable that the superintendence involved not building work so much as the general upkeep of the baths, where the duties did not concern simply the fabric of the building. In other cases, however, the duties clearly covered the work of building, and it is possible that the exactor had official charge of organizing the work. One such man was a libertus of one of the Flavian Emperors¹¹²; his description on his tombstone as exactor operum perhaps suggests that he acted in this capacity more than once. T. Flavius Hermes, who discharged a vow at Nemausus, is described as exactor oper(is) basilicae marmorari et lapidari¹¹³; it is probable that he was a descendant of a freedman of the Flavian dynasty and possible that he was an Imperial appointee, since we know that Hadrian built a basilica at Nemausus in honour of Sabina¹¹⁴. On the other hand, the exsactor (sic) operum domi[ni]n[orum] nostrorum¹¹⁵ of the late second century, although his 'supervision' of Imperial constructions included duties relating to materials, was clearly a minor civil servant who was part of a team in which others had the technical and financial responsibilities¹¹⁶. We must therefore be cautious about assigning to the exactores the sort of role that was played, for example, by Vestinus¹¹⁷. C. Attius Alcimius Felicianus, however, who was cur(ator) operis amphitheatri¹¹⁸, was an eques, and since his was probably a ducenarian post¹¹⁹, it is likely that he had wide responsibilities and was in overall charge of the work connected with the restoration of the Colosseum about the middle of the third century¹²⁰. Similarly Q. Acilius Faustus, as

procurator operis theatri Pompeiani¹²¹, also in the third century, was probably the overall administrator; his seems to have been a sexagenarian equestrian procuratorship¹²². It is hardly likely, however, that these two posts were permanent rungs on the equestrian career ladder; I would assume that the work involved was considered important and extensive enough to warrant ad hoc appointments.

It appears, then, that there was no single permanent official to whom the Emperors assigned the organization of new Imperial public projects. Although it is possible that particular men, such as Apollodorus, were appointed to organize an extensive programme, covering several years and involving numerous buildings, it is unlikely that there was the continuity of office that existed in the Maintenance Boards. This is, however, neither surprising nor inexplicable; while the maintenance of public works was a continuous necessity, not only did the number of new Imperial public projects vary from reign to reign - the almost total lack, both at Rome and elsewhere, of new works undertaken by Tiberius is well known¹²³ - but also there was not a constant flow of work even in the reigns of Emperors who built extensively¹²⁴. Nor was there any consistency in the social status of the men who appear to have been entrusted with ad hoc commissions; their appointments were made probably at the whim of individual Emperors, without any trace of class favouritism. It might be inevitable that the known Claudian and Commodan appointees were Imperial freedmen, but it is doubtful whether this should be regarded in terms of an anti-senatorial or anti-equestrian policy. At the same time, it is interesting to note the wide range among the men known to have been appointed for particular works, some of whom were clearly technical experts rather than administrators, although it is almost certain that an 'administrative overseer' such as Iulius Vestinus would have appointed or been assigned an architect to draw up plans and

advise him generally on technical matters. There was also, however, permanent Civil Service machinery that handled various aspects of public works, so that any man appointed by the Emperor to organize a particular building programme, whether he was a technical expert or not, was provided on an official basis with certain types of service, some of which were available to the Republican magistrates only through the publicani. It is this machinery which I now consider.

Frontinus wrote that curatores aquarum should not rely on the advice solely of the architecti in their statio¹²⁵. The official nature of the word statio seems to be confirmed by the appearance on two water-pipes of the term statio urbana Aug(usti) n(ostri) and statio urbana Augg. nm.¹²⁶; we might also note the servus publicus stationis aquaru(m)¹²⁷, who is probably to be dated to the late first or early second century. This statio was probably not a mere abstract concept but had the concrete form of an 'office' that was at the disposal of the curator and his administrative staff. A fragmentary inscription of 168¹²⁸ informs us that the statio u[rbana]¹²⁹ granted the building land and ordered the free provision of material for a shrine or temple that was to be erected by a religious collegium in honour of the Emperors. This statio urbana was regarded by Hirschfeld¹³⁰ as identical with the statio operum publicorum; there is no positive evidence for this apart from the comparison with the related statio urbana and statio aquarum, but I would suggest that we restore [ex statione] operum publ[icorum] instead of the commonly accepted [ex officio] in the letter of the procurator columnae divi Marci to Septimus Severus in which he asked permission to erect a small hut near the column for his official use¹³¹. If these restorations and identification are correct, I would suggest that this statio had an entity similar to that of the statio aquarum. It would seem, however, that it was involved not only with maintenance but with new work as

well, but this is not surprising if we remember that similar financial and clerical services would have been required by those in charge of either kind of work. Although Augustus created a Board with specific responsibility for the maintenance of public buildings, we should beware of regarding it as an entirely separate 'Department'.

If the statio was indeed a central administrative office from which various aspects of public building were controlled, we know the titles of several minor officials who might have worked in it:

tabularius oper(um) public(orum) - M. Ulpus Aug.l. Abascantus¹³²

adiutor tabulariorum operum publicorum - T. Flavius Aug.lib. Vitalis¹³³

a commentariis operum publicorum et rationis patrimonii -

M. Ulpus Aug.lib. Thaumastus¹³⁴

dis(p)ensator operum publicorum - Hierocles Aug. (servus)¹³⁵

dispensator rat(ionis) aed(ium) sacr(arum) et oper(um) publicor(um) -

Impetratus Aug.n. (servus)¹³⁶

The functions of a tabularius "were essentially those of accountant, involving the recording of payments made and those due, balancing the accounts of the department and communicating the results to the central bureau in Rome"¹³⁷. It is interesting not only that we find more than one tabularius in connection with the opera publica at the same time, but also that they had an adiutor, and one of freedman status at that, since these adiutores seem normally to have been slaves¹³⁸. This suggests that their bureau was large and that other duties were also involved, including perhaps the drafting of documents such as receipts. The a commentariis was in general charge of the departmental records; among his responsibilities was probably the duty of recording building contracts¹³⁹. The two dispensatores, who as cashiers had physical control of funds, were both Imperial slaves, but this was a normal safeguard¹⁴⁰; the tombstone of Hierocles was erected by another Imperial slave, Eros, who was also his vicarius, or assistant¹⁴¹. The form of

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status indication of Hierocles provides no firm evidence for his date; although the use of Aug(usti) was much less common for slaves than forms with Caesaris before the middle of the second century, it is found as early as the reign of Tiberius¹⁴². The use of Aug(usti) n(ostri) in that of Impetratus, however, indicates that he is certainly not to be dated before the death of Nero and probably not before the accession of Hadrian¹⁴³. It is interesting that we have here a separate ratio for public works. Its establishment cannot be dated precisely, but although the statement of Boulvert¹⁴⁴ that it does not antedate Vespasian is based on the dangerous argumentum ex silentio that the earliest recorded officials connected with it are liberti of the Flavian dynasty, it is not unlikely that it was a development of the middle to late first century. We also find a ratio and appropriate civil servants with specific responsibility for the aqueducts¹⁴⁵. In addition to these officials who carried out financial duties relating to public works in general, we have one example of a man who appears to have been appointed as cashier in connection with a specific project - Sabinus Caesaris verna dispensat(or) Capitoli¹⁴⁶. Vulić and Hirschfeld¹⁴⁷ date him to the reign of Augustus, the latter on the ground that his wife's nomen was Iulia, but although we know that Augustus did indeed undertake a restoration of the Capitol¹⁴⁸, Weaver has recently shown that the chronological value of the Imperial nomen of a wife is extremely limited unless, of course, she were herself an Imperial freedwoman¹⁴⁹. Moreover the use of verna in the status indication of Imperial slaves is, according to Weaver, rare before the reign of Hadrian¹⁵⁰. Weaver does not include Sabinus in his five pre-Hadrianic examples, but the unabbreviated form of Dis Manibus might nevertheless suggest a late first century date, and it is tempting to connect him with the restoration of the Capitoline temple of Vespasian or Domitian¹⁵¹. At whatever date we put him, however, it is surely dangerous to

conclude that "für grössere Restaurationen oder Neubauten sind auch besondere Kassenbeamte bestellt worden"¹⁵²; Sabinus is the only known example and his appointment might have been exceptional.

The ratio operum publicorum and ratio aquarum were presumably sub-divisions of the fiscus¹⁵³. Frontinus specifically records that the cost of the Imperial labour gang and of the material used on the maintenance of Rome's aqueducts was met by the fiscus¹⁵⁴, but there is little evidence for the precise source of the money that was spent on Imperial public buildings¹⁵⁵. The general control, however, of the head of the fiscus, the a rationibus, over payments for Imperial building work seems to be alluded to by Statius in his eulogy on the father of Claudius Etruscus¹⁵⁶, and two second century inscriptions show the office of the a rationibus playing a leading role in the sphere of building¹⁵⁷. The later of these inscriptions also shows part of the Civil Service machinery at work. The rationales wrote to the exactor operum dominicorum ordering him to provide tegulas omnes et impensa from the Imperial stocks¹⁵⁸; to the procurator operum publicorum asking him to provide ten wagon-loads of wood at the price that the fiscus charged when a bridge was built¹⁵⁹; and to the curatores operum publicorum asking them to assign the land that the procurator columnae required. The assignment of land for building was a normal duty of the curatores operum publicorum, attested throughout the imperial period, while the role and importance of the exactor has already been discussed¹⁶⁰. The appearance here of a procurator operum publicorum is interesting¹⁶¹; Aquilius Felix was clearly an equestrian who held a sexagenarian post¹⁶², and as far as we can determine, his duties concerned, at least in part, the provision of material. He would seem to be another example of an equestrian auxiliary appointed to assist a superior, senatorial official. Such appointments appear to have been especially common in the reigns of Marcus Aurelius and the early Severans¹⁶³, and

it is possible that a second example of procurator operum publicorum is to be found on the inscription of 168¹⁶⁴, where he might also have the assistance of an adiutor.

Three inscriptions remain to be cited in connection with financial officials. A small fragment¹⁶⁵ records the following official, whose name is lost: adiutor tabul. rat. u.---. The usual resolution and restoration, adiutor tabul(arum/ariorum) rat(ionis) u[rb(icae)], is based on the full appearance of the phrase ratio urbica on the stems of two marble columns, found in Rome, which were presumably ordered and/or paid for by that ratio¹⁶⁶. The relationship between the ratio urbica and ratio operum publicorum is as unclear as that between the proposed statio urbana and statio operum publicorum¹⁶⁷. They may have been identical¹⁶⁸, or perhaps the ratio operum publicorum was a particular branch of the ratio urbica. Secondly, we must return briefly to the Trajanic a commentariis operum publicorum et rationis patrimonii¹⁶⁹. The cumulation of titles is generally interpreted as evidence that the Emperor drew on his own patrimonium to pay for buildings¹⁷⁰, and we might note that a procurator operum publicorum was also procurator rationis patrimonii, perhaps simultaneously¹⁷¹. It is possible that this ratio, which can certainly be dated back to the reign of Claudius¹⁷², met the cost of works which are recorded as erected by an Emperor pecunia sua, but although the various treasuries were apparently distinct, the Emperors seem to have drawn freely on them all¹⁷³, and I would suggest that the connection between building work and the patrimonium should not be pressed. Finally, there is the curious case of Epelys Ti. Claudii Caesaris[s] Aug. disp(ensator) maternus ab aedificiis voluntaris (= voluptaris?)¹⁷⁴. Both his name and office are strange; the most likely interpretation is that his duties were connected with the private pleasure buildings of the Emperors¹⁷⁵.

The precise relationship between the various rationes is by no means clear, but it is apparent that, within the highly organized administration of the various financial sources that might be deployed on public projects, there were sub-sections which dealt with the specific spheres of aqueducts and buildings. The a rationibus, who had general overall fiscal responsibility, was an Imperial nominee, and so too, in effect, was the head of the aerarium¹⁷⁶, so that, although the latter was a senator and although the money in the aerarium continued to be regarded as 'public' rather than 'Imperial',¹⁷⁷ the Emperors had de facto control of all the treasuries at Rome. This is another element in their overall control of public building in Rome. Under the Republic, the censors were voted fixed amounts of money for their works by the senate¹⁷⁸, while the heads of the aerarium, the quaestors, who were generally responsible for making payments for public buildings, worked under the senate's direction¹⁷⁹. Although we might reasonably assume that the quaestors were assisted by a varied staff, we do not know whether, or to what extent, the financial and clerical duties within the aerarium of the Republic were subdivided according to the nature of the payment. Nor do we know, on the other hand, whether the imperial system was more efficient. Imperial organization connected with buildings, however, went beyond the purely financial aspect.

I have already noted the two late second century officials, an exactor and procurator, who had duties relating to the provision of material. There is also a group of minor civil servants who must be recorded here in this connection:

tabularius a marmoribus - Primigenius Imp. Caesaris Vespasiani

Aug. Iuvencianus¹⁸⁰

ab marmoribus - Hermeros Ti. Claudii Caesaris [sic] Aug. Germanici

ser. Thyamidianus¹⁸¹

a marmoribus - M. Ulpus Martialis Aug. lib.¹⁸²

optio tabellariorum stationis marmorum - Semnus Augg.nn.lib.¹⁸³

tabularius marmorum Lunensium - T. Flavius Aug.l. Celadus¹⁸⁴

tabularius marmorum Lunensium - T. Flavius Successus Aug.l.¹⁸⁵

The three tabularii were probably accountants¹⁸⁶, and Bruzza¹⁸⁷ has shown that their bureau formed a part of the ratio urbana. The duties of the a marmoribus also may have been financial - the title might even be an abbreviation of tabularius a marmoribus - although it has been suggested that they were charged with furnishing marble¹⁸⁸; the difference in status of the two examples can perhaps be ascribed to the difference in date. The overall importance to our evidence of these men, however, goes beyond their particular duties since they reflect the fact that by the second century most of the important marble quarries, in the provinces as well as in Italy, were under Imperial control¹⁸⁹. The marble trade itself was highly organized through Imperial officials, with stocks of roughly worked material established both in the quarries and in large centres such as Rome. Those appointed to oversee the erection of public buildings, therefore, were able to call upon an official administrative machine to provide at least the marble that was required, and this is an important change from the situation during the Republic, when it was the contracting publicani who were generally responsible for the provision of material¹⁹⁰. It is interesting that two of these officials had responsibility specifically in connection with Luna marble¹⁹¹; this is perhaps a reflection of the common use, especially in the first century, of that particular marble for building and other purposes¹⁹². More interesting, however, is the appearance of the word statio in the title of Semnus. Large stockyards of marble existed in Rome at the foot of the Aventine¹⁹³, and it would be logical to suppose that the Imperial officials had some sort of office there. It is tempting to suggest that this was

termed statio marmorum; if this is correct, it would provide a good parallel for a similar statio operum publicorum¹⁹⁴.

There are two final civil servants whose role must be considered here:

- tabul(arius) mesorum aedificior(um) - Patiens Aug.l.¹⁹⁵
- tabularius menso(rum) aedificiorum - M. Ulpus Aug.lib. Patiens
Victorianus¹⁹⁶

I do not accept the view of Bang¹⁹⁷ or the argument of Chantraine¹⁹⁸ that these two men are identical; it seems to me that the evidence favours overwhelmingly the view that the first Patiens was a freedman of Claudius¹⁹⁹. Three other problems arise from these inscriptions. It is probable that the two tabularii kept records of payments made to mensores aedificiorum engaged on Imperial projects. Hirschfeld²⁰⁰ was the first to state that these inscriptions show that mensores employed by the Emperors on their buildings were paid directly from the fiscus, without any intervention (Vermittlung) on the part of the curatores operum publicorum. Although he was probably correct, I wonder whether we should necessarily expect any intervention on the part of the curatores, whose main task had always been the maintenance of public buildings, with the mechanics of finance left to others. Hirschfeld's view, however, was extended, perhaps unintentionally, by Loane²⁰¹, who stated that the "mensores ... were not under the supervision of the curatores operum publicorum". The inscriptions surely refer only to the administration of their payment; it seems to me dangerous to suggest that the tabularii also supervised their work and that this is another example of 'Imperial control'. The supervision of work fell almost certainly, to judge from the evidence of Frontinus on the comparable curatores aquarum, upon the curatores operum publicorum when the mensores aedificiorum were engaged on maintenance work and upon the ad hoc commissioners

when they were engaged on new works. Secondly, what was the function of the mensores aedificiorum? They are generally described as constructors, architects, engineers or simply surveyors²⁰². I have found, however, thirteen separate instances on inscriptions of that title²⁰³, which suggests that their duties were regarded as distinct from those of both the simple mensores and the architecti, of both of whom there are numerous epigraphic examples. The most likely suggestion, based partly on a straight translation, is that they surveyed and measured completed buildings, or completed parts of buildings, prior to payment of the contract price²⁰⁴; for in the imperial period, at least, it seems that not only might contracts be made for lump sums (per aversionem) but the contract payment might also be based on a measurement of the amount of work carried out (in pedes mensurasve)²⁰⁵. For such duties, the mensores aedificiorum would have doubtless required some of the knowledge of both 'surveyors' and 'architects', but it seems incorrect to describe them simply as such, without reference to their actual work²⁰⁶. Finally, it is surely also incorrect to assume that these two inscriptions imply the existence of a 'college' of mensores aedificiorum²⁰⁷. There is certainly no positive evidence for one, either in Rome or elsewhere; the existence of Imperial tabularii might simply reflect the frequency with which mensores aedificiorum were employed on Imperial building projects. Even if there were a college, we should not assume that it was composed of either Imperial slaves, as Loane states²⁰⁸, or even Imperial freedmen. None of the eleven mensores aedificiorum known to me was a slave, Imperial or private²⁰⁹; only one, C. Iulius Bithynicus, bore an Imperial nomen and even he claimed to be freeborn²¹⁰; indeed the majority appear to have been ingenui rather than liberti²¹¹. Admittedly there are four examples of mensores who were Imperial slaves and four who were Imperial freedmen²¹²,

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but the duties of a simple ensor might vary widely, and moreover, as I will show presently, we should not assume that all Imperial employees were necessarily members of the Imperial household.

The civil service staff that I have here described was responsible for administrative services connected with public building rather than with the execution of building work itself. It certainly simplified the task of a 'building commissioner' if he could call upon trained clerical staff to deal with the routine 'paper work'; and the last two elements described above reveal two 'practical' official services that were available to him. But buildings require men to design them, men to erect them; the civil service could organize and administer, but it did not provide the labour. It is this side of Imperial building that I now wish to consider.

There are several references to architecti who were employed on Imperial building projects. Augustus joked about the procrastination of the architectus who was in charge of the building of his forum²¹³. Tiberius is said to have rewarded with money an ἀρχιτέκτων who had set upright one of the largest porticoes in Rome, but out of jealousy expelled him from the city and refused to allow his achievement to be officially recorded²¹⁴. ἀρχιτέκτονας warned Claudius of the huge cost of building a port at Ostia²¹⁵. Apollodorus, an ἀρχιτέκτων from Damascus, was in charge not only of the building of Trajan's bridge across the Danube but also of the construction of his forum, an Odeum and gymnasium at Rome²¹⁶. Decrianus, an architectus, moved the colossal statue of Nero from the site on which Hadrian wished to build the temple of Venus and Rome²¹⁷. And Sextus Iulius Africanus, who built (ἀρχιτέκτονας) a library at Rome, perhaps for Severus Alexander, may also have been an ἀρχιτέκτων²¹⁸. To these men we might add the names of Severus and Celer under Nero and Rabirius under Domitian, who were probably technicians and may have been architecti²¹⁹. The status of

all these men is generally uncertain, but Rabirius and Africanus were clearly not members of the Imperial familia, while it is possible that Apollodorus was a peregrinus whom Trajan first encountered in Syria²²⁰. Most of them are connected in our sources with only a single project - were they ad hoc appointments? - and, despite the example of

* Apollodorus, we must eschew the temptation to describe a man as the architectus of a particular Emperor and to assign to him many of the works from that reign²²¹.

Inscriptions add both to the numbers of and to our general knowledge about architecti and Imperial projects²²². They produce two Imperial slaves who were architecti - Amianthus Nicanorianus²²³, in the reign of Augustus, and Tychicus Crispinillianus (Plate II, fig. 3)²²⁴, a slave of Domitian - and four Imperial freedmen - Ti. Claudius Eutyclus²²⁵, Rusticus (Plate I, fig. 4)²²⁶, who is probably to be dated to the first half of the second century, Anicetus²²⁷, who is certainly to be dated after 161, and Narcissus²²⁸, who may have been a freedman of Septimius Severus. All of the inscriptions emanate from Rome except that of Narcissus, which comes from Lepcis Magna; none of these men is definitely connected with a particular building, although it is tempting to suppose that Narcissus was sent out from Rome in connection with Severus' building programme there²²⁹. Although it is possible that Amianthus and Tychicus entered the Imperial household already trained, the presence of verna in the description of Anicetus confirms that men were trained as architecti within the Imperial familia²³⁰. These architecti might have been employed either on private work of the Emperors or on public; they might even have been attached to the staff of the Maintenance Boards²³¹. It might be thought that the number of known architecti within the familia is surprisingly low in view of the large amount of building work executed by many Emperors, but the nature of their profession makes

comparison difficult and perhaps dangerous. It is clear, however, that Emperors also employed architecti who were not members of the familia. This is shown not only by the literary examples already quoted but also by the five (or possibly four) inscriptions which record architecti Augusti²³². This 'title' has never been properly explained²³³; the three civilian bearers of it especially require close examination.

C. Octavius Fructus²³⁴ was the son (filius) of C. Octavius Eutyclus and Doia Pallas, and was clearly an ingenuus. The original editor of the inscription dated his type of funerary altar to the late first or early second century, and this would not be discordant with the unabbreviated form of the phrase Dis Manibus Sacrum. The name of his father, however, and the Greek cognomen of his mother suggests that his parents were both freed. If that is correct, the likely dating of Fructus and his death at the age of 26 make it possible that his father was a freedman of a relative of one of the early Emperors, perhaps of an Octavia, of whom there are several examples from the period in question²³⁵. Although it would then be possible that Fructus owed his employment by an Emperor to his father's position, we should still remember that he was himself an ingenuus and had no personal connection with the Imperial familia.

C. Iulius Posphorus (sic) (Plate I, fig. 3)²³⁶ is also given filiation and it is therefore inaccurate to describe him as a freedman²³⁷; although it is common for a freedman to omit the indication of his status²³⁸, it would be highly unusual, as well as illegal, for him to claim filiation. Absence of status indication similarly makes it unlikely that his wife, Stratonice, was a freedwoman of Claudius²³⁹. It is probable that each of them was the child of an Imperial freedman²⁴⁰. It is difficult to date the altar by other criteria. The absence of D.M. might suggest a date before the middle of the first

century²⁴¹; on the other hand, the use of the father's cognomen rather than praenomen in the status indication might suggest a second century date, with which the style of the altar and the letter-forms would not be discordant. It seems to me best to regard Posphorus as an ingenuus whose position of architectus Augusti might or might not have been owed to his father's (or wife's) possible close or distant connection with the Imperial familia.

The last example poses the biggest problem. The inscription reads in full: Alcimo | architecto | [A]ugustorum | [A]villia T.f. | [Qu]intilla (Plate II, fig. 4)²⁴². Alcimus is described by Calabi Limentani²⁴³ as an Imperial slave, and both Weaver²⁴⁴ and Chantraine²⁴⁵ argue that where a man is recorded in the form: name - occupation - Caesaris/Augusti, or (which is more common) name - Caesaris/Augusti - occupation, the Imperial reference is not dependent on the occupation but stands alone in the sense of Caesaris/Augusti (servus). If this applies in the case of Alcimus, then his 'title' was simply architectus, and he can be omitted from this group and placed among the Imperial slaves, with a date probable after 161. On the other hand, the definite examples of the occupational title architectus Augusti, the holders of which were not members of the Imperial familia, provide a good parallel for regarding architectus Augustorum as such²⁴⁶. If Alcimus had only an occupational connection with the Imperial house, I would suggest that he was not a slave but that the absence of his nomen indicates either that the inscription is of late date or - perhaps as well as - that Alcimus bore the same nomen as Quintilla, who may have been his daughter. The letter-forms of the inscription are by no means decisive but would not be inconsistent with a late second century date; the use here of Augustorum probably refers to joint rather than successive Emperors.

Whether one accepts that there were three or only two examples of

civilian architecti Augusti/orum, it is clear that the term is an indication of occupational and not status connection with the Imperial household. Weaver cites examples of similar occupational connections, in several of which the men concerned even bear nomina that are not found in any Imperial dynasty²⁴⁷. Epigraphy thus confirms the literary evidence that Emperors employed architecti from outside their own familia. There were doubtless many different reasons for this. There may have been an occasional shortage of architecti in the familia; perhaps some of the 'outside' architecti had good reputations, either in general or for particular types of work. We should also remember that all important new public building at Rome during the Empire was, after the very early period, originated by the Emperors. It is difficult, however, to determine whether the 'post' of architectus Augusti was permanent or merely an ad hoc appointment. Although it is possible that the 'title' refers to a permanent Imperial post held by a man who was not an Imperial slave or freedman, perhaps on one of the Maintenance Boards, I would suggest that it is equally likely that the 'title' had no official basis but was adopted honoris causa by individuals who had worked on one or more Imperial projects, as a form of self-advertisement either during their life-time or after death²⁴⁸.

Of the two military examples, which are both probably to be dated to the second century, one was a veteran of the praetorian guard²⁴⁹, the other a serving praetorian miles (Plate V, fig. 1)²⁵⁰; both, of course, were full Roman citizens. Their 'title' is generally held to be a military one. Domaszewski²⁵¹ suggested that they were employed in the armamentarium since another praetorian veteran is recorded with the title arc(h)itect(us) armament(arii) imp(eratoris) in the reign of Domitian (Plate VI, fig. 1)²⁵²; and Durr²⁵³ couples them with the simple military architecti as "ingénieurs de l'arsenal". There is plenty of evidence that military architecti were employed on

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armaments projects as well as on the usual building work necessary to an army²⁵¹. On the other hand, there is no parallel for this sort of military title. The military stator Augusti²⁵⁵ and protector Augusti²⁵⁶ are clearly special cases, since they formed a quasi-Imperial personal bodyguard, while the delectator Augusti provinciae²⁵⁷ was apparently on a par with procuratores Augusti provinciae. And I would suggest it is no coincidence that there are no recorded medici Augusti in the army, although there are plenty outside²⁵⁸. It is noteworthy, moreover, that in the legions we find only the simple title architectus²⁵⁹ and, twice, architectus legionis²⁶⁰; that the simple title alone is found in the fleet²⁶¹ and in the equites singulares²⁶²; and that the other known architectus in the praetorian cohorts is described as ordinatus architectus, which seems to refer to his military rank²⁶³. The total evidence and the existence of architecti Augusti outside the military sphere surely favour the conclusion that this was not a military title in these two cases but one taken by them after their employment on particular, and possibly civilian, projects²⁶⁴. If this is correct, the fact that Q. Cissonius Aprilis was termed architectus Augustor(um) would support the theory that that was also the 'title' of Anicetus.

The duties of an architectus varied widely²⁶⁵, but they could include responsibility for drawing up plans and for overseeing the execution of work; in such cases the architectus would clearly have been the most important of the 'technicians' in any scheme. This is doubtless one of the reasons why we find some in the Imperial familia. I have also noted above²⁶⁶ the examples in the Imperial household of another type of 'technician', the mensores; they were basically surveyors, and some of them may have been employed on building work. It is interesting, however, that there is no trace of a librator in the Imperial familia; his skills would have been especially required

for the building and maintenance of aqueducts²⁶⁷. The few epigraphic examples of libratores are all military²⁶⁸, and it is worth noting that, in his reply to a request from Pliny in Bithynia, Trajan²⁶⁹ advised him to apply for a librator to Calpurnius Macer, who was the nearest provincial governor who had command of an army. And it was a centurion whom Caligula sent to make a survey (dimetiendum) for his proposed Corinth canal²⁷⁰. The lack of an example in the Imperial familia, however, is perhaps due to the simple chance of survival; we do not know the status either of those employed by the curatores aquarum²⁷¹ or of those at Rome to whom Trajan refers²⁷², although it is not unlikely that some of the former at least were Imperial slaves or freedmen. All these 'technicians' required a high degree of theoretical knowledge and training, so that it is not surprising that the Emperors maintained at least some in their own household. But what about the labour, both skilled and other, that would have been needed in order to put the plans and surveys into concrete form?

I have already noted²⁷³ the two labour gangs, of Imperial and public slaves, that were available for use by the curatores aquarum on the maintenance of aqueducts and have suggested that similar gangs were also officially retained for the maintenance of public buildings. The existence of these gangs has provided part of the basis for the common assumption that Imperial slaves also provided the labour for new public buildings²⁷⁴, and even those who have partially rejected this still accept the secondary basis, the existence of "numerous architecti, fabri, mensores etc. in the columbaria of the emperors"²⁷⁵. Several points must be made here: (a) we must "distinguish between the permanent need for workers on the aqueducts - a need which made a trained corps a constant necessity - and the sporadic demand for labour on ordinary building projects"²⁷⁶; (b) on detailed examination, the number of men in the Imperial columbaria whose occupations might

connect them with building is nowhere near as "numerous" as has been assumed, and many of them are in fact 'technicians' and not 'workers'; (c) there is good evidence that private building contractors took work on Imperial projects until at least the end of the first century; (d) the size and nature of the composition of the collegium fabrum tignariorum at Rome reveal that "free builders continued to make their livelihood in the capital"²⁷⁷ at the end of the second century.

The first point requires almost no further comment. Numerous workers would have been needed for the erection of many of the new Imperial buildings in Rome and it would have been financially crippling for Emperors permanently to have maintained large gangs of slaves who would be employed only irregularly on such work²⁷⁸. Their labour could hardly have been diverted to other uses in between projects. Secondly, it must be noted that, while the great majority of those in the columbaria, Imperial and private, have no occupations recorded for them, the vast majority of the recorded occupations are purely domestic - bakers, bedroom attendants, door-keepers, hairdressers, pedagogues etc. The number of men connected, even distantly, with building is relatively very small. For example, of the over 400 men and women in the monumentum Liviae, occupations are recorded for about 130; of these, 5 at the most seem to be connected with building²⁷⁹, and of those one was a 'technician' (ensor), while the two aquarii possibly belonged to the official gang for the maintenance of aqueducts. By comparison, there are 10 cubicularii, 2 paedagogi, 7 pedisequi and 3 pistores. In the monumentum liberorum Drusi, about 30 of the 87 men and women have their occupations recorded; none of them seems to be connected with building, while there are 1 cubicularius, 1 paedagogus, 2 pedisequi and 1 pistor. And in the monumentum Marcellae, there are 2 fabri and 1 plumbarius²⁸⁰ among the 70 (out of 450) whose occupations are known, but 2 atrienses, 5 examples of an a bibliotheca and 2

cubicularii. A useful comparison is provided by the vast private monumentum Statiliorum²⁸¹, which yields only 3 fabri, 1 faber structor parietarius, 3 fabri tignuarii, 1 marmorarius, 1 ensor and 1 structor²⁸² among the 170 (out of 428) whose occupations are given, numbers which are low by comparison with the 3 cubicularii, 5 paedagogi, 5 pedisequi, and 6 unctores. Since all these figures are based on the evidence of the columbaria, it cannot be reasonably argued that financial reasons lie behind the relative scarcity of 'builders'. We must surely draw the conclusion - which seems obvious on a priori grounds - that slaves were maintained by the Emperors and other large families mainly for domestic and (especially in the case of the Emperors) administrative duties, and that the relatively few slaves who were 'builders' (other than 'technicians') were kept for maintenance, repair and general odd-job purposes. The columbaria offer no evidence that the Emperors maintained slaves for the execution of Imperial public buildings.

Other evidence points to the same conclusion. In the table on page 66, I give the total numbers of the examples of different occupations that might be connected with building, broken down into three groups: the first two columns contain the examples from Rome (a) of private individuals and (b) of slaves and freedmen in the familiae of Emperors or their immediate families; the third column (c) contains the examples of Imperial slaves and freedmen from outside Rome. I have excluded men from the professional collegia at Rome, whom I consider presently²⁸³. The considerable numerical superiority which this table reveals of the extant examples of private 'builders' at Rome over Imperial is, I suggest, another indication that financial reasons or the chance of survival do not account for the very low number of 'builders' in the Imperial columbaria. The only category in which there is significant parity is that of structor, and there is a ready explanation for this. The word structor could signify not

	(a)	(b)	(c)	Total
<u>faber</u>	14	4	1	19 ²⁸⁴
<u>faber intestinalarius</u>	2	0	0	2 ²⁸⁵
<u>faber tignuarius</u>	8	0	0	8 ²⁸⁶
<u>lignarius</u>	1	0	0	1 ²⁸⁷
οἰκόδομος ξυλουργός	1	0	0	1 ²⁸⁸
<u>structor</u>	9	9	3	21 ²⁸⁹
<u>faber structor parietarius</u>	1	0	0	1 ²⁹⁰
<u>structor parietarius</u>	1	0	0	1 ²⁹¹
<u>constructor</u>	1	0	0	1 ²⁹²
<u>tector</u>	5	0	3	8 ²⁹³
<u>marmorarius</u>	11	2	1	14 ²⁹⁴
<u>marmorarius subaedanus</u>	1	0	0	1 ²⁹⁵
μαρμάριος	1	0	0	1 ²⁹⁶
<u>lapidarius</u>	3	0	1	4 ²⁹⁷
<u>lapidarius quadratarius</u>	1	0	0	1 ²⁹⁸
<u>albarius</u>	1	0	0	1 ²⁹⁹
<u>materiarius</u>	2	0	0	2 ³⁰⁰
<u>museiarius</u>	0	1	0	1 ³⁰¹
<u>pavimentarius</u>	0	0	1	1 ³⁰²
<u>plumbarius</u>	0	1	0	1 ³⁰³
<u>politor</u>	3	0	2	5 ³⁰⁴
<u>sector</u>	1	0	0	1 ³⁰⁵
<u>tegularius</u>	1	0	2	3 ³⁰⁶
Total	68	17	14	99

Table 1 (see page 65)

only 'builders' but also men connected with the preparation of meals, waiters or even carvers of meat³⁰⁷. Indeed, the full title of one of the Imperial examples from Rome, a slave of Domitian, was structor a cybo (sic)³⁰⁸, which clearly indicates that he was not a 'builder'. Moreover, on a fragmentary inscription from Rome, to be dated almost certainly no earlier than the reign of Vespasian, which records probably two structores in a collegium of Imperial slaves and freedmen, the likely presence of an a fru[mento?] and two min[istratores] suggests that the two structores were 'butlers' rather than 'builders'³⁰⁹. Since I have shown that most of the slaves in the Imperial columbaria whose occupations are known were 'domestics', it is not unlikely that the majority of the Imperial structores had duties connected with food rather than building.

The second interesting fact here concerns the Imperial 'builders' from outside Rome. Of the 14 extant examples, 10 occur on the fasti of two Imperial collegia ministrorum of which one certainly comes from Antium³¹⁰. On these fasti, the occupations of 73 men can be definitely identified, and again 'domestic' occupations predominate; there are 11 atrienses, 12 topiarii and a few examples of bookbinders, librarians, linen-weavers, secretaries etc. The Julio-Claudian Emperors, to whose reigns the fasti are dated, loved their retreat at Antium³¹¹, and there can surely be no doubt that the 'builders' on the Antium fasti were employed on the maintenance and/or improvement of the Imperial villa there³¹².

My third and fourth points can be taken together. I have already noted³¹³ that, although the curatores aquarum were provided with two official gangs, comprising 700 men, for the maintenance of aqueducts, they nevertheless also let (unspecified types of) work to private contractors, and I suggested that a similar system operated for the maintenance of public buildings. I have also examined³¹⁴ the various

epigraphic examples of the term redemptor found in the imperial period, and noted especially the redemptores operum Caesaris, two of whom had no status connection with the Imperial household. That term in itself, whether official or not, strengthens the suggestion that private contractors undertook work on new Imperial building projects. Even when this is recognized, however, it seems dangerous to imply that the 'contract system' continued only until the end of the first century simply because the later of the two dated examples of the term was placed in the Flavian period³¹⁵. That private contractors continued to flourish for at least the first two-and-a-half centuries of the Empire is confirmed, I believe, not only by the fact that the Imperial household could not, or rather did not aim to, produce the required building labour from within its own ranks but also by a study of the collegium fabrum tignariorum of Rome, a large proportion of the records of which date from the mid-second century and Severan period³¹⁶. The sheer size of this college is perhaps an immediate reflection of the importance of its 1500 or so members within the 'building industry', but it is their status, both social and economic, which is the point of interest here. All the members were at least freedmen; some even have their filiation recorded³¹⁷. There are, however, at the most only five Imperial liberti recorded in the college³¹⁸, and only about a quarter of all the other members bore an Imperial nomen. Almost half of that number, however, are Iulii and Claudii in the second half of the second century, and the chronology of most of the other examples makes it doubtful, to say the least, whether we are to detect in the college many men with Imperial connections. Moreover, the nomina of several of the members are extremely uncommon even at Rome³¹⁹. We have, unfortunately, no direct evidence of the members' economic status. The records relating to the collegium fabrum tignariorum at Ostia, however, (even more of which are dated to the second half of the second

century than in the case of the college at Rome), show that many of its chief officials were extremely wealthy, and it is probable that in some cases at least that wealth derived from their activities as fabri tignarii³²⁰. A passage of Gaius in the Digest³²¹ defines fabri tignarii thus: non eos dumtaxat qui ligna dolarent, sed omnes, qui aedificarent. It would seem that some, perhaps many, of the members of the Ostian college were not simply carpenters or even furniture-manufacturers³²² but rather 'controlled' the services of others (probably mainly slaves) and took contracts connected with various aspects of building, both public and private. Although the participation in local government of some of the officials of the college at Ostia reflects the nature of the population of that city, especially in the second century, rather than indicates any political importance of the college³²³, it seems that its basic composition was similar to that of the college at Rome. It is not unlikely, therefore, that some at least of the members of the Roman college, which was about four times as large as the Ostian, were also 'building-contractors', and they, I would suggest, were the primary source of the labour employed on the erection of Imperial public buildings at Rome.

A note of caution, however, must be sounded here. It has often been assumed³²⁴, especially by those who have not postulated the existence of numerous Imperial slave building-workers, that during the first two centuries of the Empire the Emperors used the services of the various 'building' collegia for their projects qua collegia, and that not only was the work divided into sections that correspond with the names of those colleges but that each section of work was also distributed to the particular college - structores, marmorarii, subrutores, subaedani, tignarii etc.³²⁵. There is, however, absolutely no evidence that in the first two-and-a-half centuries of the Empire

it was the services of the collegia themselves, as distinct from their individual members, that were employed. That first occurred in the late third and fourth centuries, during the period of the colleges' 'enslavement'; until then, they were little more than social and religious clubs³²⁶. Moreover, while the evidence for other 'building colleges' is extremely limited indeed, and not accurately dateable, there can be little doubt of the paramount position within the 'building industry' at Rome of the collegium fabrum tignariorum. On the other hand we should not overrate the value of the fact that a freedman of Claudius was both a redemptor operum Caesaris and a magister quinquennalis in the collegium fabrum tignariorum at Rome³²⁷. Frank³²⁸ states the inscription shows "the relationship of this gild to the architects or procurators of the emperor"; MacMullen³²⁹ believed it shows that "the redemptor thus became identical with the gild master ... or was completely replaced by the gild-master, with whom the officials of the state could no doubt work directly". This freedman was not a guild-master in the mediaeval sense³³⁰, and the men whose services he would have employed were probably for the most part slaves, who were not members of the college³³¹. Nor was his status of Imperial freedman necessarily a factor in his employment as an 'Imperial contractor'³³². It is interesting, moreover, that he was magister of the college for only part of a lustrum, being elected to replace another (himself a replacement of a replacement) who had been allowed to give up his duties (excusatus)³³³. Nor should we assume that "his official position in the gild of carpenters was essential to his profession of contractor"³³⁴. I would suggest that there is no reason why a decurio of the college should not also have taken an Imperial building contract; indeed there are good grounds for believing that many of Onesimus' fellow-members, the majority of whom were not Imperial liberti, were

contractors like himself³³⁵.

There are almost no literary texts recording the labour used on Imperial building projects. The status of the 30,000 whom Claudius is said³³⁶ to have employed for 11 years on the draining of the Fucine lake is unknown, but Suetonium³³⁷ records the order of Nero that convicts were to be transported to Italy from all parts of the Empire for use on an artificial lake and canal, and Josephus³³⁸ notes that 6,000 Jewish prisoners worked on Vespasian's Corinth canal³³⁹. These were all engineering projects, however, and the work that these men carried out was probably 'heavy labour', of a type suitable for men who were doubtless mostly unskilled (at least, as far as engineering or building was concerned). We might remember, by way of contrast, that for his proposed Corinth canal Caligula provided the 'technician' himself, from the ranks of the army³⁴⁰. For work at Rome, we have only the reported comment of Vespasian, when he refused to make use of a device of a mechanicus for the cheap transportation of heavy columns, that he must be allowed to feed (pascere) the plebicula³⁴¹. If the story is not entirely apocryphal, I would suggest that some of Vespasian's plebicula were employed by contractors on building projects.

It has, even recently, been stated not only that "there quite probably was a ministry or office of works presided over by a praefectus or curator" but also that "the presiding architects of state programs would not have been provided with less" than the "elaborate staff" of the curator aquarum and that "of the things necessary to see a great building through to completion, those the government could most readily and efficiently supply were labor and materials."³⁴² Although it is clear that there was an office staffed by permanent Imperial civil servants, it seems to me less certain that there was a permanent official who was in charge of the direction of new works. Not only

does epigraphy conspicuously fail to provide evidence of such a man³⁴³ but we must also remember that he would have been otiose during those periods when there was no new Imperial building in progress or preparation, whereas the civil servants would have been kept constantly busy by the demands of maintenance work. While Apollodorus seems to have been in charge of an extensive and continuous programme of building, other appointments appear to have been made ad hoc; there was probably no consistency among Emperors in this respect. That, however, is less important than my complete rejection of the assumption that the Emperors of the first two centuries provided the labour for their projects; administrative organization, 'technicians' and materials (to some extent³⁴⁴), yes; perhaps even some of the highly skilled workers, such as decorative sculptors. And they also could and did help when a project demanded an extraordinary amount of heavy labour. But the total evidence surely points to the conclusion that usually much of the actual work, as in the days of the Republic, continued until at least the age of the Severans to be let to private contractors. Although these contractors were probably 'professionals' who bore little resemblance to the entrepreneurs of the second century B.C.; although they may have worked under closer official supervision than their Republican predecessors; and although there was greater state organization of a project as a whole in the imperial period; nevertheless it was upon these independent contractors that the Emperors relied for the physical execution of their building projects.

Public building outside Rome

While the building inscriptions of imperial Rome record almost exclusively the names of Emperors or of members of their immediate families, inscriptions from elsewhere generally record only the names of those who had official responsibility for the erection of a building and/or of those who contributed to the financing of it³⁴⁵. This had

always been the normal practice in the Roman world, however³⁴⁶, and on the whole it remains so in ours. But if building inscriptions provide little evidence of the 'builders' themselves, they at least allow us to form some sort of picture of the administrative organization.

This appears in general to have been not dissimilar from that which existed at Rome in the imperial period, with the maintenance of public buildings being entrusted to permanent officials and the erection of new works allocated to individuals on an ad hoc basis. There are several epigraphic examples of the title curator operum publicorum and its variants, all but one of them from Italy³⁴⁷. Its holders are all from the ranks of local magistrates, while two of them had risen to equestrian status³⁴⁸ and another two even claimed appointment by an Emperor³⁴⁹. All the inscriptions are funerary, so that we cannot determine whether their duties covered simply maintenance, which in the smaller cities would admittedly have entailed less work than at Rome, or also included new building work; perhaps their complete absence from inscriptions recording new buildings is in this case a decisive silence. There are also examples of other comparable local officials, curatores aquarum, in Italy³⁵⁰, and curatores of particular buildings, especially temples, in Italy and some of the 'western' provinces³⁵¹. Their duties were probably solely concerned with maintenance. In the provinces of the Greek East, there are numerous epigraphic examples of men connected with building of whom the word ἐπιμελητής, ἐπίσκοπος or ἔργευστάτης (or a derivative) is used³⁵², many of whom had held local office. In my opinion, however, only a few of them were permanent, regular officials in charge of the maintenance of the public buildings of a city in general³⁵³; the great majority are connected with specific new building projects, and we should not regard the ἐπιμεληταί etc. as the straight Greek equivalent of the Latin curator operum publicorum³⁵⁴. Apart from these officials, an (oft quoted)

passage of Strabo³⁵⁵ records that at Cyzicus three ἀρχιτέκτονες had the care of public buildings and engines of war (ἐπιμελουμένων οἰκοδομημάτων τε δημοσίων καὶ ὀργανῶν). We should be wary, however, of concluding with Broughton³⁵⁶ that "it is extremely probable that ... in the cities of Asia Minor there were public architects permanently in the service of the communities". Although the title of the officials at Cyzicus suggests that they had 'professional' knowledge, it is worth noting that Strabo also mentions ἀρχιτέκτονες at Rhodes and Massalia only in connection with war-machines³⁵⁷, while the three at Cyzicus also had partial responsibility for armaments and were not certainly in charge of anything but the maintenance of buildings. Moreover, only a few of the extant architects of Asia Minor appear to have had any official status³⁵⁸, and there is also evidence of competition for projects among architects in Bithynia, which seems to indicate the absence in such cases of permanent official architects³⁵⁹. Outside Asia Minor, ἀρχιτέκτονες are found on lists of officials in Achaia, Macedonia and Moesia³⁶⁰, and in some cases³⁶¹ the relevant documents have no connection with building. It is probable that at least some of them were permanent officials, but whether they had automatic responsibility for new work as well as for the upkeep of existing buildings cannot be ascertained³⁶².

The evidence for the official administration of new works outside Rome is varied and scattered, but it seems that in all parts of the Empire, individuals, usually magistrates, either volunteered or were appointed to organize the erection of a new public building on an ad hoc basis. The extent and range of their duties, however, requires close examination.

In the Italian municipalities and colonies during the Republic, public buildings that were erected at public expense were usually made the responsibility of the chief local magistrates, and just as at Rome

the censors and other magistrates let the contracts but left the detailed supervision of the work to the contractors and, perhaps, the architect, so it is likely that local magistrates mostly exercised only a general supervision. Public work that was privately financed was probably also let on contract, although it is possible that 'private overseers' involved themselves more closely with day-to-day matters. During the imperial period, there are comparatively many more recorded instances of the private financing of public buildings - public munificence might further a 'political' career - but there are also numerous inscriptions commemorating publicly financed work. A wide range of men comprise the officials who appear on these building inscriptions - local magistrates of varying rank, army officers, provincial governors and their subordinates, curatores rei publicae. As far as I can judge, however, no fixed pattern emerges; no particular rank or type of official is associated either with certain types of work or with work in any particular province³⁶³; some inscriptions give a bare minimum of information, others record the names of participants in the organization at several different levels³⁶⁴. There appears to be no fixed pattern even among the inscriptions recording the work of Emperors outside Rome. Although provincial governors are usually associated with this work, their role, expressed by a variety of verbs and prepositions, was probably largely ceremonial³⁶⁵ and their appearance on the inscriptions is doubtless due mainly to their rank. It was their subordinates, who are mentioned on several occasions (again in a variety of ways), who had the daily responsibility for the execution of work³⁶⁶.

If we move away from the almost purely honorific mention of governors, it seems that in general there were no permanent officials with responsibility for overseeing the execution of new public buildings, but that men were appointed for specific works³⁶⁷. This is often

apparent from the titles of individuals. I have already noted the exactor operis basilicae marmorari et lapidari at Nemausus³⁶⁸, and to him we might add the exactor operum publ(icorum) et theatri a fundamentis at Capua³⁶⁹. Other similar 'overseers' are the curator operis thermarum datus ab Hadriano at Aequum Tuticum, who was a local magistrate from nearby Beneventum³⁷⁰; two curatores refectionis thermarum at Lepcis Magna, who were also probably locals³⁷¹; and at Placentia a local curator aedis Iovis faciund(i)³⁷². From the provinces of Asia Minor, there are numerous instances of the verbs ἐπιμελεῖσθαι and ἐργεπισταῖν (and occasionally ἐπεσκοπεῖν) on building inscriptions³⁷³, and on the whole the men of whom they are used are locals, usually magistrates. These verbs and their noun equivalents, however, also occur on honorific inscriptions in connection with a specific public building or group of buildings³⁷⁴, and in these cases at least the men so commemorated had probably been appointed ad hoc. There is also some literary evidence to support the view that these posts were temporary and specific. Pliny³⁷⁵ refers to curatores operum in connection with new building work in Bithynia generally, and two texts of Ulpian³⁷⁶ state that it was the responsibility of the governors of Imperial and senatorial provinces alike to appoint curatores operum for both new and maintenance work. Finally, while it is likely that in the first and early second centuries the posts of ἐπιμελητής and ἐργεπιστάτης were filled by volunteers, certainly in the late second and early third centuries the supervision of a new building project was regarded rather as a liturgy³⁷⁷.

What were the duties of these men? The view of Broughton, quoted at the start of this chapter, was repeated by both MacMullen and Jones³⁷⁸ but requires, I believe, some revision. Broughton and Jones refer to a speech of Dio Chrysostom³⁷⁹ in which the orator emphasized the lengths to which he went "on behalf of the city" when he was acting.

as an overseer³⁸⁰ of the execution of a public building project at Prusa. He writes of the trouble to which he put himself μετρῶν καὶ διαμετρῶν καὶ λογιζόμενος... καὶ τελευταῖον εἰς τὰ ὄρη φθειρόμενος³⁸¹. Jones especially takes Dio's zeal to be typical of all curatores operum, and refers also to a passage in Plutarch³⁸² where 'the latter refers to the many hours that he spent watching tiles being measured and stone delivered. Three points, however, must be noted. First, Dio was speaking in his own defence and would have naturally stressed, and perhaps exaggerated, his own role and patriotism. Secondly, Plutarch not only was similarly boasting about his own patriotism but also records the surprise of a fellow citizen who found him engaged on his wearisome occupation. And thirdly, Dio admits³⁸³ that he was completely ignorant about such matters as the choice of materials. It seems to me not only that we should regard the zeal of Dio and Plutarch as unrepresentative but also that curatores operum must have enjoyed the services of technical experts to whom they surely delegated a considerable amount of work. As Sherwin-White notes³⁸⁴, their "duty was supervisory, not executive". Although as supervisors they lacked the civil service facilities enjoyed by their counterparts at Rome, there were doubtless useful local contacts which they either knew themselves or were able to tap through their technical advisers, while the trade in materials such as precious marble became so developed in the imperial period that it was probably a relatively simple matter to obtain delivery even from distant quarries³⁸⁵. We should not suppose that their supervisory duties caused them excessive difficulties or work.

Broughton's view also denies a place to the 'contractor' in building in Asia Minor, but although basically correct this requires clarification. Certainly there is no evidence in the Greek East of the sort of building contractors - the entrepreneurs - who operated in Rome during the last two centuries of the Republic, but as I noted in connection with the

redemptores, it is necessary to clarify one's understanding of the term 'contractor'. There is, in fact, very little evidence of the way in which building work was actually carried out. Ulpian³⁸⁶ writes that curatores operum cum redemptoribus negotium habent, respublica autem cum his, quos efficiendo operi praestituit, but this gives no clue to the scale on which the redemptores operated; the term could be used of a single artist³⁸⁷. The inscription from Miletus cited by Broughton, however is important in this respect and worth quoting in part here³⁸⁸: οἱ οἰκοδόμοι οἱ περὶ Ε.....νι... | Ἐπίγονον, ἔργολάβοι τοῦ μέρους τοῦ / θεάτρου οὗ ἐργεπιστάτῃ δὲ προφήτῃς | [θε]οῦ Οὐλπιανὸς Ἡρώς, ἐργοδοτεῖ δὲ ἀρχιτέκτων Μηρόφιλος, τὰ εἰλήμα[τα] // καὶ τὰ τετ[ρ]άετα κατὰ τῶν κειόνων / περιελῶδον, καὶ ἐνεγκοῦς[ης ἥ] ἄλλην ἐρ/γοδοσίαν σκέπτωνται; (The reply of the oracle at Didyma then follows.) It appears that a particular piece of work had been let on contract to a group of workers who were 'led' by a representative. The precise status of this 'representative' is not clear but the tenor of the document suggests that he had rather the nature of a foreman than of a 'contractor-manager' comparable to those in Italy who termed themselves redemptor operum Caesaris. This inscription is also interesting in that it shows that not only was the work on the theatre divided into sections in respect of the recruitment of labour but also that there was a separate ἐργεπιστάτης and ἐργοδότης for each section³⁸⁹; this sort of division of a work seems to have been especially common in the Greek East³⁹⁰. We might also note that the ἐργοδότης of this particular section was an ἀρχιτέκτων as well; here is an example of the sort of man to whom the overseer could delegate much of the 'executive' work of finding labour, selecting materials etc. Broughton terms Menophilus "the public architect", but this is by no means certain, and the phrase also seems to me to obscure his duties in this case. The fact that

he was connected with the building of only a part of the theatre surely indicates that he was a 'technical expert' who was putting into effect a portion of the total plan that had been devised by another (more senior?) ἀρχιτέκτων³⁹¹; perhaps the ἐργοδοῖται for the other sections were also architects.

There is little positive evidence to show whether it was the general practice in the Greek East to let building work on numerous small contracts. The other second century inscription, from Pergamum³⁹², which Broughton claimed "implies the same system" is too fragmentary to allow such a firm conclusion. On the negative side, I have found only one other inscription from the early imperial period in which the term ἐργολάβος is used in connection with building³⁹³, and there the nature of the work and the type of 'contractor' are far from clear. I would suggest, however, that this reflects not so much the non-existence of contractors in the Greek East as a gap in our sources; it is noteworthy that the epigraphic evidence for building contractors is almost totally confined to Italy, where much of it is in the form of sepulchral inscriptions. At the same time, a study of the more fully documented system of building that was prevalent in classical and Hellenistic Greece produces certain parallels³⁹⁴. A 'building commission' was set up, consisting of local dignitaries and technical experts, which let a large number of generally small contracts for various parts of the work. Some of these were taken by individual craftsmen (both local and from outside), some by small groups of workers and others by more wealthy landowners. In the last case, the 'contractor' undertook a comparatively large portion of work (e.g. the quarrying, carting and setting in place of stone) which he doubtless sublet or distributed among his own workers, and he usually acted out of a sense of 'patriotism' rather than for any personal financial gain. There is no trace of the large-scale 'professional' contractor. It is true that there is a great difference

between the two periods in both the type of work involved - mainly religious building in classical and Hellenistic Greece and secular in the provinces of Asia Minor - and its frequency (although we should not assume that there was anything like a continuous programme of public building even in the major cities in the Roman period). Common elements, however, can be seen not only in the division of the work in the Miletus inscription but also in the large number of inscriptions from both Greece and Asia Minor which record contributions, or promised contributions, made by individuals to a project. These usually took the form of money or material for specific parts of a work³⁹⁵; in such cases the overseer would still have needed, probably, to find the labour, but there are also instances of individuals promising to undertake the erection of part of a public building³⁹⁶. Other sources of labour were also available to the overseer. Pliny wrote to Trajan expressing his firm hope that everybody in Nicomedia would readily engage in the work on a canal³⁹⁷, while public projects probably automatically attracted labour both locally and from afar³⁹⁸. Individual examples of 'builders' are found on tombstones and dedications, but in circumstances that do not allow us to determine how they obtained work. And there are finally a few examples in Asia Minor of 'colleges' of men connected with building³⁹⁹, although their *raison d'être* was not certainly professional. It seems, however, that on the whole overseers in the Greek East did not until the late Empire call upon 'colleges' of workers qua colleges any more than did their counterparts at Rome⁴⁰⁰. If we conclude that in general they let a multiplicity of contracts for work on public buildings to small groups of workers drawn from various sources, we should not forget the possibility that in the larger cities at least the proliferation of building work in the provinces of Asia Minor, especially in the second century, may have led to the (admittedly unattested) emergence of some large-scale building contractors.

The evidence for the way in which overseers in other provinces tackled their task is also deficient, but it is probable that they drew on similar resources. 'Architects' are occasionally recorded in conjunction with them⁴⁰¹, and they doubtless made use of them and other local contacts for the provision of labour and materials. The 'corvée' system is mentioned in the Lex Ursonensis⁴⁰², and there are a few Republican and imperial examples of it in action in Italy and the provinces⁴⁰³, although it is mainly confined to work on Imperial land until the late Empire⁴⁰⁴. There are occasional examples of individuals undertaking to build specific parts of a work, such as a cuneus of a theatre⁴⁰⁵, and even of men who record that they carried out work operariis suis⁴⁰⁶. Finally, we are again faced with the absence of evidence for contractors outside Italy. Contracts made by individual workers in the gold mines in Dacia have survived⁴⁰⁷, and it is likely that some work on buildings was executed by individual craftsmen. Building projects, however, were often large and complex, and much of the work was surely undertaken by workers united in some form of groups. Colleges of 'builders' are found in all parts of the Empire where the institution of colleges was commonplace, and it is possible that, as at Rome and Ostia, some of their individual members were large-scale contractors⁴⁰⁸. At the same time, however, we must remember that the main reason for the existence, or at least the main corporate function, of the most widespread 'building college', the collegium fabrum, had nothing to do with building⁴⁰⁹, and that the employment of the colleges themselves as sources of labour did not occur before the late Empire.

CHAPTER 3

Organization in the Imperial Period - (ii) Materials

Our information about the provision of building materials during the Republic is extremely scanty. The ancients were prepared to transport materials for particular important projects considerable distances, especially if this could be done by water¹. But in general ancient cities tended, because of transport difficulties, to use local or easily accessible material², and Vitruvius emphasized that an architect must tailor his plans to suit the material obtainable locally and be able to improvise if a shortage should arise³. Rome herself was blessed with an easy supply of materials, though not all of it was of good quality; there were several nearby quarries whose stone could be easily transported by water⁴, while although much of the timber employed on buildings in Rome came from Etruria and Liguria it too could be easily imported by boat, first along rivers and thence by sea⁵. The extent of this trade, however, is unknown. The Greek building accounts of the fifth to second centuries B.C. reveal a piecemeal arrangement for the supply of materials⁶, and it is probable that at least until the end of the second Punic war material for public buildings was brought into Rome too on an ad hoc basis. In the first half of the second century B.C., however, monumental building at Rome increased enormously in scope and size⁷, and the consequent increase in the demand for materials doubtless partly accounts not only for the construction in 193 B.C. of an emporium on the Tiber, which was also improved in 174 B.C.⁸, but also the building in 192 B.C. of a portico outside the Porta Trigemina in the wood-dealers' quarter⁹. We must remember that, although only a few permanent public buildings were constructed almost entirely of wood in the late Republic¹⁰, wood continued to be used for temporary structures well into the Empire¹¹, was used extensively on private housing¹², and was also required both for permanent parts, such as roof-beams, and for

temporary woodwork, such as scaffolding¹³. It is not known, however, who was responsible for working the quarries or forests. Our sources do not include stone quarries among the regular censorial contracts, while only the forests of Sila, in Bruttium, are mentioned in this connection, where the contract was for pitch¹⁴. This is in marked contrast to the silver mines, for which the censors let regular contracts¹⁵, but they had become Roman property by conquest; possibly quarries and forests in Italy were generally owned by local cities. The supply of materials was perhaps one of several contracts let by the censors and other magistrates in connection with public buildings. Whether the contractors who took them already had their own organization at work in the quarries and forests or whether they took over and expanded an already existing labour force, as perhaps happened in the case of the mines, is not known. Nor do we know the extent of production; a passage of Plautus indicates that slaves were required to cut a fixed number of blocks per day¹⁶, but there is no evidence whether production was on a continuous or piecemeal basis. Another passage of Plautus suggests that a delay was likely before a materiarius actually provided the timber for a ship¹⁷, but although there is no evidence of stockpiling there is also no evidence that public building was held up because of delay in the delivery of material. But whether the private contractors developed the system of production that is attested for the marble trade in the imperial period¹⁸ we cannot determine.

In the last two centuries B.C., marble from various sources became increasingly used on buildings at Rome¹⁹. Only marble from Luna, however, was employed with any regularity at Rome during this period, and even that is first attested only in 48 B.C.²⁰. Extraction from the Luna quarries, which were worked by private contractors²¹, may have soon become continuous²². The extraction and supply of overseas marbles, however, were almost certainly in this period undertaken on a piecemeal basis; their use at Rome was irregular, and since they were employed as a decorative

rather than main building material every order was likely to be different. Almost nothing is known of the process of order and supply. It is possible that some Roman commanders made particular arrangements during their campaigns abroad²³; some even despoiled existing buildings of their columns²⁴. Perhaps the supply of marble was left generally to private contractors. We might note that in 45 B.C. Cicero asked Atticus to consult one Apella, a native of Chios, in connection with the columns for the shrine of Tullia²⁵. Whether or not the columns were to come from that island, the Chian perhaps had useful contacts in the marble or building trade.

We know still less about the provision of other building materials. Roofing tiles appear to have been produced to standard sizes in Etruria as early as the sixth and fifth centuries B.C.²⁶, and tiles were probably produced on the great estates near Rome during the late Republic. As far as we know, however, the Roman state took no initiative in the production of any material nor any steps to organize its supply. There was probably a steady trade in materials for private building; whether this was drawn upon and expanded for public projects by entrepreneurs who took building contracts cannot be determined.

Augustus boasted that he found Rome a city of brick and left it a city of marble²⁷. Although this boast requires the qualification that much of the marble was simply veneer, marble was also employed at Rome for the walls of several large public buildings of this period in place of the hitherto usual tufa or travertine, and there is no doubt that it was in Augustus' reign that marble was first used on buildings at Rome to any large extent²⁸. Although much of it was imported from several different areas outside Italy, such imports seem at this time to have been spasmodic and concerned with particular orders²⁹. Most of the marble used at this period came from Luna³⁰. Again there is little evidence of who organized the trade, but a 'college' of privately owned slaves is attested for the Luna quarry in the period 16-22³¹, and probably almost all the quarries were still owned by private individuals or local cities. Quarry marks on blocks of Luna

marble indicate a degree of organization of its extraction³², but there is no evidence of Imperial initiative in this respect. It does seem, however, that it was in Augustus' reign that the wharf under the Aventine was found to be inadequate to cope with the increase in the amount of material then imported and that a new wharf for building materials was constructed in the more convenient area of the Campus Martius³³. Perhaps Agrippa was responsible for this; for in addition to his well attested involvement with public building at Rome, he may have had connections with marble quarries in Numidia and Phrygia³⁴.

During the course of the first century, many types of foreign marble came to be used extensively on public buildings at Rome. Entries on blocks of marble found at Rome show that the quarries from which they were extracted were then under Imperial control³⁵, but although it seems that it was Tiberius who began the process of 'nationalization'³⁶, we cannot precisely date the change in any particular case. The earliest dates recorded on the blocks for specific marbles are: cipollino (Carystus) - 17(?); africano - 64; portasanta (Caria?) - 67; giallo antico (Numidia) - 64(?); pavonazzetto (Synnada) - 107; Parian - 132; Pentelic - 166³⁷; we know, however, that all of these marbles were used by Emperors at Rome before those dates³⁸. It is probable that by the middle of the second century at the latest all the important marble quarries were under Imperial ownership, and this is another facet of the gradual extension of Imperial control over services that were vital to public life.

The nationalization of many quarries produced a degree of organization in the trade that was unknown, or at least is unattested, earlier. I have already discussed³⁹ the six civil servants at Rome, the earliest a slave of Claudius, whose duties were connected with the marble trade. I would add here that the five inscriptions from Rome itself, one of them specifically recording a statio marmorum, were all found in the area of

the marble yards of the Aventine or Campus Martius⁴⁰. The Imperial quarries themselves were in the general charge of Imperial freedmen procuratores⁴¹. These were aided by a varied staff. A few of the inscribed blocks at Rome record Imperial liberti whose duties are described by the participle probante and who perhaps had the daily responsibility for the supervision of technical work on a particular face⁴². The names of centurions, too, occasionally appear on the blocks, sometimes in conjunction with the term caesura⁴³; troops are known to have been employed on cutting stone in certain quarries⁴⁴, although it is possible that these centurions were seconded for special technical duties. They may also have guarded convict labour. There is also some evidence in the quarries of $\alpha\rho\chi\iota\tau\acute{\epsilon}\kappa\tau\omicron\upsilon\epsilon\varsigma$ ⁴⁵, who (inter alia) may have supervised some of the finer work that was often executed in the quarries. And Synnada provides evidence of Imperial civil servants - tabularii, commentarii - at the quarries themselves⁴⁶; they presumably made records concerning consignments before their despatch.

Imperial organization, however, extended beyond that of mere manpower. The excavation of the area of the Emporium below the Aventine revealed large quantities of marble blocks and columns that were clearly part of a stockpile⁴⁷, and it seems that stocks were also kept in the Campus Martius⁴⁸. Inscriptions on the blocks suggest not only that the quarries were worked methodically but that each was allotted an annual quota⁴⁹, and there is a growing body of evidence that in the course of the first century the major quarries came to produce marble not simply to order but on a production-line basis. Many of the blocks had lain there, never used, since the first and second centuries; they were presumably quarried and sent to Rome for use if or when required. We might note, too, that a section of the red granite column of Antoninus Pius had been quarried over half a century before it was actually used (Plate IV, fig. 2)⁵⁰, while two blocks of Numidian marble, quarried in the reign of Domitian, were

not used until 300 years later, at Ostia⁵¹. The purpose of such stockpiling was obviously to avoid the delay between the sending of a particular order to a quarry and the arrival in Rome of the material. Although particular orders were probably still made (though perhaps only in special cases), an architect or overseer in Rome could now simply apply for what he wanted to the stockyards, and the ready availability of numerous different marbles allowed him the sort of choice that was unknown to Vitruvius.

The effect of this organized exploitation and of the stockpiling at Rome was profound. From about the middle of the first century onwards, marble came into increasing use on public buildings in nearly all parts of the Empire⁵². Lepcis Magna provides a good example⁵³. The city had a local quarry of fine, durable limestone, and many buildings in that material have survived from every period of the city's history. There is no trace of marble on buildings dateable to the first century; the earliest extant building on which imported marble is found is the baths of Hadrian, dedicated in 126-7⁵⁴, although the presence of a redemptor marmorarius in about 120 and the use of marble for inscriptions in the reign of Trajan⁵⁵ show that it began to be imported from about the beginning of the second century. After that, the use of marble, from several sources, became increasingly common, culminating in the richness of the programme of Septimius Severus. It was not simple lack of finance that had precluded its use earlier; a temple erected at private expense in 72 cost 200,000 sesterces⁵⁶. Although it is likely that Imperial organization of much of the marble trade reduced prices - even small cities, such as Sabratha⁵⁷, could afford to use it - it was probably as much the comparative ease with which marble could now be obtained that accounts for its widespread use in the second century. It is possible too that the market of Rome had been so saturated in the first century that fresh markets needed to be opened up. It would be interesting to know whether,

with this extension of the trade, stocks of marble were held in cities other than Rome. A small dump of marble has been found at Ostia, but it seems that it comprised off-loaded marble awaiting shipment to Rome⁵⁸. And although regular supplies of marble were certainly being made by the middle of the second century to Ephesus, where there were even marble workshops on the dockside⁵⁹, we have no evidence yet of any stockpiling there.

It had long been the practice for a certain amount of rough work on stone to be executed in the quarry itself⁶⁰. During the Roman imperial period, there was a gradual extension of this practice; the stockyards of Rome consisted of not only marble blocks but also columns, some of which seem to have been made to certain standard lengths⁶¹, and other architectural members also appear to have been roughed out in the quarries. The exploration of ancient shipwrecks has provided much evidence in this respect. One sixth century wreck⁶² even carried a cargo of virtually all the architectural members for the interior of a church - bases, columns, capitals, choir screens and pulpit. Borders had been left on some of the parts to provide protection against damage during transit, proof that they were unused and had not been fashioned on the building-site, but the pieces are much more detailed than the kind of roughed out columns found in the stockyards. The extent of 'pre-fabrication' in this example was perhaps extraordinary, a product of the political and ecclesiastical situation of the time⁶³, but the general picture is confirmed by the evidence not only of other shipwrecks⁶⁴ but also of sarcophagi⁶⁵. In most cases, the work executed on sarcophagi in the quarry itself extended beyond the hollowing out to features of the decoration. And some quarries even catered for the tastes of a particular market; of the 24 early third century sarcophagi found in a wreck off Taranto which were made of a marble emanating from a quarry probably in south-west Asia Minor, half were roughed in a style that is scarcely found outside Italy⁶⁶.

The men who executed this sort of work in the quarries must have been highly skilled rather than simply stone-cutters. What is surprising, however, is that at Lepcis Magna, where marble was unknown before the early second century, the marble-work on buildings was, according to Ward-Perkins⁶⁷, "from the outset ... skilled [and] competent ... essentially the work of experienced hands". It was, in other words, too good to have been produced solely by masons accustomed to working in the local limestone. Ward-Perkins also demonstrated⁶⁸ both that the inscriptions on many marble columns and other architectural elements were cut by masons in situ and not in a quarry and that they reveal non-local names. Moreover, an early third century dedication at Lepcis Magna⁶⁹ was made by the marmararius⁷⁰ Asclepiades, described as a native of Nicomedia; perhaps he travelled to Lepcis with a consignment of marble from the quarry at Proconnesus, which was commonly used there in the late second and early third centuries. It would be interesting to know how common it was for skilled workmen to accompany consignments of marble; the quarries, after all, would not have had an inexhaustible supply of labour, and there was probably no guarantee that their men would return on completion of a job. No evidence from other sites comparable to that for Lepcis appears to have been published. But we certainly find marble workers who were natives of towns or areas that possessed a good marble quarry active in other, often distant, parts of the Empire, both in individual examples and groups. The best known group is that of the Aphrodisienses⁷¹; and a σύνδοξ of Nicomedian λίθογόοι is found at Nicopolis-ad-Istrum, in Moesia⁷², and individual Nicomedian marble-workers are attested, apart from Lepcis, at Portus and Tomis and in Galatia and Pamphylia⁷³. And marble-workers from Docimium are found in several areas of Asia Minor⁷⁴. We might note, too, that in about 366 artifices peregrini were summoned to Madauros in Numidia to work on the swimming-pool and sun-lounge of the public baths that were to be restored almost certainly in different coloured marbles⁷⁵; the

nearest marble quarry was about fifty miles distant, at Simitthus. It is possible that in centres where marble became commonly used, local masons, after an initial period of training by quarry-workers, themselves became skilled enough to work the material and transmit a marble tradition, although small cities may have usually needed to 'import' marble-workers for occasional, specific projects. Perhaps by the early third century, skilled marble-workers were to be found generally only in the quarries and in large cities; that might account for the fact that sarcophagi were often left in their rough 'quarry state' and not finished locally⁷⁶.

Despite all this evidence, we know almost nothing about the mechanics of the trade. In Rome, it might have been a simple matter for an architect or overseer to visit the stockyards himself and make his choice from a wide variety of marbles; we might suppose that that was how Mustius fulfilled the request of the younger Pliny⁷⁷. But what happened if he wished to place a special order? And by whom was the marble transported? Moreover, what was the procedure in cities where there was no nearby stockyard? There are six inscriptions which especially provide some clues. Three refer to redemptores marmorarii, one, undated, from Rome, one from Puteoli, dated 62, and one from Lepcis Magna, dateable around 120⁷⁸. Two others from Rome record the tomb of C. Tullius Crescens, negotiator marmorarius de Galbes, and of M. Αύ(ρήλιος) Ξενωνιανός Ἀκύλας, πρῶτος λιθενόρων, who had a statio in the horrea Petroniana⁷⁹. The horrea Galbana were certainly located in regio XIII beneath the Aventine, in the area of the marble stockyards⁸⁰; the site of the horrea Petroniana, however, is not certain, although we should note that the inscription was found on the Aventine⁸¹. The sixth inscription, discovered at Interamna, in southern Picenum⁸², records the tomb of another λιθενόρος, Αὐρ. Ἀνδρόνεικος. What was the precise function of these men? If the different descriptions indicate a distinction, I would suggest that in general the redemptores took contracts for work in marble, which were executed by men under their

control and supervision, while the other three dealt in marble as a material. It is possible that in addition, or perhaps alternatively, the redemptores took contracts to provide the marble, not simply through a merchant but through their own resources, maybe even dealing with the quarry itself. The port of Puteoli would have provided a good base for such an operator in 62, when the new harbour at Ostia had not yet made Rome independent of Puteoli⁸³, although it would have been a good base also for a contractor in marble work. The name of the redemptor at Lepcis, moreover, M. Vipsanius Clemens, suggests an earlier connection in his or his patron's family with Agrippa. If the officina Agrippae, recorded at the marble quarry of Simitthus in 133 and 150⁸⁴, is indeed to be associated with the aide of Augustus, Clemens possibly had some connection with the quarry, although giallo antico is not at all common at Lepcis⁸⁵. That would still not entail, however, that he imported marble; he might have begun life as a worker in the quarry and advanced to become his own master.

Did private marble traders import marble only from privately owned quarries or from Imperial quarries as well? The known date of the Puteoli redemptor, and perhaps the Lepcis redemptor also (assuming that they were importers) would certainly accord with the possibility that they dealt only with private quarries. The regular use of such marble, however, was mainly confined to comparatively small, localized areas⁸⁶. There seems to me no reason, moreover, why private traders should not have imported from Imperial quarries, even though Imperial personnel may have had overall control of the organization of the trade. There is no indication that the corpus traiectus marmorariorum at Ostia⁸⁷, which perhaps had responsibility for transporting marble up the Tiber, was part of any formal Imperial organization. Also, the nomina of the two λιθωνπόροι date them to the reign of Marcus Aurelius at the earliest, and their lack of status indication strongly suggests that they were not Imperial

freedmen⁸⁸. And there are signs that the negotiator is also to be dated no earlier than the second century⁸⁹. These men, then, were operating at a time when all the major quarries were under Imperial control and imports into Rome from private quarries were limited. Unfortunately, it is difficult to determine the exact nature of their activities. The two λεγεινόροι were both natives of Bithynia, and one is specifically described as a Nicomedian⁹⁰. Bithynia possessed several small marble quarries⁹¹, while the large Imperial quarries of Proconnesus were not far distant. They perhaps had personal connections with a quarry or quarries which helped them to set up in Italy as marble importers. Moreover, both Xenonius and the negotiator were connected with Imperial horrea⁹², and Xenonius actually had a statio inside the horrea Petroniana. We should also note here a second century text in the Digest⁹³ recording a negotiator marmorum who was a conductor horreorum Caesaris, whom Rickman has shown⁹⁴ hired space in an Imperial warehouse for his marble. Rickman also emphasized⁹⁵ that the horrea at Rome were devoted both to storage and to distribution, and rejecting the common assumption⁹⁶ that these men simply had shops in the area suggested that Xenonius' statio was as much an office as a store. Admittedly this does not prove that he operated an extensive business; he might have been a small agent who obtained his material from the stockyards. I would suggest, however, that it is equally likely that these men were among those through whom marble was imported from the quarries, both private and Imperial, and that they imported for both private and Imperial needs. Marble for the latter might have been held in the stockyards, for the former in the private stores of the importer. How far their trading activities were governed or directed by Imperial orders cannot be determined. But if Imperial quarries were indeed required to produce a fixed annual quota of marble⁹⁷, the duty of the negotiator would have been simply one of shipment. Special orders in connection with Imperial work may have been made directly to the

procurator marmorum through the civil service machinery, but the negotiator probably acted as an agent on behalf of private buyers. In exceptional circumstances, there may have been direct Imperial assistance; for example, the elder Piny records the special ships built by Augustus and Caligula to transport obelisks to Rome by sea⁹⁸. Imperial organization of the extraction of marble, however, need not have entailed Imperial control of the trade as a whole, and I would suggest that this is another field in which private enterprise continued under the Empire to be allowed to play a considerable part⁹⁹.

The procedure followed by building overseers in cities other than Rome is even less clear. Did they have to apply directly to the quarries? Or were there 'agencies' at important centres, especially ports, around the Mediterranean? The two famous blocks of black marble despatched to Lepcis Magna iussu Fulvi Plautiani¹⁰⁰ are of little help here; it is not certain in what capacity Plautianus issued his order, while the marble probably emanated from a privately owned quarry that mainly served a local market¹⁰¹. It is likely that during the first century most cities had to deal directly with the quarries, apart from some which might have been able to feed off the trade with and stockyards in Rome. But the fact that marble became a common building material in many parts of the Empire during the course of the second century suggests that it was by then much easier to obtain; if overseers could have applied to their nearest agency instead of to the quarry itself, the sort of delay that would inhibit the widespread use of marble would have been avoided. One such agency may well have been Ephesus, whose imports of marble and quayside depots and workshops have already been mentioned¹⁰². And there must have been other agencies, as well as stockyards of a comparable type to those at Rome, though on a smaller scale. Whether these agencies were established on behalf of a particular quarry or by men who might deal with a number of different quarries is by no means clear. The evidence

of sarcophagi suggests that certain quarries had a virtual monopoly in that trade in certain areas, for example Proconnesus with Alexandria and Attica with Cyrenaica¹⁰³. On the other hand, it is interesting that, although the cargo in the sixth century 'church wreck' was mainly of Proconnesian marble, the pulpit was made of verde antico, from the quarries near Larissa in Thessaly¹⁰⁴. As at Rome, it is not unlikely that much of the trade was in the hands of private enterprise, working in conjunction with the Imperial organization established in the major quarries. But if the mechanics of the trade and the process of ordering are beyond recovery, the widespread employment of marble attested by extant buildings makes it clear that its organization and administration were highly developed and efficient.

The only other building material of the organization of whose production we have much evidence is brick. During the Republic, bricks were seldom used on public buildings at Rome, and only sun-dried bricks were used for private houses¹⁰⁵. The latter, however, had two notable disadvantages. They were liable to become dangerously weak when exposed to moisture¹⁰⁶, while walls constructed of them needed to be extremely thick if they were to support more than one storey; since a law limited the width of party walls to $1\frac{1}{2}$ Roman feet, they became useless in Rome when the size of that city's population compelled the construction of tenement blocks¹⁰⁷. In the course of the early Empire, experiments were made in Rome with various types of tile-brick facing¹⁰⁸. There was a good supply of clay in the neighbourhood and the increased demand for bricks was met by private suppliers, many of them belonging to prominent or noble families, who opened up kilns on their estates which were supervised by their freedmen and worked by their slaves. Some of the brickyards which were to become among the largest by the second century were already operating in the early first century¹⁰⁹. But it was not until after the introduction of strict legislation imposing the use of non-inflammable

material as the basic component of buildings following the fire of 64¹¹⁰ that this industry became highly developed in Rome. Brickstamps¹¹¹ allow us to trace the development of several yards. They provide clear evidence not only of their expansion between the reigns of Nero and Hadrian¹¹² but also of the fact that even in the early second century they were still largely owned by private families¹¹³. The reasons why the brick industry was the only one from which it was not regarded as degrading for the nobility to make profits are not important here¹¹⁴. Of greater moment is the fact that no positive efforts were made to bring the yards under Imperial control or even into any Imperial organization; as in other spheres of the building industry, Emperors instead utilized services that were already adequately provided by private enterprise. It was by chance, through the process of inheritance, that the most productive brickyards came into the possession of the relatives of men who later became Emperors, especially Antoninus Pius and Marcus Aurelius¹¹⁵. Even during the second half of the second century it was the diminution in building activity at Rome and a previous over-production of bricks rather than any positive Imperial measure that led to the closure or take-over of most of the remaining private yards¹¹⁶. Although at the start of the third century the praetorian prefect Plautianus reorganized many of the yards that had fallen into disuse, he was closely connected with the Imperial house and after his downfall those yards too came under direct Imperial ownership¹¹⁷. If by the reign of Caracalla brick-production at Rome was virtually an Imperial monopoly, it must not be forgotten that during the peak period of the industry many of the brickyards at Rome had still been in private hands.

There is almost no evidence, at any period, of the mechanics of the trade. Production was probably undertaken on a continuous basis during the months from May to September; each slave or group of workers probably had a minimum daily quota, with more slaves being taken on if output

needed to be increased¹¹⁸. The sole surviving 'order', for a mere 400 tegulae¹¹⁹, is of little value both because of its size and because the position of the two parties is unknown, but we might note that a few bricks have been found stamped with the name of the building for which they were destined¹²⁰. There is also evidence that at least some private and Imperial brickyards had warehouses, though their location is unknown¹²¹.

Bricks were not readily transportable in the ancient world; besides, their ease of manufacture made it profitable generally to produce only for local needs¹²². We know of town-owned and private brickyards in Italy and the provinces; Imperial yards are known in Italy and there are traces of them in some provinces, even in the first century; and the army also manufactured large quantities of bricks¹²³. The general scarcity of collected evidence, however, allows no study of any development.

By comparison with marble and bricks, we know next to nothing about the trade in or provision of other building materials, timber, sand, iron etc. Much of Rome's building timber seems to have come from the north of Italy, at least during the Republic and early Empire¹²⁴. In this respect, it is interesting that the freedman father of Pertinax is said to have had a long connection with the timber trade¹²⁵, probably in Liguria since Pertinax was born at Alba Pompeia¹²⁶, and it may be no coincidence that two of the three epigraphically known negotiantes materiarii come from Ariminum and Florentia¹²⁷, while sectores materiarii are recorded at Aquileia¹²⁸. Timber was also imported from several different provinces, both for building and other purposes¹²⁹. Hadrian reserved four species of tree in the forests of modern Lebanon solely for Imperial use¹³⁰, but it is not clear whether there was any Imperial organization of the trade as a whole in the early Empire¹³¹. Timber seems to have been regularly imported into Ephesus in the middle of the second century, probably by private merchants¹³², but for the most part there is simply no evidence; only one extant Greek inscription, from Gaza, dated 508/9, records

specific timber merchants (ξύλεμποροι)¹³³. It is unfortunate that we have no details whatsoever about the navicularii lignarii of Ostia¹³⁴. We do not even know in what form wood was usually imported. An inscription of 359 from Chalcis, recording the allowance of material laid down by the governor for individual building supervisors, differentiates between fashioned timber and trunks¹³⁵, while both Pliny¹³⁶ and Juvenal¹³⁷ record huge trunks that were brought into Rome, although these may have been exceptional. Timber yards may have existed at Rome in the vicus materiarius in regio XIII, probably between the Aventine and the Tiber¹³⁸.

The Imperial organization of the exploitation of the marble quarries was probably exceptional; Emperors desired to make large-scale use of marble on their buildings, the material was not available in the neighbourhood of Rome and its extraction was a comparatively lengthy and highly skilled operation. It is therefore not surprising that the Emperors took steps to ensure that their requirements could be readily met, although it seems that the trade itself was still left largely in the hands of private merchants. Other types of material, on the other hand, were more easily obtainable, and most of them enjoyed a long tradition of use at Rome. But while it is unlikely that the Emperors attempted to organize the production of timber and other material, we should remember that at the end of the second century there was a civil service official who seems to have had special responsibility for the material required for Imperial works¹³⁹. And although the production and importation of all types of material may have been generally left to private enterprise, at least in the first two or three centuries of the Empire, we might well suppose that agents from the Imperial statio operum publicorum exercised some sort of supervision over orders that were specifically for Imperial projects.

CHAPTER 4

Architects in the Roman World

"There is something of a problem for us in that the modern distinction (which cannot always be applied consistently, even now) between the engineer and the architect did not exist in the ancient world."¹ In any discussion of 'architects' in the Roman world, it is important that this idea should be kept in mind. Many of the buildings of the Romans are works of what we could call civil engineering - aqueducts, harbours, amphitheatres etc.; many of the men who are termed in our sources as architectus or ἀρχιτέκτων are known solely in connection with such works. The wide range of meaning of these two words has long been recognized² and can be easily documented for all periods of antiquity³. In the Roman period, Plautus used the term in the sense of house-designer and ship-designer⁴, Vitruvius to describe both makers of siege-engines and designers of temples⁵, and the elder Pliny in connection with both temples and a lighthouse⁶. And inscriptions paint the same picture, with the words used in connection with buildings (of many types), weapons and, although rarely, ships. Necessary though the distinction is, however, we must not fall into the trap either of dismissing architects (in our concept of the word) from the Roman world altogether or of undervaluing the skill and importance of the architectus and ἀρχιτέκτων. The somewhat superior relative value placed on the architects of our world is, perhaps, based on the unfair comparison between works such as the Pont-du-Gard and the Colosseum and the churches of, for example, Sir Christopher Wren. But not only is the distinction between architect and engineer not always applicable today, but the Romans also built temples, villas, libraries etc.; the beauty of Roman architecture was for long given less recognition than its practicality⁷. We should also

remember that some at least of the 'engineers' in the Roman world were also 'architects'. The two most famous examples are Vitruvius, who not only worked on an armaments assignment for Augustus but also designed a basilica at Fanum Fortunae⁸, and Apollodorus, employed both on Trajan's bridge across the Danube and on his forum at Rome⁹, which is extolled by ancients and moderns alike¹⁰, while at Herculaneum P. Numisius¹¹ was the architectus of both a theatre and, probably, a temple. Finally, we might remember that the architectus, even in the role of engineer, was a professional of no little skill or even imagination; the term is never used of an ordinary worker¹², but as its derivation implies, the architectus was the leader, the co-ordinator of the efforts, of numerous types of workers, with the experience in their diverse crafts and materials to create a unified whole¹³.

A brief word must be added here on the way in which we recognize 'architects' in the Roman world. Apart from the terms architectus and ἀρχιτέκτων, which cover our broad notion of the architect-engineer, men of whom our sources employ other terms are also often described as 'architects' by modern scholars. The librator, ensor and ensor aedificiorum seem to me to have had the sort of specialist functions that an architectus did not have, at least in isolation; thus a librator might engineer a tunnel for leading water through a mountain¹⁴, but he probably did not take responsibility for the construction of an amphitheatre. The same is probably true of the geometres, but machinator and mechanicus appear to have had the more general sense of 'engineer', although they are connected with 'contrivances' rather than buildings, at least in the early Empire¹⁵. The extreme rarity, however, of those two terms on inscriptions¹⁶, especially in comparison with architectus, is probably not accidental. We also find the Greek words τεχνίτης and οἰκοδόμος used, especially in Syria, in circumstances which suggest that the man concerned was the 'architect'¹⁷; there are even two late examples

of ἀρχιτεκτονικός¹⁸. This may be either local linguistic fashion or a reflection of the fact that a skilled stonemason or carpenter might have the technical knowledge, though not necessarily the overall experience, required by an architect. Finally, there are many cases, epigraphic and literary, in which no particular term is applied to a man whose activities nevertheless suggest that he was an 'architect' or 'engineer'.¹⁹

One of the functions of an architect is to draw up plans for building projects, and it was recognized in antiquity that this was the quality that most distinguished an architect from both the layman and the contractor and ordinary building worker. Cicero, for example comments that he found it easier to imagine what his brother's house would look like when it was half built than he could from the plan (forma)²⁰. There is ample literary evidence that architects in the Roman world did draw plans of some sort. For example, Aulus Gellius²¹ relates how several fabri aedium, of one of whom he later employs the term architectus²², exhibited plans for some baths; and Plutarch²³ records that rival τεχνῖται provided παραδείγματα when competing for a city building contract. There are also several ancient illustrations of men either drawing or with drawing instruments in circumstances that suggest that they may have been architects²⁴. We do not know either the form of these plans or how detailed they were. Vitruvius refers to ichnographia (ground plan), orthographia (elevation) and scaenographia (perspective), as well as to the use of exemplaria picta²⁵; he also appended some sketches (now lost) to his own book²⁶. The detailed specifications in the Lex Puteolana²⁷ were surely based on an equally detailed plan. Some plans that were made on durable materials have survived²⁸, and although they were probably not made by architects for use by the contractors and workers, they show that very detailed plans could be and were produced. Three-dimensional scale models, too, may have been occasionally prepared by an architect²⁹. It is probable that plans, with the essential dimensions marked on them

in Roman feet, were regularly available, at least in the case of a building of any size or complexity. To what extent the contractors or craftsmen could directly translate these plans into concrete form, without any verbal explanation or direction from the architect, is uncertain. We should by no means assume that illiteracy would have precluded this. Many Roman buildings were based on relatively simple mathematical principles³⁰, which it would be not unreasonable to suppose that the skilled mason of the Roman world could understand, just as his mediaeval counterpart is known to have done later³¹. And much could no doubt be left to the good sense and experience of the mason. It is true that there is one notorious case³² in which it seems that none of the workers or supervisors was able to understand the instructions of a librator, who had to be recalled to bring the work to a successful conclusion, but that may have been exceptional, the result of the complete inexperience of the men concerned in the particular type of work, a tunnel. Finally, one or two individual drawings of details such as mouldings have been found³³. How far an architect had the freedom to determine the form and style of a particular building is a moot point and not one to be discussed in detail here. Certainly the styles of some Imperial buildings, at Rome and elsewhere, reflect the character and outlook of a particular Emperor³⁴ and one might suspect that occasionally an architect was asked to design a temple or theatre similar to one that already existed elsewhere³⁵. But it is unlikely that many architects worked completely within a straight-jacket.

The architect in the Roman world seems to have had a much closer, more personal contact with the actual work of building than most modern architects have. When he worked in conjunction with one or more overseers, it is clear that they were official 'administrators' while he provided technical advice and knowledge. If he himself was the overseer, he presumably attended to both functions. His 'technical advice' would cover many spheres. He might supervise the letting of contracts and the

recruitment of labour³⁶. He might need to make adaptations to a plan as work proceeded, even on his own initiative³⁷. And although the decision about the type of material to be used might not always have been his³⁸, the wide knowledge of materials that an architect required³⁹ would have placed him in an excellent position to give advice about it. He may have even been responsible for its procurement; the younger Pliny, for example, asked one Mustius not only to draw a plan for a portico which he proposed to build but also to buy a quantity of marble and in particular four marble columns cuius tibi videbitur generis⁴⁰. Moreover, columns might arrive at the site that varied in length both from one another and from the original specifications; in such a case, care would be required over the selection of bases and the making of capitals in order to produce a uniform height⁴¹. How much of this kind of responsibility was left to the good sense of the contractor or mason must have varied from site to site. The architect himself may have been a former or even practising 'contractor' or mason who had gained much of his learning as a skilled worker of some sort on a building site, so that his technical knowledge may have been little greater than theirs⁴². But although some building procedures, such as the actual erection of columns, became in time routine enough not to require the architect's constant presence and could be organized by and carried out under the contractors or their foremen, and even sub-architects⁴³, there were doubtless many occasions when the contractor or worker would need to turn to the architect for advice; tam magnus ille fabrilis exercitus ad tuum recurrit iudicium, wrote Cassiodorus to the architectus Aloysius⁴⁴. The architect was responsible for the direction and co-ordination of all the different groups at work⁴⁵, and many ancient illustrations of him in this role have survived⁴⁶. In this capacity, he was made liable, at least under Septimius Severus, to legal action, along with the contractor, if a work was deficient⁴⁷.

How was an architectus appointed for a particular project? There is no evidence that any official architects, permanent or temporary, were placed at the disposal of the censors and other magistrates in the late Republic⁴⁸, nor should we assume that this was the case by virtue of the fact that architecti were among the official apparitores allocated to the land commissioners under the law of Rullus⁴⁹. It is unfortunate that we do not know how the citizen L. Cornelius came to be engaged as an architectus by Q. Lutatius Catulus, presumably on his Capitoline programme⁵⁰, although it is possible that he had served under him as praefectus fabrum⁵¹. We might note, however, that a portico and perhaps also the temple of Jupiter Stator, commissioned in 146 B.C. by Q. Caecilius Metellus Macedonicus, seems to have been designed by Hermodorus of Salamis⁵², whom the consul possibly encountered during his campaign in Greece. And the man whom Caesar in 45 B.C. planned to put in charge, perhaps as architect, of his building programme at Rome had lived in the city for only two years⁵³; he was probably an acquaintance of Caesar rather than an official architect. The appointment of Valerius of Ostia⁵⁴ may also have been ad hoc. The censors and other magistrates must of course have engaged an architect at some point, although whether it was before, during or after the auction of the contract is uncertain. It is not impossible that the choice of an architect was in some cases left to the entrepreneur, even if the magistrate did give certain directives about the style of building required; other magistrates may have directly engaged an architect whose work was known to them⁵⁵. It is even possible that architects competed for a public contract⁵⁶.

Under the Empire, architecti definitely held permanent official posts in the Water Board and perhaps the other Maintenance Boards as well, but I have argued that there was no permanent official in charge of new Imperial works at Rome and that architects were generally engaged ad hoc⁵⁷. Some Emperors probably had a favourite architect; Apollodorus seems to

fall into such a category, and Severus, Celer and Rabirius may have done so also⁵⁸. These, however, were surely personal appointments rather than official posts. There was not by any means a continuous programme of new Imperial building at Rome⁵⁹, and it is perhaps significant that we do not know the name of a single architect employed by Augustus at Rome, despite the extent of his building in the city. The Emperors certainly maintained architecti in their own familia⁶⁰, and may on occasion have sent them to work on projects outside Rome⁶¹. But we must not forget that they also made use of others from outside, as is shown both by the nature of the architecti Augusti⁶² and by the nomina of some of those employed on Imperial work⁶³. While these outsiders were also perhaps Imperial appointees, engaged either through recommendation or on the basis of personal knowledge⁶⁴, it is not impossible that competitive tenders were invited for Imperial projects.

Outside Rome, the picture is neither clear nor constant. We hear of competition among architects for a particular project in Bithynia⁶⁵, and Plutarch⁶⁶ writes as if it were the general practice in cities. There also seem to be some examples, however, of permanent and official architects, especially, perhaps, in Greek and Greek Eastern provinces. At Sparta, Φλάβιος Διονύσιος⁶⁷ appears as an ἀρχιτέκτων on a late second or early third century list of officials in a context that appears to have no connection with building. His post is likely, therefore, to have been both permanent and official, but it would be interesting to know whether he was a 'professional' architect or simply a non-technical magistrate, the equivalent maybe of a curator operum publicorum; the nature of the title would suggest the first. At Olympia, Πρατκων⁶⁸ is recorded as an ἀρχιτέκτων on a list of cult officials that is to be dated between 36 and 24 B.C. The numerous extant lists of these officials⁶⁹ are spread over three centuries (36 B.C.-265 A.D.), but this is the only one on which an ἀρχιτέκτων appears, a fact which is also true of the ἱατρός. Some of

the lists are admittedly very fragmentary, but it is noticeable that other 'inconstant elements', such as *οἰνοχόοι* and *κλειδοῦχοι*, disappeared gradually around the late first century and that only men with clearly religious functions, such as *θεοκόλοι* and *μάντιες*, appear more or less throughout the whole period of 300 years. It is interesting, however, to find an *ἀρχιτέκτων* probably permanently attached (at least for a while) to the services of a temple, presumably to look after its upkeep⁷⁰; it is likely that at Palmyra, *Ἀλέξανδρος, ἀρχιτέκτων Θεοῦ Βήλου*⁷¹, had similar duties. In Macedonia, there are three examples of men whose duties are described by the participle *ἀρχιτεκτονῶν* who appear with officials such as *πολιτάρχαι* and *γραμματεῖς* on inscriptions of which at least two and probably all three record public building activity⁷²; the participle rather than a noun is employed to qualify many of the other officials, and may simply be local usage. We cannot determine whether these three held permanent official posts as *ἀρχιτέκτονες*; the fact that in at least two cases⁷³ the *ἀρχιτέκτων* is the last man to be recorded might suggest that his mention was simply a mark of honour, although one might equally argue that it was a question of seniority. It seems certain, however, that one at least of them, *Διονύσιος*⁷⁴, was a 'professional' since one of the *πολιτάρχαι* recorded with him is also described as the overseer of the work (*προστα[τήσαντος] τοῦ ἔργου*). Also in Macedonia, *Λ. Εὐόλιος Φύρμος* (*sic*)⁷⁵ appears as *ἀρχιτέκτων* at the end of a list of officials on an inscription (to be dated after 153/4) which appears to record a decision of a *βουλή*, probably of Thessalonica, in connection with the will of Ti. Iulius Rhoemetalces; in view of the nature of the document, his official position can scarcely be doubted, although he may not, of course, have been a 'professional'. The use of the noun is interesting since a participle is employed of most of the other officials⁷⁶, but the variation probably has no significance.

The province of Moesia Inferior produces two inscriptions⁷⁷ recording

public building work on which a man described by the participle ἀρχιτεκτονῶν is listed, again at the end, together with the city's local magistrates and other officials; no overseers appear, but there is no need to assume that the 'architects' held permanent positions. And a group of inscriptions from Tanais in the neighbouring client kingdom of the Bosphorus is particularly interesting. One man, Αὐρήλιος Ἀντωνεῖνος⁷⁸, was engaged as an ἀρχιτέκτων on four separate building projects, once by King Rhescouporis in 220 and three times by King Ti. Iulius Ininthimaemus, at least twice in 236. On the first occasion, he is recorded with two other ἀρχιτέκτονες⁷⁹. On two of the inscriptions⁸⁰, only the man who financed the work is named in addition to Ἀντωνεῖνος, but on the other two (one of which records privately financed work)⁸¹, a variety of officials are recorded, including numerous ἐπιμεληταί, which suggests at least that the ἀρχιτέκτων was a 'professional'. We should not necessarily, however, regard Ἀντωνεῖνος as the official city architect simply because he was connected with public projects at two widely separate times. Apart from the fact that in 220 he is named along with two others (and he is also in second position), he might simply have been an architect of proven ability to whom the kings naturally turned; he might even have won the contracts in competition with others.

In Asia Minor, Πό. Γράνιος Ασιατικός⁸² is described on his tomb at Miletus as ἀρχιτέκτων τῆς πόλεως; it is impossible to determine whether this appellation was official or simply indicates that he worked on several public building projects in the city. Similarly, Ζήνων, ἀρχιτέκτων τοῦ Θεάτρου καὶ τῶν τῆς πόλεως ἔργων⁸³, may have been the best, or indeed only, architect at Aspendus, to whom the city would turn first. At Ephesus, it seems that a man who was πρότασις, γραμματεὺς and ἁμνῶδης was also an ἀρχιτέκτων, perhaps even ἀρχιτέκτων τῆς [πόλεως]⁸⁴; he may have been a permanent official, a 'professional' or both. I would suggest, however, that M. Αὐρήλιος Ἀφροδείσιος⁸⁵, who had held every office at Nysa

public building work on which a man described by the participle ἀρχιτεκτωνῶν is listed, again at the end, together with the city's local magistrates and other officials; no overseers appear, but there is no need to assume that the 'architects' held permanent positions. And a group of inscriptions from Tanais in the neighbouring client kingdom of the Bosphorus is particularly interesting. One man, Αὐρήλιος Ἀντωνεῖνος⁷⁸, was engaged as an ἀρχιτέκτων on four separate building projects, once by King Rhescouporis in 220 and three times by King Ti. Iulius Ininthmaemus, at least twice in 236. On the first occasion, he is recorded with two other ἀρχιτέκτονες⁷⁹. On two of the inscriptions⁸⁰, only the man who financed the work is named in addition to Ἀντωνεῖνος, but on the other two (one of which records privately financed work)⁸¹, a variety of officials are recorded, including numerous ἐπιμεληταί, which suggests at least that the ἀρχιτέκτων was a 'professional'. We should not necessarily, however, regard Ἀντωνεῖνος as the official city architect simply because he was connected with public projects at two widely separate times. Apart from the fact that in 220 he is named along with two others (and he is also in second position), he might simply have been an architect of proven ability to whom the kings naturally turned; he might even have won the contracts in competition with others.

In Asia Minor, Πό. Γράνιος Ασιατικός⁸² is described on his tomb at Miletus as ἀρχιτέκτων τῆς πόλεως; it is impossible to determine whether this appellation was official or simply indicates that he worked on several public building projects in the city. Similarly, Ζήνων, ἀρχιτέκτων τοῦ θεάτρου καὶ τῶν τῆς πόλεως ἔργων⁸³, may have been the best, or indeed only, architect at Aspendus, to whom the city would turn first. At Ephesus, it seems that a man who was πρύτανις, γραμματεὺς and ἡμνώδης was also an ἀρχιτέκτων, perhaps even ἀρχιτέκτων τῆς [πόλεως]⁸⁴; he may have been a permanent official, a 'professional' or both. I would suggest, however, that M. Αὐρήλιος Ἀφροδείσιος⁸⁵, who had held every office at Nysa

up to that of βουλευτής and had also been connected with many projects as ἀρχιτέκτων, was a magistrate who was also an architect⁸⁶. It is not clear whether the ἀρχιτέκτων who is recorded on a fragment at Pergamum⁸⁷ together with local officials such as an ἀρχιβούκολος and ἐφηβοφύλαξ was a magistrate, official or what; nor do we know the position of the unnamed ἀρχιτέκτων referred to at Halicarnassus in connection with the erection of either statues or stelae⁸⁸ or the unnamed ἀρχιτέκτονες at Cyzicus whose employment on work on the agora was envisaged in a local decree⁸⁹. Finally it would be interesting to know how Μηρόφιλος⁹⁰ came to be the ἀρχιτέκτων who gave out the work for a part of the theatre at Miletus and whether he was indeed subordinate to another ἀρχιτέκτων.

It seems probable, then, that in a few cities in some Greek and Greek Eastern provinces there were ἀρχιτέκτονες who held a permanent official position, though they were not necessarily all 'professionals'. Nor is it impossible that comparable examples might have been found in the 'western' provinces had it been the practice there to inscribe on stone the sort of list that provides much of this information for the Greek section of the Empire⁹¹. Broughton's suggestion, however, that "in the cities of Asia Minor there were public architects permanently in the service of the communities"⁹² seems to me to be too generalized. For all their mutual rivalry, it is unlikely that even the big cities, such as Ephesus, would have had a building programme continuous enough to warrant such an official. Plutarch, moreover, states⁹³ that cities were anxious to let the most favourable contracts possible in terms of cost and time, while the fact that there were rival architects for a project at Nicaea⁹⁴, which seems not to have been a particularly large city, suggests that some cities were not compelled by circumstances to rely on the services of a single man⁹⁵. In an age when many architects probably worked more for themselves than for the greater glory of their city, we might expect the system of competitive tender at least to have existed side by side

with that of appointment through patronage.

The question of the nationality of architects in the Roman world has often been discussed, and wildly conflicting conclusions have been drawn from the evidence. Promis, for example, coupled the difference between 'engineering' and 'architecture' to a difference in nationality between Romans and Greeks, the former (most of whom were in the army) exercising an office, the latter being the exponents of an art⁹⁶; while Rivoira⁹⁷ and Friedländer went to the other extreme, the latter concluding⁹⁸ that "von den namhaften kaiserlichen Architekten, die wir kennen, ist Apollodorus von Damascus ... der einzige, der mit Gewissheit als Nichttrömer bezeichnet werden kann". The surviving epigraphic evidence does not, in my opinion, allow any useful statistical treatment to be made of it⁹⁹. Apart from the difficulty of determining who was an 'architect' and what particular type of architectus, if any, an individual was¹⁰⁰, there are often insoluble problems involved in judging a man's status or origin; moreover, we cannot be certain that the extant material is representative. Nor must we forget the literary evidence, which is often inadequate for statistical purposes and may itself reflect only a small part of the picture. Some general features, however, can perhaps be discerned.

The usual starting point is Trajan's reply to Pliny's request for an architectus, that such men ex Graecia etiam ad nos venire soliti sunt¹⁰¹. It is certainly true that by far the majority of the extant epigraphic examples of non-military architecti etc. were not of native Roman or Italian origin. Almost all the examples from outside Italy come from provinces whose culture and traditions were predominantly Greek, while within Rome and Italy nearly half the examples (15 out of 34) are of slaves and freedmen¹⁰², 4 of uncertain status have non-Latin cognomina¹⁰³ and of the remainder one¹⁰⁴ was possibly of freedman stock and two¹⁰⁵ were probably the freeborn sons of freedmen. We should remember, however,

that Rome and Italy are the very areas which would naturally have attracted foreign architects, whether willing or enslaved. There are, moreover, exceptions which should be neither forgotten nor minimised. Apart from L. Cornelius¹⁰⁶ in Rome itself, we find citizen architecti without, as far as one can judge, any 'Greek' blood in their veins in many parts of Italy; at Grumentum, Paestum, Herculaneum, Formiae and Terracina, Clusium, Sarsina and Verona¹⁰⁷. And Vitruvius¹⁰⁸ asserts that antiqui cives had been great architecti, although he names only two¹⁰⁹. To them we might add Valerius of Ostia and Vitruvius himself¹¹⁰, while some of the men employed by Cicero were possibly both Roman citizens and architects¹¹¹. And from the imperial period, we might include here Rabirius¹¹² and Mustius¹¹³. It is also possible that the extant evidence is itself somewhat misleading here. On the question of architecti, Trajan also wrote to Pliny: nulla provincia est, quae non peritos et ingeniosos homines habeat¹¹⁴. Although that may have been a generalization¹¹⁵, it is noteworthy that there are very few epigraphic examples of civilian architecti, native or Greek, in non-Greek provinces¹¹⁶. Although cities in those provinces do not seem to have expressed mutual rivalry in the kind of building spree that is attested in Asia Minor, they still boast many fine buildings, and there is evidence of large and flourishing collegia fabrum at Apulum, Aquincum, Salona and Sarmizegetusa and a collegium fabrum tignariorum at Lugdunum, many of the members of which were connected with the construction of buildings¹¹⁷. It is true that military architecti, whose presence in some of these provinces is attested, may have been responsible for some of the work, but I wonder whether the almost total lack of civilian architecti in the western provinces is due to mere chance and whether their names, for whatever reason, have simply not been preserved¹¹⁸. Trajan's authority should not be disregarded, but his comment about the Greek origin of architects is perhaps a generalization which reflects the picture only as far as Rome and Italy were concerned.

A connected question is that of the status of architects. In quoting ancient authors on this, we must bear in mind not only their social standpoint but also their personal prejudices¹¹⁹. Cicero ranked architecture, together with medicine and teaching, above what he termed the vulgar occupations, although his approval of it is a little more tepid than some scholars have suggested: iis quorum ordini conveniunt honestae¹²⁰. We must remember, however, that Cicero, who himself took a great interest in the various aspects of building¹²¹, is here drawing a distinction between manual work and paid occupations on the one hand and 'professions'¹²² with an inherent quality of their own on the other. But in extolling the virtues of architecture as a noble and useful pursuit, he was certainly not thinking of the sort of architect mentioned by Vitruvius, who canvassed for work or deliberately submitted falsely low estimates¹²³. The younger Seneca, on the other hand, linked architects with the ordinary building worker in a general attack: felix illud saeculum ante architectos fuit, ante tectores¹²⁴; we must remember, however, that he despised all artists¹²⁵. And there are several texts that illustrate the ambivalent attitude of the upper class towards the creative arts and artists¹²⁶.

More reliable information, perhaps, about the position of architects in society is to be found on inscriptions. The respectability of the 'profession' is possibly shown to some extent by that fact that of the 26 examples of civilian architecti in Rome and Italy 11 were ingenui¹²⁷. It is unfortunate that we have the complementary evidence of 'economic status' in only one case; M. Cassius Denticulus was a IIIIvir at Verona who rose to become an eques (Plate IV, fig. 3)¹²⁸. At the same time, we should note that none of them (or at least none of those without libertine origins) is to be dated after the late first century¹²⁹. This cannot be attributed simply to the gradual disappearance from inscriptions of the record of filiation¹³⁰, although I am not convinced that it is a sign that the 'profession' became dominated by slaves and freedmen. Another indication,

perhaps, that the importance of architecti was recognized is the appearance of the names of some of them on buildings¹³¹. An early third century law¹³² forbade the inscription of any name on a public building other than that of the Emperor and the party that had financed it. We do not know if a similar law existed earlier, but most of the 'signatures'¹³³ can be dated to the late Republic or early Empire¹³⁴. It is often assumed that this practice was the result of Greek influence¹³⁵ and it is true that many of the examples come from the hellenized areas of central Southern Italy, especially around Naples¹³⁶. It is also true that there are no 'signatures' from Rome (though that may be a result of the nature of the extant material), and that of the three examples from central and northern Italy two are of men with Greek cognomina¹³⁷. There was no tradition, however, among Greek architects of 'signing' buildings; nor can we compare 'signatures' on buildings to those on pottery¹³⁸. Perhaps we should see in 'signatures' a satisfaction of the architect's pride and even a form of self-advertisement, and recognition by society of the role played by the architect in a building scheme, even if he were a slave¹³⁹. There is little other epigraphic evidence on which to judge the relative status of architecti in Rome and Italy. Ti. Claudius Vitalis¹⁴⁰ was possibly the freedman of a former slave quarry worker and official at Luna, and in that case one might imagine that his position as an architectus was considered an improvement over his former patron's. Certainly the size of his sepulchrum¹⁴¹ indicates that he was not a poor man. The son and grandson of P. Cornelius Architectus¹⁴² were both officials in the collegium fabrum tignariorum at Rome, which suggests that the family was of some means. And A. Bruttius Secundus¹⁴³ was a sevir, a position that needed to be backed by money. The remainder, however, have little to tell us but their names. There are not even any public statues of architecti, even in small cities. This personal 'silence' and the absence of public recognition (other than through 'signatures')

is surely an indication of their generally low social and economic status.

Outside Italy, there are fifteen examples of architecti etc. with Roman nomina¹⁴⁴. One that might have been among the more interesting, from Antipolis, is of no value to us in our present knowledge of the text and may even be spurious¹⁴⁵, and a second¹⁴⁶ is possibly to be assigned to the army. In Spain, however, C. Sevius Lupus, who was probably the 'architect' of a pharos, describes himself as architectus Aeminiensis Lusitanus¹⁴⁷. It is unfortunate that we cannot trace his family origins; his nomen is widespread in both Italy and Spain¹⁴⁸. He would seem, however, to have held a high social position. Three of the eight ἀρχιτέκτονες in Achaea and Macedonia whose names are known bear the tria nomina. The Corinthian Γ.Ήλιος Εὐπαίδευτος¹⁴⁹, who worked at Delphi probably in the second century, was possibly a descendant of a family that settled in Corinth when it was colonized by Caesar; certainly two Heii held local magistracies there in the reign of Augustus¹⁵⁰. Εὐπαίδευτος was also made a citizen of Delphi ἀντὶ καλοκαγαθίας, and I suspect that his activities as an ἀρχιτέκτων made no small contribution. At Sparta, Φλέβιος Διονύσιος¹⁵¹ is found on a list of the late second or early third century. Although his father's name is recorded simply as Διονύσιος, this is no indication that his father was not a Roman citizen also¹⁵², though we should not necessarily trace citizenship back to his late first century ancestors. We might note that on this list at least four of the other officials bear the tria nomina, of whom two were Μ. Αὐρηλίοι. And in Macedonia a Λ. Εὐόλειος Φύρμος (sic)¹⁵³ is found in the mid-150's. It is noteworthy that of the dozen officials named with him only the ταμίης τῆς πόλεως and the sole surviving ταμειύων τῶν νέων have the tria nomina, and, though it is impossible to determine how the family of Φύρμος received the citizenship, his Latin cognomen suggests that it went back at least one generation. At Pergamum, probably in

the second century, we know of a *Ἰούλιος Νεικόδημος*¹⁵⁴ and an *Αἰλῖος Νεῖκων*¹⁵⁵, who was possibly enfranchised by Hadrian. One of these two was probably the father of the celebrated doctor Galen, whose family is known to have owned much land¹⁵⁶, while the isopsephic verse of *Νεῖκων* shows him to have been a man of more than one talent. Both clearly held positions of some distinction at Pergamum, although we should not necessarily conclude in the case of the father of Galen that that was due to his activity as an *ἀρχιτέκτων*. At Miletus there survives the tombstone of *Πο. Γράνιος Ἀσιατικός*¹⁵⁷. The Puteolan Granii are well known as traders throughout the Mediterranean in the first century B.C., and wealthy Granii are recorded at Miletus in the second and third centuries¹⁵⁹. Those who have seen the tomb of *Ἀσιατικός* have not, unfortunately, dated it. At Abonouteichos, probably in Bithynia¹⁶⁰, we find a *Π. Αἰλῖος Φουνισουλκινὸς [Τ]ρίφων*¹⁶¹, while at Adraa in the middle of the third century a *Ἰούλιος Φλ(αούς) Οὐῆρος*¹⁶² was employed by two successive governors. Finally, of the four *Μ. Αὐρηλίου*, one, at Nysa¹⁶³, held every local office up to that of *βουλευτής* and was remembered for the part that he played in many building projects; of the others, one is found at Cyrene, one in the Bosphorus and one in Iberia¹⁶⁴.

Most, perhaps all, of these Roman citizen 'architects' seem to have been at least natives of the province in which they are found. We cannot link the grant of citizenship in any case to the fact that a man was an *ἀρχιτέκτων*; indeed, in some cases, the grant seems to have been made to the family even before the birth of the *ἀρχιτέκτων*. But the fact that an *ἀρχιτέκτων* was a Roman citizen must have been a mark of honour for him within his own community, while conversely it is an interesting reflection on the status of the 'profession' that a Roman citizen should want to be an *ἀρχιτέκτων*. Not that the lack of citizenship was necessarily a hindrance to an *ἀρχιτέκτων*. *Ζήνων*¹⁶⁵, *ἀρχιτέκτων* of the theatre and other buildings at Aspendus in the 160's, presented gardens to the city

as well as 3,000 denarii towards a display to mark the opening of the theatre. The people of Sillyum, in Pamphylia, honoured Κλέων both for his ἀρχιτεκτονική and his contribution of 500 denarii to the cost of grain and it is possible that a statue was also set up in his honour in Kiesme, in Pisidia, which may have been his native town¹⁶⁶. And at Mylasa, in Caria, Περικλῆς¹⁶⁷ was also honoured in some way by his native city because of his ἀρχιτεκτονική. Part of the relevant inscription, of which the reading, perhaps faulty, presents us with gibberish Greek, may indicate that he had been to Rome and made a reputation there; certainly he was able to afford sarcophagi for himself and his family¹⁶⁸. These men, however, form only a part of the total picture. Although other ἀρχιτέκτονες are recorded in some local official capacity (whether permanent or not) and there are a few whose dedications to deities have survived¹⁶⁹, of many we know very little beyond their and their family's names.

No easy or general conclusion can be reached about the relative position of architects in society. As 'professionals' their value and importance were undoubtedly recognized. Cicero¹⁷⁰ was aware that it was foolish to attempt to build a house without consulting one, while Columella¹⁷¹, in the early Empire, and Cassiodorus¹⁷², in the sixth century, write of the architect's need for knowledge of all aspects of building and of the reliance of the ordinary worker on his advice. And the 'profession' may have won individuals, as people, a certain status in the eyes of their fellows, both in Rome and Italy and in the provinces. It is interesting, however, that, unlike doctors and teachers, no grants or concessions were made to architecti en bloc, even at Rome, until the fourth century¹⁷³, and then the relevant measures were dictated by a shortage. It would clearly be as foolish to judge the position of architects in the Roman world on the single example of Apollodorus in Rome or Ζήνων in Aspendus as it would be to judge the ethical values of

modern architects by the corrupt activities of John Poulson.

There is little evidence to show whether there were enough architects to meet the demand. Trajan's reply to Pliny's request for a mentor, that he did not have enough for his own building programme in and around Rome¹⁷⁴, does not necessarily imply that there was a general shortage of technicians. We must remember that Trajan not only was dealing with a governor who persistently requested advice and assistance but also had on hand at the time an unusually large building programme that would have required numerous technicians. Trajan also added¹⁷⁵ that skilled men could be found in every province, a claim that he repeated about architecti in a later letter¹⁷⁶, and he also later promised to send a mentor from Rome¹⁷⁷. And Pliny himself writes of rival architecti for a particular project in Bithynia¹⁷⁸. But even if we accept Trajan's claim as justified, what Pliny required was competent, and independent, technicians¹⁷⁹. Both his letters and archaeological evidence reveal that bad mistakes were made in some of the Bithynian building projects; in the case of the aqueduct at Nicomedia and the gymnasium at Nicaea, it is likely that the mistakes occurred because the 'architects' were attempting to use techniques and materials of which they had little or no experience¹⁸⁰. Cicero, on the other hand, never seems to have had difficulty finding an architect¹⁸¹, and it is not until the fourth century that there is any firm evidence of a widespread shortage of trained technicians, including architects¹⁸².

Coupled to some extent with this question is that of the 'mobility' of architects. Three basic 'professional' reasons might lead an architect to move from one city to another: the lack of constant employment in one particular area, the attractions and opportunities offered by another city, and the positive demand for their services in other places. A large centre such as Rome would naturally attract artists, including architects. Apollodorus may well have been wooed from Damascus by the

attractions of the Imperial court¹⁸³, and it is probable that less well known architects were also drawn by the prospects that Rome offered¹⁸⁴. Away from Rome, in addition to the Corinthian who worked at Delphi and was made a citizen there¹⁸⁵, Πραξιτέλης of Amorium¹⁸⁶ built a bridge at Dorylaeum, which was about sixty miles away, where he became a citizen; two architects who were citizens of Tomis were originally citizens of other cities, one, perhaps both, of Nicomedia¹⁸⁷; Κλέων¹⁸⁸ may have made the not very long journey from Kiesme in Pisidia to Sillyum in Pamphylia; an ἀρχιτέκτων at Nysa in Caria¹⁸⁹ may have had connections with either or both of the neighbouring towns of Antiocheia and Aphrodisias; and T. Vettius, an architectus at Grumentum, may well have come originally from central or northern Italy¹⁹⁰. It is impossible to determine precisely why these men moved from their native cities. On the other hand, Cossutius¹⁹¹, who was summoned to Athens to work on the Olympeion, and possibly Valerius of Ostia¹⁹², the architectus of a theatre at Rome, probably partly owed those particular jobs to their reputation; we might note also that the good reputation of Corumbus¹⁹³ was known to Cicero. At the same time, however, we must not forget the numerous examples of architects who are found in their native cities, both large and small. Emperors may have despatched architects and technicians from their own familia or the army in connection with Imperial work¹⁹⁴, and Hadrian may have formed a squad of 'professionals', including architecti, to accompany him on his provincial tours in order to guard against possible delay in the recruitment of highly skilled labour¹⁹⁵. But there are no good grounds for assuming either that there was a general lack of skilled men outside Rome and Italy or that there was not enough local work to provide continuous employment. There was surely plenty of private work to provide the bread of which the more prestigious public building work comprised the filling¹⁹⁶.

The evidence for the way in which an architect learned or was trained

in his 'profession' is scattered and imprecise. A formalized apprentice system in numerous trades is known only from the papyri of Egypt¹⁹⁷, but any sort of supervised training can only have been given by those who were 'practising' architects. There are numerous examples throughout antiquity of son following father in the profession as well as slave following patron. Vitruvius himself states¹⁹⁸ that craftsmen (artifices) used to train only their own children, relatives and others who were worthy (boni), and this can be accepted even if we are wary of his preceding statement that in the time of his ancestors only 'honourable' architecti were given commissions. Chrysippus, freedman of the architectus Vettius Cyrus, seems also to have been an architect¹⁹⁹, and Cyrus himself may have been the freedman of another²⁰⁰. It is possible that the architectus L. Cocceius Auctus was the freedman of another architectus, C. Postumius Pollio²⁰¹, and Περικλῆς at Mylasa²⁰² may also have followed in his father's footsteps (ἀπόμιμος) as an architect. And in the fourth century, when almost all trades were compulsorily hereditary, there was official encouragement for fathers to train their sons as architects²⁰³. We also find members of the same family engaged in different aspects of building, including 'architecture', in all periods of antiquity²⁰⁴. The Cossutii of the late Republic and early Empire provide perhaps the most famous illustration of this in the Roman world²⁰⁵, and we might also note that the son and grandson of P. Cornelius Architectus²⁰⁶ were members and officials of the collegium fabrum tignariorum. At the same time, however, we must remember not only the examples of the sons of great fathers who did not enter their father's profession²⁰⁷ but also the fact that on a large number of inscriptions recording 'architects' the occupation of the father or sons is not recorded. We should by no means assume that it was the rule that son should follow father²⁰⁸.

It is probable that sons and slaves gained most of their knowledge by working alongside their fathers and patrons, and the training of most

architects must have been undertaken mainly on the building site where experience could be gained from the actual execution of works. An architect needed a wide range of practical knowledge, ranging from the selection and use of various materials to the techniques of the numerous types of worker employed in building - masons, sculptors, plasterers etc. As Burford states, "there were no bridge-building or harbour-constructing workshops, and inherited family interest in such works would not have been sufficient to train an apprentice in the structural disciplines"²⁰⁹. Many an architectus probably began his career as an apprentice mason or carpenter; some may even have gained early experience in marble quarries²¹⁰. At the same time, however, all of them would have needed at least some mathematical knowledge, and although there is no reason to suppose that it had to be gained at a 'school' rather than in a mason's yard, it is probable that some architecti also underwent formal theoretical training. Even if Vitruvius' course of instruction was intended for his ideal gentleman architect²¹¹, it is likely that some budding architecti, especially perhaps the ingenui²¹², used both his and other writers' manuals on architecture to acquire the sort of theoretical knowledge that is taught to architectural students today. Not that we should imagine that there were regular 'schools' for student architects. It is true that Severus Alexander is said²¹³ not only to have paid regular salaria to, among others, rhetoricians, mechanici and architecti, but also to have provided them with auditoria, but this information, which comes from a 'suspect' life, raises certain doubts, not least in respect of the auditoria²¹⁴. The architectus magister of Diocletian's price edict²¹⁵ need not have been a 'teacher' in our sense of the word; nor do the fourth century constitutiones²¹⁶ which gave exemptions to, among others, architecti and their students necessarily imply that the latter underwent formal schooling, although it is noteworthy that they were required to have had a taste of 'liberal studies'. It is unfortunate that inscriptions rarely .

give any clue to the age of a particular architectus. It is interesting, however, that the only civilian architectus whose age is specifically recorded died when he was only 26 years and 50 days old, by which time he was already an architectus Augusti²¹⁷. One can only speculate how long his training lasted and what form it took.

There is almost no firm evidence for the remuneration of architects; Diocletian's edict fixes the amount to be paid for the teaching, not the practice, of architecture²¹⁸. The Greek building accounts show a great variety in the amount and method of payment, some ἀρχιτέκτονες earning an official salary, other being paid per day less than a sculptor. The amount and form doubtless depended on numerous factors, including the nature of the duties and the reputation of the ἀρχιτέκτων²¹⁹. Cicero²²⁰ writes that architecti were distinguished from manual workers in that they were not paid a wage, and it is possible that some received only a token honorarium, especially, perhaps, when working on a public project in their native city. But although this may have been true of men like Vitruvius, the latter makes it clear that other architecti took a different view²²¹. And after all, no architectus whose main, perhaps only, source of livelihood was his 'profession' could have afforded to provide his services without first being assured of his reward, and I doubt if many of those recorded on inscriptions would have regarded the receipt of a wage as the social stigma that it was in Cicero's eyes. Finally, we cannot determine whether the profession was lucrative or not. It has often²²² been classed as such on the basis of a poem of Martial²²³, but that seems to me to be a false interpretation; Martial is surely saying that architecti needed to be tough and hard-headed; the pecuniosae artes are only those of the citharoedus and choraules. Huge sums of money, however, were certainly spent on buildings, both public and private²²⁴, and although it is not clear into whose pockets most of it went, one can scarcely doubt that, provided that he was independent, the architectus

of such projects received a considerable share, especially if he were also a contractor. On the other hand, many of the epigraphic examples of 'architects' display no sign whatsoever of any wealth, and as is the case with so much of the discussion on any aspect connected with architecti in the Roman world, it is extremely dangerous to make generalizations.

CHAPTER 5

The Role and Composition of the Colleges

"Not only were there no Guildhalls in antiquity, there were no guilds, no matter how often the Roman collegia and their differently named Greek and Hellenistic counterparts are thus mistranslated. The collegia played an important part in the social and religious life of the lower classes, both free and slave; they sometimes performed benevolent functions, as in financing burials; they never became regulatory or protective agencies in their respective trades."¹ It is important not only that we should recognize the facts outlined here by Finley about the function of the collegia but also that, having recognized them, we should not relapse into employing terminology that continues to suggest concepts associated with the mediaeval guilds². I shall, therefore, generally use the term 'colleges' to describe the various 'associations' that were the collegia, corpora, sodalicia etc. of the Roman world³.

At the end of the last century, Waltzing demonstrated that there was no evidence whatsoever that the colleges existed to promote or protect the 'professional' interests of their members⁴. Although the colleges are not exactly comparable to the working men's clubs of today, the benefits of membership were essentially those of personal pleasure and privilege - the sharing in banquets and handouts, the provision of a decent burial, and, on a more abstract level, the sense of belonging to a small and distinct 'community'⁵ which played a larger role in the life, political and social, of the whole community outside than most of the members would have played in an individual capacity⁶.

In the same way, there is no evidence that in the first three centuries of the Empire labour was provided by the colleges qua colleges.

It is commonplace to read that "specialization among workmen had become rather highly developed by the first century A.D."⁷ and that this is reflected in the names of the "guilds" which provided "the means to construct rapidly and well"⁸. It is true that inscriptions produce a large number of terms that describe men connected with specialized aspects of building work - fabri intestinarii, pavimentarii, subrutores, λευκουργοί, λιθοξόοι, ξυλουργοί etc. - and that many of these terms are found in the names of individual colleges. Several cautionary points, however, must be made here. First, we should not assume that, because separate terms existed to describe the infinite variety of work that needed to be executed on a building, the men of whom those terms were used were capable of executing only those types of work. There is no reason why, for example, a furniture-maker should not also have been employed on the carpentry involved in building nor why a bricklayer should not also have dressed stones⁹. We might remember that a man of whom the participle ἀρχιτεκτονῶν was used was also a τεχνεὺς and χρυσοχόος¹⁰, that a second ἀρχιτέκτων¹¹ was also an ἀρχιψαγρέας and that another man is described as a lapi(darius) or lapi(cida) on one side of his tomb and as a sculptor on the other¹². And as Burford has recently suggested¹³, the comprehensiveness of the list of workers who were exempted from munera in the fourth century¹⁴ is perhaps an indication of legal completeness rather than extreme specialization.

Secondly, it is only in Rome that we find a large number of colleges in whose titles these specialized terms figure. Other towns might boast one such specialized college¹⁵, but there is no reason to believe that outside Rome building work was undertaken by specialized gangs incorporated in specialized colleges. It seems that in general if a 'building worker' belonged to any college it was probably the collegium fabrum or collegium fabrum tignariorum¹⁶. Perhaps the best illustration of this is the city of Ostia, which had to our knowledge only one college,

the cft0, whose members were specifically connected with building work.

At Rome itself, there are several colleges that might be connected with various aspects of building¹⁷: the cftR, fabri aerarii¹⁸, conlegium fabrum ferrarium, fabri intestinarii, collegium marmorariorum, collegium pavimentariorum, conlegium sectorum serrarium, collegium structorum¹⁹, corpus subaedianorum²⁰, collegium subrutorum²¹ and the vectuarii²².

Most of these colleges are attested in the first three centuries of the Empire, during the 'free' period. It is no coincidence, however, that we have more information on the cftR than on all the other 'building colleges' together. A study of its composition, and of that of the cft0²³, reveals that its members, or at least many of them, were probably 'employers' rather than 'employees'²⁴; its very size - around 1300 in the second century - suggests that it was the major college connected with building work, and its members were not simply the specialist 'carpenters' that they are often termed²⁵, but were engaged on all aspects of building²⁶. Although the very existence of the other 'building' colleges would indicate that there were at Rome sufficient numbers of men of a certain 'speciality' to warrant the formation of separate colleges, the *raison d'être* in many cases was purely social, sepulchral or religious²⁷, and the nature of the cftR and cft0 in the early period indicates that the lack of evidence until the fourth century that the individual colleges themselves provided the basis of the labour is not simply accidental.

Thirdly, we must not assume²⁸ that all workers were members of a college. It is probable that colleges charged both an admission fee and a regular subscription, and college officials were expected, or even required, to make other financial contributions²⁹. Few precise figures are known, but in one case the admission fee was 100 sesterces and an amphora of wine and the monthly payments amounted to about 15 sesterces per year³⁰. It is possible that membership was beyond the reach of many workers; certainly the cftR and cft0 seem to have been somewhat exclusive.

Moreover, it seems that slaves were not generally admitted to 'professional', as distinct from funerary or religious, colleges³¹, while if it is true that much of the unskilled labour employed on building work was casual it is likely that those workers too were not incorporated in a building college. There is no doubt that the methodical Romans often divided up a projected building into several sectors, and it is probable that within each sector the work was broken down into small component parts³². But that does not necessitate the "division of opera publica by guilds" that MacMullen postulated³³. Workers could be regimented and disciplined to carry through the work on a building without necessarily belonging to a college.

The commonest and most widespread colleges to which men connected with building could belong were the cf and cft. Waltzing argued³⁴ that the membership of these two colleges was identical - "constructeurs en bâtiments" - and the titles synonymous, but although this thesis is superficially attractive³⁵, it has one major weakness. If it is indeed true that smiths, ivory-workers etc. did not belong to the cf, we would expect to find examples of their individual colleges, but except at Rome there is a noticeable paucity both of colleges of particular types of fabri³⁶ and of colleges of fabri-type workers, such as goldsmiths and marble-workers³⁷. The town of Ravenna provides a good case in point. Despite its importance as a seaport, Ravenna, unlike Ostia, Pisa and Arelate, had to our knowledge no collegium fabrum navalium³⁸ but it boasted the largest cf known to us, with at least 28 decuriae³⁹. The comment of Bormann⁴⁰ on this large number is interesting: "mirum non est in eo oppido, quod erat statio classis praetoriae". Obviously we cannot exclude the possibility that there was a separate collegium fabrum navalium of which evidence has simply not survived⁴¹, but it seems possible that here is one case at least where the members of the cf were not merely "constructeurs en bâtiments". And although it is true that

it is its fire-fighting duties that largely account for the fact that the evidence for the cf is common and widespread, there are several other examples which also suggest that its basic membership was not limited to building workers. One might note especially the general lack of 'industrial' colleges in towns where the cf is recorded on at least seven occasions⁴². Ambrosino⁴³, on the other hand, argued that the cf was the general category of which the cft and other colleges were specific elements, but the arguments which he advanced for what Degrassi⁴⁴ termed a "seductive" theory can be quickly shown to be without firm foundation. First, the cf is not found only in "small centres" where there would not have been enough workers in each specific category to form separate colleges; Ariminum, Mediolanum and Ravenna, which are not among the towns named by Ambrosino, can hardly be included in such a category. Secondly a small potential membership was not necessarily a hindrance to the formation of a college; the lenuncularii pleromarii auxiliarii at Ostia had only 22 members in 200⁴⁵, and there are less than 40 names of members on a list of dendrophori at Luna⁴⁶. Finally, the cft is itself found in several small centres, such as Allifae and Tolentinum⁴⁷; it is scarcely satisfactory to suggest that its occurrence in such places was a result of the particular conditions of local industry⁴⁸. But however one resolves the problem, it is certain that 'builders' formed the bulk of the cft⁴⁹ and probable that they at least provided numerous members of the cf.

Of the other colleges that may have been connected with building, none is found commonly, and occasionally there were local reasons for the existence of a particular college. Associations of marmorarii are found in Catania, Taurinum and, probably, Baetica⁵⁰; the presence of a local, or at least neighbouring, marble quarry⁵¹ probable swelled the numbers of marmorarii in those areas and led to the formation of a college. The sectores materiarum at Aquileia⁵² probably lived in an area of good timber

supply⁵³. And a local stone quarry may have given the impetus to the formation of a statio serrariorum Augustorum at Italica⁵⁴. The reason for the formation of other specific colleges, however, is beyond recovery. There may have been stone quarries at Cemenelum in the Alpes Maritimae, where we find lapidari Alman[t]icenses⁵⁵, but the presence of that college across the mountains in Arelate⁵⁶ is more difficult to explain. Local quarries may also account for the formation of other groups of lapidarii⁵⁷, but it is hard to explain the existence of subaediani in widespread parts of the Empire⁵⁸; their nature, however, is extremely doubtful and we cannot be sure that they were 'builders'⁵⁹. In the provinces in the hellenized area of the Empire, there are comparatively few professional colleges⁶⁰. Again, some of the 'building' colleges, especially those of stone-workers, were probably formed because of special local conditions⁶¹, but in other cases it is not clear whether a particular group had a permanent or only temporary character⁶². Although there are a few groups which might have been a permanent source of building labour⁶³, in general there is no evidence that the colleges in the Greek East were in themselves the main suppliers of labour any more than were their counterparts in the West.

Of the various building colleges, only the cft0 consistently provides evidence of the economic status of individual members. We know the names of probably 28 magistri quinquennales in the cft0. In 14 cases⁶⁴, the relevant inscription is such that we would not expect to find on it any details about the magistrate. Of the other 14, however, no fewer than 7 were Augustales or seviri Augustales⁶⁵, a position which required the holder to possess not a little money⁶⁶; of these 7, moreover, one⁶⁷ provided his son with enough wealth to become patron probably of the fabri navales, while a second⁶⁸ had served locally as a lictor and also held the position of Augustalis at Aquae Sextiae, to where he presumably retired after making his fortune at Ostia. Another magister⁶⁹ had not

only been a local apparitor in several capacities but also gave 50,000 sesterces to the city in recognition of the honours paid by the council of Ostia to his son, who had risen to the rank of eques. Two more⁷⁰ were local decuriones, and although that position was in the second century at Ostia no longer the preserve of the aristocracy⁷¹, its holder needed to be a man of substance. Moreover, one of these two⁷² was also an eques Romanus, and the other⁷³, who was awarded the decurionatus ornamenta, gave 50,000 sesterces to the city and was the father of Roman knights and the father and grandfather of local decuriones, whose careers were probably launched by his money. Of the other four, one held office also in the collegium fori vinari⁷⁴; one had the money to raise a dedication to Mars⁷⁵; one had a statue erected in his honour by the cft0 ob merita eius, which presumably implies beneficence on his part⁷⁶; and the last was wealthy enough to afford the luxury of a sarcophagus⁷⁷. In most of these 14 cases, the men concerned had no known connection with any other college. Many of the 28 magistri, moreover, were avowed freedmen⁷⁸, and most of the rest appear to have been of libertine origin. As far as one can judge, the majority were self-made men whose wealth came from their activities in the building trade. Nor was it only the magistri in the cft0 who could boast any wealth. We have details of 3 less senior officials, and although in two cases⁷⁹ there is no reason to suppose that either man was particularly rich, the third⁸⁰, a decurio, was also an Augustalis quinquennalis and could afford a sarcophagus. Several of the magistri, moreover, are known to have held lower posts in the cft0⁸¹, and there is no reason to assume that any of the others were made 'honorary' magistri in the college simply because of their wealth. Finally, although most of the evidence is to be dated to the period between the start of the reign of Marcus Aurelius and the death of Septimius Severus, we might note that of the magistri who were Augustales one held office in the 140's and another in the late 230's⁸²,

another held office probably in the late first century⁸³, while a fourth was magister in the second lustrum of the college, in the 60's⁸⁴. And since the major period of public building at Ostia fell in the reigns of Trajan, Hadrian and Antoninus Pius⁸⁵, from which we have almost no evidence of the cftO, it would seem that the building trade was prosperous for members of the college at all periods until the economic decline of the third century.

The much more limited evidence of other building colleges suggests a similar picture. Dedications to deities made by 5 magistri or former magistri of the cftR are known⁸⁶; one of them also made a monetary distribution of an unknown size to the college's officials⁸⁷, another erected an ara cum superficie aerea (Plate XI, fig. 3)⁸⁸. The funerary inscription of a decurio of the cftR suggests that he was able to afford a large monumentum. And I would suggest that L. Pacatius Tyrannus, honoratus collegi fabrum tignariorum Romanensium, who was honoured by the council and others at Capena in 162 ob merita eius⁹⁰, was the homonymous decurio of the cftR recorded in 154⁹¹. Perhaps he retired to Capena after a successful working life in Rome. Although members of the cftR had little if any hope of social advancement at Rome, it seems that the prospects offered by their work were good.

We have details of about 9 magistri and 10 ordinary members of the cft in the rest of Italy and the provinces. The position of sevir Augustalis is known to have been held by two magistri, one of whom was also a patron of the cft⁹², and by two ordinary members⁹³. Another magister⁹⁴ may also have eventually become a patron of his college, while an ordinary member at Arelate⁹⁵ boasted a very grand tomb, although it is true that he was a specialist in hydraulic works rather than building. In the cf, 5 magistri⁹⁶ and 3 decuriones⁹⁷ are known to have been seviri Augustales. One of the magistri⁹⁸ was also a patron of the cf and was awarded the ornamenta decurionalia of his native city of Pisaurum. His eximia

liberalitas towards the college is illustrated in his distribution to every member of 50 sesterces, together with cakes and wine. And there are also two examples⁹⁹ of men rising from the ranks of the cf to become patrons. The relatively few inscriptions of other building colleges provide no evidence for the economic status of their members, although it should be noted that many of them record dedications by the whole college rather than relate to individual members. One can conclude, however, that some college members were far from poor, and in most cases, their wealth appears to have come from building.

It is clear that in general slaves were ineligible for membership of the professional colleges¹⁰⁰. There are, on the other hand, numerous definite examples of liberti in the building colleges, especially in the cftR¹⁰¹ and cftO¹⁰²; liberti also frequently held the post of magister quinquennalis, even in the early lustra of those colleges¹⁰³. At the same time, there are also several examples of ingenui, both ordinary members and officials¹⁰⁴. It is difficult, however, to determine the exact status of the majority. On most inscriptions, status is not indicated, and it might be argued that the absence of indication implies that the majority were of freed rather than free origin, especially when a single inscription records the status of one man but not of others¹⁰⁵. On the other hand, one might argue both that there was not enough room on the alba for status indication¹⁰⁶ and that there was an increasing tendency in the second century even on the part of ingenui to omit it. We should also note that Latin cognomina predominate among members of building colleges of which we have much evidence. This is especially true of the cft and cf in Italy and the provinces; only about 16% of their known members bore non-Latin cognomina. But it is also true of the cftR (46%) and cftO (35%), and in those two colleges non-Latin cognomina are much less common among the lower officials and ordinary members (42% and 32%) than among the magistri (53% and 50%). It would

be dangerous to draw firm conclusions from these figures¹⁰⁷. They might suggest that the proportion of actual freedmen in the building colleges, even at Rome and Ostia, was less than that of ingenui. But we must note that many of the Latin cognomina borne by the members of these colleges were common slave names¹⁰⁸. Although it is a possibility that freedmen were more likely to become magistri of the cftR and cftO than ingenui, the composition of the cftR and cftO at least was probably a broad mixture of free and freed, while many of the 'free' may well have been libertini.

The cftR and cftO provide much evidence for the nature of their membership as a whole, but even that is far from adequate¹⁰⁹. Most of the cftR evidence refers to officials of the college; we have only one list of rank-and-file members¹¹⁰. The majority of recorded names, moreover, lack praenomina. For the cftO, we have one album of members¹¹¹, but it is not quite complete and again praenomina were not recorded. We are, therefore, unable to make the sort of comparisons that are possible in the case of the lenuncularii tabularii auxiliarii of Ostia, for whom three lists of members, with praenomina, survive, two of them virtually complete. Some points of interest, however, can be made.

The cftO album, which is dated to 198, contained room for the names of about 550 members, including decuriones but excluding honorati and, probably, the 3 magistri¹¹²; the nomina of 323 survive. There are 146 different nomina; six are Imperial nomina¹¹³, which are borne by 70 members; of the other 140, 51, covering 164 members, occur at least twice, but there are 89 men whose nomen is found only once on the album. The latter seems to me to be a very high proportion of the total membership (23%). Moreover, of the 89 nomina, 32 are found on 4 or less other inscriptions of Ostia (including examples of women), a further 19 are not found on any other Ostian inscription¹¹⁴, and only 2 (and these not certainly) appear on other inscriptions of the cftO¹¹⁵. It is noteworthy

too that 17 of the nomina found only once on the cft0 album occur at Ostia on 10 or more other occasions¹¹⁶, while several are also relatively common in other Ostian colleges¹¹⁷. Although some of this group may have been ingenui or freedmen who worked for large 'concerns' operated by men who were not their relatives or patrons, I would suggest that we are also to detect here many small 'concerns', with a single free or freed workman assisted perhaps by a few slaves. A similar picture emerges for the cftR. Of the 164 known members with non-Imperial nomina, 77 (47%) have nomina found only once in the college, and many of these are uncommon even at Rome¹¹⁸. It is true that most of the evidence relates to officials of the cftR, and one might reasonably suppose that magistri certainly and decuriones possibly were generally prosperous enough to have had working under them at least one libertus who might have been only an ordinary member. But the lack of an album cannot totally explain the high figure; 14 of the 22 members on the sole decuria list¹¹⁹, including the decurio himself, had combinations of praenomina and nomina that do not recur on that list.

The 51 non-Imperial nomina which occur more than once on the cft0 album are distributed thus: twice - 29; three times - 8; four times - 6; five, seven and nine times - 1 each; eleven times - 2 (the very common Cornelius and Valerius). This might suggest that the number of very large concerns in the cft0 was not high¹²⁰. Three of these nomina repay closer study. The nomen Salinator is found only at Rome and Ostia and according to Meiggs¹²¹ "is most easily explained as arising from the freedom given to slaves employed in the salt-beds". Although there are 24 examples of it at Ostia, none occurs in any college other than the cft0, where two appear on the album and one was a contemporaneous magister¹²²; can this simply be coincidence? The three were perhaps part of a single concern. The nomen Larcius provides a similar instance, though for a different reason. There are 4 Larcii on the album, but

this nomen is not at all common at Ostia¹²³, and the sole example in another college is of a Roman senatorial patron of the dendrophori¹²⁴. The third and most noteworthy nomen is Egrilius, one of the commonest at Ostia apart from those of the Imperial houses¹²⁵. In colleges other than the cftO, it occurs only among the dendrophori¹²⁶ and on the list of contributors for the enlargement of a temple in 140¹²⁷, where there are 43 examples. On the other hand, it occurs 9 times on the album and twice on other inscriptions of the cftO, both of them to be dated to the late second century¹²⁸. The Egrilii were a wealthy family at Ostia. Are we to conclude that much of its money was invested in the building trade?¹²⁹ Or were these 11 working for a concern (or concerns) on their own behalf?¹³⁰ In either case, their appearance in large numbers in the cftO at approximately the same period and their absence from other 'industrial' colleges is striking. Since our evidence for the cftO is mainly confined to the late second century, these examples are by no means proof that some families or familiae had an exclusive connection with a single trade, but they perhaps carry that suggestion¹³¹.

Many of the examples of recurring nomina on the cftO album provide indications of a father-son or patron-freedman relationship. In 12 cases¹³², the nomen occurs more than once in a single decuria; several nomina qualify at least twice in this category, so that there are 19 examples covering 40 men. Although it cannot be proved that two men with the same nomen in the same decuria were connected by blood or patronage, we might note that on the single decuria list of the cftR a father-son relationship is specifically recorded twice while another example of either combination of names appears lower down the list, where we might detect a freedman¹³³. In 3 of the 19 Ostian examples¹³⁴, the nomen appears neither elsewhere on the album nor on other cftO inscriptions, while in two of those cases the relevant cognomina strongly suggest some sort of connection¹³⁵. In 4 of the 19 examples, moreover¹³⁶, the nomen

is recorded for successive members of the decuria, who perhaps joined at the same time and worked for the same concern.

There is no reason, however, to assume that a son or libertus was necessarily enrolled in the same decuria as his father or patron. While all but 3 of the 15 known decuriones on the cftO album have nomina that recur on it¹³⁷, only 2 of the 12 with non-Imperial nomina have an ordinary member in their own decuria who bears their nomen¹³⁸; and to these we can add the decurio on the single surviving cftR decuria list¹³⁹. It seems to me unlikely that at least 6 and possibly 10 of the 15 contemporary Ostian decuriones did not have relatives or liberti in the rest of the college; we might note that, excluding the decuriones, there are 31 non-Imperial nomina which occur more than once on the album but not in the same decuria. In one case, the cognomina strongly suggest some sort of connection¹⁴⁰, and perhaps there was one in others also. And in the cftR, in addition to the few examples of the specific record of a father-son relationship within the same decuria¹⁴¹ and where the decuria is not known¹⁴², we should note that on each of the 3 lists of decuriones there is a high proportion of recurring nomina, necessarily in different decuriae¹⁴³.

There are also several examples in both the cftR and cftO of nomina that recur over a period of many years. A Q. Numisius was a magister in lustrum IX and XXIII of the cftR and a C. Fictorius in lustrum II and XI¹⁴⁴; the later C. Fictorius was also a C(aii) l(ibertus), and was perhaps a freedman of the earlier. There are also six cases where the nomen alone recurs¹⁴⁵. And of the 25 different nomina recorded for members of the cftO outside the album, 18 are found on the album as well. Among these is the nomen of a magister who held office about 50 years before the erection of the album although admittedly his nomen is relatively common at Ostia anyway¹⁴⁶. The uncommon Tadius, however, is not only found on the album but was also the nomen of a magister

possibly of the cftO in 173¹⁴⁷. Moreover, all but 2 of the nomina of the known second century magistri recur on the album, were there are several examples of most of them. There may well have been connections in many of these cases, the same concern operating over a lengthy period. One of the exceptions, however, the rare Faianius¹⁴⁸, is interesting since it was borne by a magister who held office probably four years before the erection of the album¹⁴⁹; it is unfortunate that because of the incompleteness of the album, we cannot definitely prove that no freedman of his belonged to the college¹⁵⁰. We should also note that the nomina of neither of the known first century magistri of the cftO are found on the album¹⁵¹, and might compare the fact that of the 25 non-Imperial nomina on the almost entirely first century list of magistri of the cftR¹⁵², only the very common Caecilius, Numisius, Statilius and Valerius recur on second century inscriptions of the college. Again in the cftO, the nomen of one of the 3 magistri of lustrum XXXIII (c.220-c.228) and of the one known magister of lustrum XXXVI (c.235-c.243) are not found on the extant part of the album of 198¹⁵³; and among the 27 examples of recurring non-Imperial nomina in the cftR, the recurrence occurs on the same inscription in 9 cases, and all but 2 of these nomina are otherwise common at Rome¹⁵⁴. Finally, there are a few examples where a male relative of a member of one of these colleges is recorded on the same inscription but not as a college member¹⁵⁵; the circumstances of such silence might suggest that the man concerned was not a member¹⁵⁶. In his account of the Ostian colleges, Meiggs wrote¹⁵⁷: "In the late Empire the guilds became hereditary and members were tied to their trade. Such compulsion was new, but it had long been customary for sons to follow fathers in the guilds. It was also common for families and their freedmen to follow the same trade." Although, as I have shown, we are certainly able to document for the cftR and cftO the statement about sons and freedmen, I would suggest that the situation was far from approaching the rule that

was enforced by the government after the 'enslavement' of the colleges in the late Empire. We must be especially careful to bear in mind the last examples that I have quoted and not construct a picture of family businesses in the building trade going back over several, or even only two, generations¹⁵⁸.

Although I would re-emphasize that the available evidence is not such as to allow firm conclusions to be drawn, an outline sketch of the cftR and cftO can be attempted. There were undoubtedly men of considerable wealth in both colleges. And although the recurrence of a particular nomen in the same college at the same period does not necessarily indicate that its bearers worked for the same concern, the total evidence does suggest that some concerns were by no means small, concerns which could take large contracts and for which many men worked, both freed and slave¹⁵⁹. Although it is possible that such concerns operated mainly or solely in the field of private building, I would suggest that their very existence, attested even in the Severan period, makes it probable that they were also engaged for public contracts, both at Ostia and Rome. Local councils may have been obliged to rely on private builders. Could the Emperors, whose own familiae, I have argued¹⁶⁰, were not sufficient to provide all the necessary building labour, afford to ignore such a potential source of labour and expertise? The fact that one magister of the cftR in the late first or early second century called himself or was called by others redemptor operum Caesaris¹⁶¹ does not prove that it was the regular practice for Imperial projects to be let to private contractors, either then or in the Severan period, but it is another indication that such might be the case. This side of the picture, however, has long been recognized¹⁶². But it also appears that numerous members worked for concerns which boasted only two or three college members at any one time. Although there is not necessarily a direct correlation between that and the total size of the concern¹⁶³, some of these were

perhaps of only a moderate size. Can we perhaps compare this section of either college with the plebicula of Rome whose livelihood, according to Suetonius¹⁶⁴, Vespasian declared himself keen to preserve? Moreover, many members, at least of the cftO, seem to have been their concern's sole representative in the college; perhaps they ran small carpentry workshops in which few, if any, slaves were employed. A faber tignuarius need at one end of the scale have been only a simple carpenter¹⁶⁵; it is surely as dangerous to define them generally as "builders"¹⁶⁶ as to regard them as "woodworkers" perhaps operating "furniture factories"¹⁶⁷. In defining them as "builders", Meiggs quotes a passage of Gaius: 'fabros tignarios' dicimus non eos dumtaxat qui ligna dolarent sed omnes qui aedificarent¹⁶⁸. We should note, however, that the phrase used is not simply non eos ... but non eos dumtaxat; the overall nature of the composition of these colleges must not be forgotten.

Finally, some interesting comparisons can be made between the cftO and the lenuncularii tabularii auxiliarii of Ostia¹⁶⁹. Wilson¹⁷⁰ quoted 12 examples of combinations of praenomina and nomina that appear at Ostia only among the lta and there on at least three occasions; they cover 92 (23%) of the names recorded on the two complete alba. And although he has slightly cheated, since a few examples of about half the nomina are found on other Ostian inscriptions without any praenomen¹⁷¹, his general point still stands; the figures perhaps indicate that some families or familiae specialized in this one occupation. The cftO album, however, produces a different picture; although 20 nomina on it are found nowhere else at Ostia, these cover only 21 of the 323 members whose nomina are known¹⁷². Further examples might emerge if we had the additional evidence of praenomina but it is unlikely that the final proportion would match that of the lta since the average frequency with which nomina recur on the cftO album is not as great as among the lta¹⁷³. From his statistics, Wilson concluded that "in each case, one or perhaps two were employers,

the remainder freedmen employees"¹⁷⁴. This is not unlikely, although it is also possible that individuals freed by the same patron operated their own concerns. It would be reasonable, however, to extend this group to embrace nomina that are found commonly on one college's album even if they do occur on other Ostian inscriptions. Again there would be a striking disparity between the lta and cft0. Among the lta, there are 9 examples of combinations of praenomina and nomina occurring at least 4 times in 152¹⁷⁵ and 10 in 192¹⁷⁶; these examples cover 55 of the 109 members in 152 (50%) and 113 out of 229 in 192 (49.5%)¹⁷⁷. Although on the cft0 album there are 14 examples of nomina that recur at least 4 times¹⁷⁸, the 14 significantly cover only 82 of the 263 members with non-Imperial nomina (31%), and this difference between the two colleges would doubtless be further accentuated if we had praenomina for the cft0 album. It would seem that there was in the cft0 neither the same amount of 'family specialization' nor as many large concerns proportionately as within the lta.

This picture becomes even clearer if we consider it from the opposite side. I have noted¹⁷⁹ that the nomina of 28% of the extant members on the cft0 album do not recur on it; comparative figures for the lta are: in 152, 27 out of 125(22%) and in 192, 22 out of 257(9%). It is possible that these members worked for men with whom they had no connection by blood or patronage. But the evidence suggests that while at one end of the scale a greater proportion of the lta than of the cft0 worked in large or very large concerns, at the other end a much higher proportion of the cft0 membership worked in small, even very small, concerns. Perhaps a reason for this difference is to be found in the difference in the nature of the occupations involved. Meiggs plausibly suggested that the lta were the owners of tug-boats which towed merchantmen to their berths¹⁸⁰. If this is correct, their capital outlay and daily running costs are likely to have been high, 'partnerships' may have been necessary and

common, and there were probably several positions of responsibility within a particular concern which needed to be filled by non-slaves, who were eligible to become college members. In such conditions, it might perhaps have been difficult for a small concern to remain economically viable. A simple carpenter or even a small builder, on the other hand, might have incurred only limited capital and daily expenses. And even if they had a working force of slaves, small concerns of this type would have had few if any posts of responsibility to be filled by freedmen.

Finally, to support his statement about the "hereditary" nature of both the colleges and trades, Meiggs cites examples of combinations of praenomina and nomina found frequently on the lta alba of both 152 and 192¹⁸¹. He might have added that on both of those alba and on one of the fabri navales¹⁸² there are several examples of men specifically recorded as sons of other members¹⁸³. He omitted, however, to mention the examples quoted by Wilson, to which additions can be made, of numerous combinations found often on one album of the lta but not on the other¹⁸⁴. Wilson concluded that in such cases concerns were wound up or sold because the sons or grandsons of the men who founded them did not enter the business, though it is also possible that the founders did not have any sons or grandsons to take over from them. But in either event, although comparative evidence is not available for the cftR or cftO, these examples serve to strengthen the warning given earlier that we should not build up a picture simply of 'family businesses' in the building trade which went back over even only two generations. There were, I would suggest, many short-lived concerns as well.

It is difficult to determine how far the membership of the cft and cf in the rest of Italy and the provinces was comparable to that of the cftR and cftO. In addition to the fact that only about one quarter of the male names recorded on their extant inscriptions definitely refer to

college members, no single town provides enough information for us to draw more than general conclusions. Four points, however, are clear. They were the main colleges to which men connected with building work belonged¹⁸⁵; in some of the bigger towns especially, these colleges were large and flourishing¹⁸⁶; their membership consisted exclusively of ingenui and liberti¹⁸⁷; and some members at least, mainly officials but a few ordinary members also, were quite wealthy¹⁸⁸. Is it unreasonable to conjecture that a proportion, albeit of unknown size, of the members of these colleges were 'building contractors', men who had the resources, or were in a position to obtain them easily, to execute contracts of a substantial nature? If this is allowed, we might further assume that those contracts were for public as well as private work; for a local council would not have had its own permanent labour force on which to draw, and it would be natural to employ those whose experience of private building work was known locally, even though it may have been necessary to recruit some additional labour from outside, especially for small towns in which monumental public building was a comparative rarity, for unusually large projects or for highly specialized work. It is true that this is only a conjecture, based largely on the more abundant evidence for Ostia and Rome; it is also true that in the smaller towns of Italy and the provinces a greater proportion of the members of the cft and cf were perhaps of the more simple status of carpenter or small-time builder. But on a priori grounds, at least, I would suggest that it is not unlikely that among the members of the cft and cf there were building contractors of a type comparable to that which I have posited for Rome and Ostia.

CHAPTER 6

Building Workers

There are several problems involved in compiling, especially from epigraphic evidence, a list of the terms that cover the various types of 'building worker'. For example, a marmorarius might have had one of several functions - sculptor, decorator of capitals, or simply a general worker in marble¹; doubtless many marmorarii undertook various types of marble work. And similar considerations apply to the term lapidarius, as well as, to some extent, to the Greek λιθοργός, λιθοξόος etc.² Moreover, many of the men of whom this sort of term was used were probably individual craftsmen who mainly produced individual pieces of work such as funerary monuments and statues³, and even though they may also have been employed on purely building work such as decorative carving, I would suspect that they represent the upper end of the scale as far as 'building workers' are concerned. The same probably applies to skilled workers in materials other than stone - for example, tectores (stucco workers) and fabri intestinarii (joiners?) - whose employment on building was perhaps more regular. Of the 'heavy labourers', however, who dug foundations, for example, or even of the ordinary bricklayer, there is, not surprisingly, little or no information. But not only is the extant evidence top-heavy with the names of individual craftsmen; there are also some terms which should apparently be connected with building but whose precise significance is uncertain - for example, marmorarius subaedanus and collegium subrutorum⁴ - while one particular and very common term, structor, carries two distinct meanings, 'builder' and 'carver'⁵. There are also many men to whom no term is attached but who would appear to have been 'builders' either from the nature of the particular inscription⁶ or from the appearance of builders' instruments on their tombstones⁷. Finally, we might note that

it was not as common a practice to record one's occupation in some parts of the Empire, such as north Africa and perhaps Spain, as in others⁸. Any list that is compiled; therefore, will not only represent a mere fraction of those who contributed their labour to building work but will also inevitably include men who were not actually building workers but were active in allied trades⁹. Nevertheless, the evidence of 'building workers' is worth examination and provides information of a generally useful nature.

The majority of 'building workers' whose status is determinable from epigraphic evidence (apart from peregrini) seem to have been slaves or freedmen, which is perhaps scarcely surprising in view of the large influx of slaves into Rome and Italy during the late Republic. We might note, too, that in Plautus' Vidularia Dinia expected a slave, not a free man, when he was hiring a farm-labourer¹⁰; that Cicero alludes to buying a slave faber or tector¹¹; and that the gangs of silicarii, tectores and other opifices that were permanently kept for use on the maintenance of aqueducts both by private contractors during the Republic and the state during the Empire consisted of slaves¹². And it is usually a slave to whom passages about 'builders' in the Digest refer¹³. We should not assume, however, that all 'building labour' was slave or ex-slave. The attitude that for the free man manual labour and the hiring of one's services to another was ignoble was on the whole typical only of the upper classes¹⁴; there must have been a considerable body of relatively poor but free men, both in Rome and Italy, for whom manual labour, including building, provided the means of living. And as Burford rightly emphasized¹⁵, slave labour was not necessarily cheaper than free; slaves required constant maintenance whether they were working or not, whereas free men were paid only for the work which they had done. It seems, moreover, that free men comprised a not inconsiderable portion of hired farm labour, at least in the second century B.C.¹⁶. And ingenui were not ipso facto excluded from

municipal building *corvées* in the late Republic or early Empire¹⁷.

Finally, it is not unreasonable to suppose that the plebicula whose livelihood Vespasian is said to have guarded by not allowing the introduction of a labour-saving device included poor ingenui¹⁸. There is a danger of regarding free status as the prerogative solely of senators and equites; we must not forget that a man could also be poor and free.

There are isolated examples of free men among the 'building workers' recorded on inscriptions, even where there is no suggestion of libertine origin. At Eporedia, a fine memorial was erected in honour of T. Blandius T.f. Optatus, a marmorarius, and his wife and daughter¹⁹. At Rome, probably in the late Republic or early Empire, P. Fabius P.f. is described as both a lapi(darius) or lapi(cida) and sculptor²⁰; we might note, too, his tribe, Falerna, was not one of the four inferior urban tribes²¹. At Bologna, Q. Baebius Q.f. was a faber lapidarius²², while at Padua there is another example of a free lapidarius, T. Terentius T.f.²³. Finally, at Aquileia, the various instruments on the tomb of L. Alfius L.f. Statius suggest that he was connected with building, though admittedly perhaps as a 'technician' (surveyor?) rather than a 'worker'²⁴. It is perhaps no coincidence that most, if not all, of these men are to be dated to the late Republic or very early Empire. On the other hand, we should remember that the status indication came increasingly to be omitted from inscriptions of the imperial period, and it is possible that some of the examples of 'building workers' who appear to be dated to the late first or second century and whose status is not recorded were in fact ingenui²⁵. It would be unsafe, therefore, to postulate any chronological trend with regard to status. It is also possible that the actual number of monuments left by slaves and liberti and by relatively poor ingenui is disproportionately high and low respectively. A libertus at least had the proclamation of his freedom as an incentive to erect a memorial, while there was little or no reason, beyond family piety, to commemorate the poor ingenuus; a

freedman may also have had greater means at his disposal²⁶.

There are also several first and second century examples of 'building workers' outside Italy who bore the tria nomina, almost all of them in non-hellenized areas of the Empire. In some cases, it is plain that the man concerned was a local or at least a native of the province rather than an Italian emigré²⁷ and it is likely that this is true in most of the others also. It would be interesting to know whether their trade had been responsible for winning them their Roman citizenship and to what extent that citizenship aided them in their occupation.

Just as there are isolated examples of 'building workers' who were freeborn, so there is a little evidence that some achieved comparative wealth and success. To some extent, the mere fact that a man could afford his own memorial places him above the poorest of the poor; even if he needed to join a burial club in order to achieve it, he still had to pay a regular subscription²⁸. Many of the extant tombstones of 'building workers' are simple affairs, tabellae or grave stelae (Plate X, figs. 1-4), or occasionally an aedicula (Plate XI, fig. 2). There are also a few workers, however, who are known to have had the sort of grand memorial that proclaims a man's wealth. The marmorarius C. Clodius C.l. Antiochus shared a fine tombstone with his family at Regium Lepidum²⁹. And at Rome, K. Ἰούλιος Μίλητος, who was probably a μαρμαράριος, seems to have built himself a tomb which also incorporated a dining-room³⁰. The comparative wealth of some individuals is also attested in other ways. For example, at Tibur Eumachus, a marma(rarius) (sic) erected Lares at his own expense³¹, and the marmorarius P. Rutilius Syntrophus erected the marble base of a statue of Minerva in her temple at Gades³². At Lepcis Magna, the Nicomedian marmararius (sic) Asclepiades sculpted a marble relief in honour of Asclepius³³, and it is possible that a λιθοῦ[ργός] at Nicopolis-ad-Nestum, in Thrace, contributed towards the cost of a λέων καὶ βωμός³⁴. There are also indications of a more abstract kind. The marmorarius A. Arrius

Chrysanthus was an Augustalis at Puteoli (Plate XI, fig. 4)³⁵, and at Sena Gallica a materiarius, L. Pupius Buccio, was a sexvir³⁶. One of the four magistri vici who erected a portico at their own expense at Pisaurum was a structor, which I suspect has its 'building' connotation here³⁷. At Avdan, in eastern Caria, a τέκτων and a κέραμευς appear with a priest at the head of a list of fourteen names on a dedication to Zeus³⁸. And in Isauria, three masons (τεχνεῖται) gave 50 denarii from their wages, apparently voluntarily, towards the cost of a temple-wall³⁹. On the other hand, we should note that, although οἱ τέκτονες were included among the recipients of a banquet given in the reign of Hadrian by the priestess of the Μήτηρ Θεῶν at Histria, they figured only in the final category of recipients along with ὑμνοδοί, ἐροπλάτεια, and ἡρακλεισταί and did not receive the handout of two denarii given, for example, to councillors, doctors and teachers⁴⁰. This places the position of 'building workers' in general in a better perspective. One might expect to find individual examples of prosperity, especially perhaps among men who practised an individual art such as sculpture. But the ordinary 'building worker' was surely just another among the ranks of the many working poor. The younger Seneca alludes to the low daily pay of house-repairers and wall-builders⁴¹, and frescoes and reliefs of builders at work show them in short tunics, which seems to distinguish them, both socially and from the point of view of their function, from the contractor or 'technicians' such as architects, who generally appear in long tunics⁴². The ordinary building worker's standard of living would seem to be well summarized in a phrase of Martial, ofellae et faba fabrorum⁴³.

It seems to me idle to discuss whether men of Greek origin comprised the majority of 'building workers', especially at Rome. Apart from the fact that it has recently been shown by Solin that for Rome at least a Greek cognomen is by no means a certain indication of Greek origin⁴⁴, lack of evidence makes it impossible to determine the nature of the composition

of the slave or poor free population that probably provided the casual manual labour. As for the more permanent and skilled 'building' occupations, it is true that many marble workers in the west came from the Greek East⁴⁵, but this is hardly surprising since the majority of marble quarries were situated in that part of the Empire⁴⁶. We should note, moreover, that both the workers in the marble quarries of the Pyrenées and marble workers in the surrounding area seem all to have been of local origin⁴⁷; local resources usually breed local skills. And I have also suggested⁴⁸ that a not insignificant proportion of the collegia fabrum tignariorum, even at Rome and Ostia, was of purely local origin.

One would suspect that for ordinary local needs locals provided most of the 'building labour', not only for the heavy and possibly casual work but also for many of the more skilled jobs. This would be especially true when local or familiar material was being used. But if local labour was able to cater for ordinary local needs, what happened when a large public building project was undertaken? In large centres such as Rome and Ephesus, there was probably enough skilled labour to meet the demand. On the other hand, in cities where such projects were, if not a rarity, at least not a regular feature, it is not unlikely that local craftsmen would have neither sufficed nor been skilled enough. I have already noted the suggestion that in some cases skilled marble workers were despatched with the marble to areas that were not familiar with that material, at least until local craftsmen had been trained to work in it⁴⁹. Moreover, even where locally available stone was being used, the party financing the work may well have wanted, for various reasons, to bring in for the occasion some top-quality artists. And in any case, a large building project would of itself have attracted skilled workers (and probably casual labour also) from a wide area. Thus at Madauros, in Numidia, an inscription of about 366 records that artifices peregrini were summoned to work on the swimming-pool of the public baths⁵⁰. And in 66 Tiridates is said to have acquired

foreign artisans (δημιουργοί) to rebuild Artaxata by offering high wages⁵¹.

Numerous examples can be cited of individual craftsmen found outside their native city or province, and not simply in the very large centres which would have been an obvious magnet for skilled workers. Certainly there are examples at Rome of marble-workers from Asia Minor - Ἀνρήλιος Ἀγαθίας, a Syrian μαρμαράριος⁵², and Κ. Ἰούλιος Μίλητος, who came from Tripolis in Lydia⁵³ - while the Aphrodisienses at Rome are well known and documented⁵⁴. And at Portus, we find Γοργίας, a Nicomedian λευκουργός⁵⁵. But there are also numerous examples throughout Asia Minor, and especially in Galatia, of craftsmen from Docimium, in Phrygia, the quarries of which provided commonly used marble; some of these men have titles such as τεχνίτης and λιθουργός⁵⁶. A Nicomedian λιθουργός, Ἀσκληπιάδης, is found at Kefez-Keui, in Galatia⁵⁷; Πείων, a λευκουργός from Perge in Pamphylia, is found near Choma in Lycia, probably in the first century⁵⁸; and Χρήστος, a λιθουργός from Sinope, appears at Thermae Phazimonites in Paphlagonia, about sixty miles away⁵⁹. Within the provinces of modern Europe, Μάλλχος, a λιθουργός (sic) from Syria, is attested at Sofia⁶⁰; and the lapidarius Priscus, who was perhaps a native of Chartres (civis Carnutenus), made at least one dedication at Bath, possibly in the second or third century⁶¹. Stone-workers, however, do not provide the only examples. Μάξιμος was an οἰκοδόμος ξυλοεργός who came to Rome from Astacus⁶², two cities of which name are known, in Acarnania and Bithynia⁶³. Γάιος Βιάνορος, a δομοτέκτων, crossed the Black Sea from his home town of Nicaea, in Bithynia, to Nicopolis, in Moesia Inferior⁶⁴; and another δομοτέκτων, Ἀνρήλιος Θεόφιλος, a native of Mytilene, is found at Abydos, on the Hellespont⁶⁵. Their function was probably similar to that of Μάξιμος. An unpublished inscription at Nicomedia attests a ξυλογλύφος from the distant Syrian town of Aradus, although he was possibly a wood-carver⁶⁶. And finally Pompeius Catussa, a tector who was a cives

Sequanus, is found at Lugdunum⁶⁷. Many of these men had clearly travelled considerable distances from their place of origin. Presumably their motivation was partly a hope of greater prosperity, although that is somewhat difficult to believe in one or two of the examples cited⁶⁸. We might note the suggestion of Bean and Mitford that the numerous craftsmen from Selge, in Pisidia, who are recorded in Cilicia were attracted to work and settle there "by the prosperity which Antiochus' enlightened government had brought by the mid-1st century of our era to a country previously both remote and backward"⁶⁹. On the other hand, it would be interesting to know how many were compelled to move by lack of opportunity in their native towns. And I wonder how many skilled craftsmen were like Ζήνων, a sculptor from Aphrodisias, who on his tombstone at Rome records that he had worked by πολλὰ ῥοτεα πρ[ὸς?] ἑμαῖσι τέχναισι διελθών⁷⁰.

Movement of craftsmen in the ancient world is often associated by scholars with shortage of skilled labour⁷¹, but it seems to me that caution should be exercised here. For example, the story of the marble tiles which no workmen were able to replace on the roof of the temple of Juno Lacinia near Croton, in southern Italy, from which they had been stripped by one of the censors in 173 B.C., is evidence not so much of a shortage of skilled labour - after all, there were no workmen anywhere, even in Rome, capable of doing the job - as of the lack of the requisite technology⁷². And the Aphrodisienses doubtless became resident in Rome because of the better opportunities offered by the capital. We should remember too that, especially for craftsmen who specialized in expensive materials or unusual techniques, there may not have been a sufficiently regular supply of work in any one place, so that they were obliged to move around⁷³. It was not simply the case that work chased the craftsmen; craftsmen clearly also had to chase the work. In large centres, there was probably enough regular work both for the ordinary builder and the specialist craftsman; not only was there a large amount of public building

executed but private work - house building and, especially, repair, granted the frequency of fires - must also have provided a large amount of employment. We must be careful not to assume, however, that this led in the large cities to a considerable degree of subdivision of labour and specialization within each craft; the shakiness of this view has recently been well demonstrated by Burford⁷⁴. On the other hand, we should note Xenophon's remark that in small places the same man was obliged to make not only beds, doors, ploughs and tables but also houses, and even then remained only on the bread-line⁷⁵.

There is very little evidence for the method of recruitment of 'building workers'. The ordinary labourer such as the bricklayer or cement-mixer probably worked only on building-sites anyway and may have been hired on the spot or perhaps, in the case of slaves, through their masters. Our sources also record isolated instances of the central government providing labour for Imperial projects, through the use of convicts⁷⁶ or prisoners⁷⁷, although the enormous scale of the two works concerned suggests that such grants of labour were extraordinary. It is probable that the heavy labour was organized into 'teams'. Vitruvius states that during paving operations rubble was to be rammed down by gangs (decuriae)⁷⁸, and in another passage we read that decuriae hominum mixed mortar for Greek plasterers (tectores)⁷⁹. And in his description of the preparatory work of road-building, Statius clearly has in mind several gangs of men engaged on different tasks⁸⁰. But although it is likely that the work on a large building was both divided into sections and divided within each section by type of work, it is worth emphasizing again that there is no evidence that the work was then simply allocated to various collegia on the basis of those divisions, at least in the first three centuries of the Empire⁸¹.

Craftsmen, however, such as carpenters and masons, were probably employed not only on the building site but in workshops as well, even on

work not specifically connected with building. A fragment from a monumental altar which was probably erected by the collegium fabrum tignariorum of Rome seems to depict a scene in a carpentry workshop in which a group of eight men are working on various items of furniture (Plate VIII, fig. 1)⁸²; one might well imagine that they also undertook carpentry work on buildings. Numerous grave stelae depict individual stone-masons at work⁸³, and archaeology has revealed several examples of what appear to have been mason's workshops⁸⁴. Probably in most cases several masons worked in one shop which was owned either by one of them or by another party, possibly their master or patron. There are also a few examples of what might be termed shop signs. At Palermo there is a bilingual sign of a cutter of inscriptions⁸⁵; at Pompeii we may have the sign-board of Diogenes, a structor⁸⁶; and at Rome a notice advertised the production of a variety of work: D.M. titulos scribendos vel si quid operis marmorari opus fuerit hic habes (Plate XII, fig. 1)⁸⁷. We cannot, of course, determine the size of the establishment to which these signs referred. On the whole, however, 'production units' in the ancient world were not large⁸⁸; Crassus' team of 500 slave ἀρχιτέκτονες καὶ οἰκοδόμοι (assuming Plutarch's information to be trustworthy)⁸⁹ was surely exceptional. Equally indeterminate is the method of distribution of those aspects of a building project which required the skills of the men in these workshops. If, for example, a redemptor marmorarius took a contract to execute marble work for the whole or part of a project, did he have his 'own' team of marble workers among whom he could simply allocate the work? Or was it distributed among different workshops? Or did individuals, whether they normally worked in a workshop or not, take piece-work contracts such as are attested in the building accounts of classical and hellenistic Greece? Probably there was no fixed practice, but which was the most common we simply do not know.

Finally, a brief word about the training of 'building workers'. In

view of the nature of the work, almost all the training must have been undertaken 'on the job', either on the building-site or in the workshop. There is no extant evidence of any formal apprentice system except in Egypt⁹⁰, although that may be due to the accident of survival. A few inscriptions, however, seem to bear explicit testimony to a master-pupil relationship. Thus at Puteoli, M. Perpernius Zmaragdus erected a tombstone to Martialis, magistro suo structori⁹¹; and an inscription from Pannonia Inferior records a magister structorum⁹². There are also a few instances in which a sculptor describes himself as so-and-so's pupil ($\mu\alpha\theta\eta\tau\acute{\eta}\varsigma$)⁹³, but we have no details of their training arrangements. The tender age, however, at which some claimed to have been proficient, or even masterly, in a particular craft would suggest that their training began at an early age⁹⁴. It was probably the common practice for a poor free father or freedman craftsman to train a son or slave in his own craft, in the same way that particular trades ran in the same family for several generations in eighteenth and nineteenth century England. The son of a poor free worker might in fact have had little choice but to learn his father's trade⁹⁵, while a trained slave would not only have been able to assist his master but would also have been of greater monetary value. As it happens, for the period under consideration the number of examples illustrative of this practice in the building and allied trades is small⁹⁶. The connections of several members of the gens Cossutia with these trades in the last two centuries B.C. has already been noted⁹⁷; here we might record the names of two sculptors, M. Κοσσούτιος Μενέλαος and M. Κοσσούτιος Κέρδων⁹⁸, and it is possible that we should add those of either or both of the brothers Cn. Cossutius Agathangelus and Cn. Cossutius Cladus, on whose tombstones are sculpted several stone-mason's instruments and tools such as a mallet and chisel⁹⁹. The tombstone of K. Ίούλιος Μείλητος was erected by his alumnus, Faentius, and other artefices (*sic*); all of them seem to have been marble workers¹⁰⁰. At Sinanli, in eastern

Phrygia, a father and son were both τέκτονες¹⁰¹; and an inscription from Astra, in southern Isauria, records that two brothers worked as masons (τεχνεῖται) on a temple wall¹⁰². In the overwhelming majority of cases, however, where the names of two or more male members of the same family are recorded, the occupation of only one (usually the dead man in the case of tombstones) is recorded¹⁰³. On the other hand, I have found but one epigraphic example of two separate trades within the same family, neither directly connected with the building trade; the adopted son of a glass-worker (vitricus) at Lugdunum became a smith (faber ferrarius)¹⁰⁴. Perhaps as far as relatively poor families were concerned, the practice of a son's learning the trade of his father was so common that it did not warrant explicit mention.

CHAPTER 7

Building and the Roman Army

There can surely have been no army (other than in primitive civilizations) in which the troops were not at some time or other required to undertake 'building work'¹, even if it were of a purely military nature or concerned their own camp needs. The Roman army was no exception. It is true that occasionally the purpose of the work was partly to keep the soldiers occupied², although it is rare to find references to their employment on tasks acknowledged as being futile³. From the earliest times, however, there had always been opportunities for Roman army commanders to employ their men on useful building work, such as the construction of defensive walls and towers⁴, and as military requirements became more advanced, the troops needed to execute bigger, and often more permanent, projects, such as roads and bridges. They also had to cater for their own needs in the camps, especially when the distance of the theatre of war did not allow the army to be sent home at the end of the campaigning season. And from the second century, when the legions came to occupy fixed permanent camps⁵, although plenty of military work was still undertaken, the amount and scale of civil work that the army executed, especially for itself, seems to have increased enormously. The Roman army, like any other, tried to be self-sufficient, and accordingly trained from within its own ranks the highly skilled men who could plan and direct the execution of the various types of work that might be placed under the general classification of building. The first part of this chapter is devoted to a study of these military technicians; in the second part, I examine in general the employment of the army on building work.

Several sources give the titles of the various specialists. Vegetius.⁶

mentions fabri tignarii and structores; a text of Tarruntenus Paternus⁷ lists mensores, architecti, fabri, aquilices, plumbarii and lapidarii; and epigraphy adds libratores and, possibly, tectores⁸. And it is likely that the personal names which appear on some military brick-stamps were those of specialist potters or tile-makers⁹. To judge from their titles, the most important of these was the architectus. I have already noted¹⁰ the two broadly differing types of specialist covered by this term, architect and engineer. The type of building work undertaken by the army entailed that the military architectus was basically an engineer, but even then two different fields were involved, building and ballistics. Architectus, and ἀρχιτέκτων, could be applied not only to men who were responsible for engineering construction either in the camp or in the field¹¹, but also to those who designed or repaired weapons that had a mechanical basis, such as ballista and tormenta¹². We do not know whether the two functions were kept separate in the army. Almost all the epigraphic examples have the plain title architectus; the only specialized title belongs to C. Vedennius Moderatus, architect(us) armament(arii) imp(eratoris), in the Flavian period, who was an evocatus Augusti and may have been a special case (Plate VI, fig. 1)¹³. Certainly 'builders' were capable of undertaking arms projects¹⁴. But both types of function were vitally important to the army and may therefore have been discharged by different men, although there was probably variation in practice according to both availability and the prevailing military situation. Nor do we know how many architecti the army boasted at any one time. The number surviving on inscriptions is extremely small¹⁵; in view of the large number of military tombstones that are extant, one might with better cause than usual argue ex silentio, that their actual numbers were not high. In this connection, we might note that Paternus in his list of immunes employed the plural in all but five cases - the optio valetudinarii, architectus, optio fabricae, praeco and bucinator¹⁶. If there is any significance in

this, might it be that there was only one of each of these men per legion? We should note, however, that there is no evidence of the temporary transfer of an architectus (or indeed any other 'building technician') from one legion to another; if this silence is not simply accidental, it would seem that each legion was self-sufficient in this respect.

Despite the importance of their duties, almost all the extant military architecti were simple rankers, their main privilege being vacatio munerum. This is certainly true of those in the legions; some are specifically described as miles legionis, architectus¹⁷, while no architectus legionis (cuiusdam)¹⁸ claims any rank, which is surely decisive. Outside the legions, a miles in the praetorian guard was an architectus Augusti (Plate V, fig. 1) and a veteranus of the praetorians an architectus Augustorum¹⁹, but I have argued that these were not military posts²⁰. Another praetorian miles is described as ordinatus architect(us), and was probably at that time an ordinary ranker²¹; he later held several other posts not connected with 'building' and eventually became a legionary centurion, which suggests that in his case at least his position as architectus was quite lowly²². Even the arcitect(us) arment(arii)²³, although he was then an evocatus Augusti, had not risen during his earlier active service above the rank of a praetorian miles.

The training of these architecti was, naturally, undertaken within the army; there appears to be one extant example of a discens architectus, who is also possibly to be identified with a (fully trained) architectus of a slightly later period²⁴, and there are certainly examples of discentes in other fields within the army²⁵. It has also been suggested, however, that already 'qualified' architecti also joined the army, in the belief that their prospects would be better²⁶. Certainly Q. Valerius Seius did not join the legio XV Apollinaris until the age of 31 and may therefore have already acquired his basic expertise²⁷. On the other hand, one might suspect that some men trained as architecti in the army partly as

a temporary means to escape fatigues. Thus, although at least two of the extant military architecti remained as such specialists throughout their army careers²⁸, the ordinatus architect(us) in the praetorians had an apparently lengthy later career for which his specialist knowledge as an architectus was not required²⁹.

* Finally, the one or two examples of architecti in the fleet³⁰ do not concern us here. Their duties probably covered the building and repair of ships³¹, together with the construction and maintenance of mechanical naval weapons³².

It is possible that there were two types of ensor in the army, the surveyor and the corn-measurer³³. On inscriptions, the simple title ensor³⁴ is nearly always used; there is a single example of a ensor agrarius³⁵, two ensores frumenti³⁶ and one ensor tritici³⁷. The needs of the army make it likely that the 'surveyor' predominated. Vegetius informs us³⁸ that ensores were responsible for measuring and marking out the lines of a camp and its various buildings, a duty probably exercised under the direction of centurions³⁹, but it is clear that they undertook other survey work also outside the camp, both for military and other purposes⁴⁰. As in the case of the architecti, none of the extant military ensores was other than an ordinary ranker, and some at least remained ensores throughout their military career⁴¹; on the other hand, unlike the architecti, ensores are found in the auxiliaries as well as in the legions and praetorians⁴². Trainees are found on at least two occasions⁴³. The number of ensores per legion etc. is uncertain. At least three were discharged from the praetorians in 143, two of whom had been in the same cohort⁴⁴, and at least another two in the following year⁴⁵; the legio VII Claudia had at least 11 in 228⁴⁶; and around the same time, the legio III Augusta appears to have had at least 9⁴⁷. Thus, although they seem to have been more common than architecti, it is probable that there was only a fixed minimum number either per cohort or

per legion⁴⁸.

One of the mensores was probably also a librator⁴⁹, a specialist who was concerned with works that involved water⁵⁰. We might note that he died at the age of 25, after only 5 years' service in the praetorians; one wonders how long his training had lasted and whether he had already had any before enlisting. There are only six libratores extant on inscriptions, and one of these was a discens⁵¹. This scarcity, however, is perhaps more apparent than real, and due partly to the extreme specialization implicit in the title; for an architectus certainly⁵² and a mentor probably could also have discharged this sort of function. All the six were or had been in the army, two as praetorians, the remainder, as it happens, all in the legio III Augusta⁵³, but this is probably accidental since Frontinus records⁵⁴ that the curatores aquarum regularly made use of libratores and there is no indication that they were military. Once more, all the examples appear to have been simple rankers. Suetonius, however, records that a primipilaris was sent to make a survey (ad dimetiendum opus) for a canal through the isthmus at Corinth⁵⁵; probably the man concerned had earlier in his career trained as a surveyor and was entrusted with this task by virtue of his rank. Libratores almost certainly qualified for immunity from fatigues⁵⁶; that their value was recognized is perhaps to be seen in the fact that one of them was a veteranus legionis while another was made an evocatus Augusti⁵⁷.

These, it seems, were the main 'building' technicians within the army. The labour force was, of course, the troops themselves, but I would suggest that it is not surprising that few of them record the fact that they had a particular speciality in building, even though it earned them immunity from heavy fatigues. Epigraphy, however, does record one of the structores mentioned by Vegetius⁵⁸; several fabri are found in the fleet⁵⁹; there is a fabriciosis legionis XX in Britain⁶⁰, though he may well have been an armourer; and there is possibly a d(iscens) f(abrum)

at Dura⁶¹, though he appears to have been engaged on ship-building. Finally, there are half-a-dozen examples of tectores. Most of them are found in the equites singulares⁶² and the mounted section of the praetorians⁶³, but we also find tectores mil[itum] Mat(t)i[a]corum at Moguntiacum⁶⁴. All the inscriptions appear to date from the very late second or third century. Sander not unnaturally included them all in his list of military Handwerker⁶⁵. Domaszewski, on the other hand, regarded those in the praetorians at least as Imperial bodyguards⁶⁶, and Speidel suggested that this role be assigned to all the examples, on the analogy of the protectores⁶⁷. There is no literary support for this; in almost all the examples of tector known to me, the man concerned was connected with stucco or fresco work⁶⁸. It might be considered surprising, however, to find specialist plasterers in the army, especially in mounted divisions, and I would therefore accept Speidel's suggestion.

The Roman army was employed on all sorts of work connected with building. The presence of centurions in some marble quarries has already been noted, although it is not certain whether they acted as technical experts or as commanders of security guards⁶⁹. The troops, however, are also known to have quarried stone. For example, there is a series of inscriptions from a sandstone quarry at Coombe Crag, near Hadrian's Wall, one of which probably records the presence there of a c(enturia)⁷⁰. One of the series also piquantly records the unwillingness of the man concerned⁷¹. And in 107, Iulius Apollinaris wrote to his father from Egypt⁷² that he had managed to escape fatigues such as cutting building stones (λίθους κοπτόντων) by getting himself made a librarius legionis, which qualified him as a principalis for immunity. In these and other cases⁷³, the troops were probably quarrying stone for essentially military needs. It is possible, however, that troops were also occasionally employed to open up quarries for civil as much as for military use. Thus rock-cut inscriptions attest the presence of detachments from the

Rhineland legions, under centurions, in quarries at Brohl (Germania Superior)⁷⁴ and Morroy, near Metz (Belgica)⁷⁵, in the Flavian period. For the second century, however, there is no evidence whatsoever of the type of labour, although stone from both these quarries continued to be used on many buildings at Trier during the second century. Perhaps after an initial period of military working, civilian labour took over⁷⁶. We might also note that in 160 a detachment of the classis Germanica seems to have provided stone for the forum at Cologne⁷⁷. The army also produced bricks on a large scale, especially, it seems, in the provinces of modern central Europe⁷⁸. In the first and second centuries, however, its bricks appear to have been used only on civil works which were actually sited within an army camp or on civil works which were both constructed in areas where there was a large military establishment and which were of a type, such as baths, whose use was probably shared by the military and civilian population. It is to my knowledge only in the third and fourth centuries that bricks from military kilns were employed in purely civilian buildings⁷⁹. In Germany, the legio XXII appears to have had saw-mills (lignaria)⁸⁰. And finally, we might note that when the army in Britain was compelled by circumstances to abandon its fort at Inchtuthil, on the Tay, towards the end of the first century, it buried, unused, over 875,000 nails of various sizes up to 15 inches and weighing nearly 12 tons altogether⁸¹. Although the nails were doubtless destined for military use⁸², their existence illustrates the wide capabilities of the Roman army in the sphere of the production of building material.

Inscriptions reveal that the army was capable of undertaking building work of an enormous variety, from solid feats of engineering such as amphitheatres and aqueducts⁸³ to rather more delicate temples and porticoes⁸⁴. It is important, however, in considering the contribution of the army in the field of building to take account of the date, the place, the type and the purpose of any particular construction. The

division that I have made⁸⁵, into military and civil work, is convenient as a basis but requires extension, since the first category overlaps the second in some aspects while the second itself requires subdivision⁸⁶. For example, a road might originally have been built to facilitate the movement of troops but it was also of great benefit to the local civilian population⁸⁷. And while baths undoubtedly belong to the category of 'civil' building, many works in this category were erected in the first instance for use mainly or solely by the troops themselves and might therefore be regarded to some extent as 'military'⁸⁸. It is in both subdivisions of the 'civil' category that our main interest lies, but it is necessary to examine briefly the military works also.

The army had, naturally, always executed its own purely military constructions. Throughout the period of Rome's expansion of her empire, such work was aimed largely at aiding her conquest of territory. Apart from constructions such as forts, much of the work concerned the engineering of roads, bridges and, occasionally, canals. The primary purpose of these was to help the movement of troops and military supplies. It is true that this sort of work also contributed greatly to the romanization of provinces; a network of good roads would have allowed the development of trade and commerce, both internal and external, and it is possible that in the imperial period some roads were built in order to give easy access to mines and quarries⁸⁹. It would be unwise, however, to assign philanthropic motives generally to the original construction of 'military works'⁹⁰. From the second century onwards, there was a change of emphasis. Although the army continued to build new and repair existing roads, the situation demanded an increase in the number of military works of pure defence, and the frontiers of the Empire were fortified with structures of varying size, ranging from forts and posts on the limites⁹¹ to elaborate works such as Hadrian's Wall⁹². And in the third and fourth centuries, inscriptions record the widespread building of burgi, turres

and muri⁹³. Admittedly some of this work was undertaken in towns with a mainly civilian population⁹⁴, and inscriptions occasionally specifically record that it was executed ob defensionem rei publicae⁹⁵. Nevertheless it is still incorrect, in my opinion, to classify it as other than purely military work; not only is it to be expected that the army should have attended to such work but also its purpose was to assist the defence of the Empire as a whole as much as (if not more than) "pour assurer la sécurité du pays"⁹⁶.

The army was also responsible for building its own forts and camps and the buildings attached to them. During the Republic and early Empire, most of the work would probably have been of timber and have served purely functional military needs - barrack blocks, storehouses, a hospital, the commandant's quarters etc.⁹⁷ But when from the reign of Hadrian the legions came to occupy permanent camps, the troops would have had both the time and the incentive to build more permanent and elaborate works for themselves. It can be no coincidence that almost all the monumental buildings constructed in the camps by the troops which are attested on inscriptions are dated in or after the reign of Hadrian⁹⁸. Such works, which are found in every province in which legions were stationed, display the versatility of the troops. The majority of the buildings in this category were works of engineering - amphitheatres, aqueducts and baths - and the elaborate nature of, for example, some of the drainage systems associated with bath complexes attests the skill of both the responsible technicians and the working troops themselves. The troops, however, were not mere utilitarian engineers; they also undertook rather more 'delicate' work, such as temples, which might include porticoes⁹⁹, and it is not unlikely that the sculpture on the arches which the army erected¹⁰⁰ was also the work of soldiers.

Many of these buildings fall in the category of 'civil work'. It is true that some of the temples, for example, would have been built within

the camp itself and been solely for the use of the soldiers themselves¹⁰¹. Works such as amphitheatres and baths, however, were usually built outside the confines of the camp, and although reasons of space and safety applied in these two cases¹⁰² and although inscriptions often refer to balnea cohortis (cuiusdam) or thermae legionis (cuiusdam)¹⁰³, it is not unlikely that many buildings of this type were in fact also open to the local civilian population¹⁰⁴, especially from the reign of Septimius Severus onwards, when the distinction between a camp and the neighbouring canabae became blurred as a result of Severus' concessions relating to the marriages of soldiers¹⁰⁵. Aqueducts are another type of building in this category which would have been of immense value to the local civilian population. In assessing the army's contribution to public civil building in the provinces, however, we must remember that most of the extant inscriptions recording the army's work concern buildings in the neighbourhood of military camps or forts and that the majority are to be dated after the middle of the second century and especially in the third century, when, as I have said, it is difficult to distinguish between a camp and its canabae. Thus the aqueduct which the legio III Augusta brought into Lambaesis will have served the needs of army and civilians alike, and the temples which it erected in the civitas there may also have been used by soldiers¹⁰⁶. And the bath and basilica at Lanchester were erected, in the reign of Gordian, by and probably mainly for the troops who occupied the neighbouring fort¹⁰⁷. The soldiers were doubtless always keenly aware of their own needs.

To my knowledge, there is only one inscription which records the use of the army on civil building work outside areas in which there was a permanent military settlement. In the middle of the second century, an aqueduct was erected at Saldae in Mauretania according to the plans and specifications (forma) of Nonius Datus, a veteran and librator of the legio III Augusta, and by the labour of classici milites et gaesates¹⁰⁸.

Even here, there were possibly special circumstances at work, since it is by no means clear whether the troops were responsible for the work from the outset or whether (perhaps more likely) Datus entrusted them with it because the original (local?) builders had so miserably failed. Nor do literary sources add any real examples. It is true that Vitellius ordered the legio XIII to build an amphitheatre at Cremona and Bologna, but we must remember first that that legion had fought on the side of Otho and secondly, in the words of Tacitus, that nunquam ita ad curas intento Vitellio ut voluptatum oblivisceretur¹⁰⁹; the amphitheatres, which were for immediate use and were therefore probably constructed of timber, were scarcely built for the civil population of the two towns. It is doubtful too, whether we should accept the testimony of the S.H.A. that Probus employed soldiers to build bridges, temples, porticoes and basilicas in Egypt¹¹⁰; even if we do, we should bear in mind that the work was executed in Egypt, a province whose singularity is well known. Moreover, we should note that in some provinces where there is plenty of evidence of civilian building, inscriptions record the use of the army only on military work or on civil work destined purely for its own use. For example, in Raetia, the army is known to have built only some defensive fortifications at Castra Regina and Augusta Vindelicorum as well as a military temple¹¹¹, while the civilian building of several temples is recorded even in the third century in both the canabae and elsewhere¹¹². A similar picture emerges for Dacia, where, although a cohort is known to have restored its own baths at its fort at Veczel in 193¹¹³, the erection of a considerable quantity of civil buildings, including an amphitheatre and aqueduct, is recorded without the attestation of military labour¹¹⁴. And in Britain a proscenium was erected at Brough-on-Humber in the reign of Antoninus Pius at the expense of an aedilis vici Petuariensis, and there is no indication that the army supplied the labour¹¹⁵. It is clear that the provinces were far from dependent on the army for their civil

buildings. And although it would seem that the amount of 'private' civil building decreased considerably in the third and fourth centuries, there is no real evidence that the army filled the vacuum except in the canabae¹¹⁶.

This is in no way to belittle the contribution of the army to building in the provinces; indeed, certain notes of caution must here be sounded. First, the army certainly built some roads and bridges which seem to have had a mainly civil purpose¹¹⁷, and its use on the clearing of canals and harbours as well as on some irrigation work is attested¹¹⁸. The army, however, was particularly suitable for this sort of work by virtue both of its long experience of road and bridge building and of its very discipline and the sheer numbers of able-bodied men that it could readily offer for works that would have been undertaken only occasionally in any one area. The regular employment of the troops, moreover, was an important factor¹¹⁹, while this sort of work also directly interested the prosperity of the Empire as a whole. Secondly, many of the buildings which they erected, whether or not they were partly for their own use, were enormous undertakings and a tribute to their skill and capabilities. One wonders how many modern armies would be capable of erecting such non-military works. Thirdly, provincial builders must surely have learned from the Roman army and assimilated the new architectural skills and techniques, such as the use of concrete, developed by the Romans. Finally, our evidence is undoubtedly nowhere near complete. There is an enormous number of inscriptions recording the erection of buildings in the provinces which do not mention the nature of the labour; it is possible that the army contributed at least some of the labour or technical expertise especially in those cases where the name of an Emperor or provincial governor is attached to the verb of construction¹²⁰. We must also remember that Ulpian wrote that, among his duties relating to the inspection of public works, a proconsul ought curatores operum diligentes sollemniter

praeposere, ministeria quoque militaria, si opus fuerit, ad curatores adiuuandos dare¹²¹. It is not known how often the overseers needed such assistance; the mere fact that Ulpian mentions it suggests that it was not uncommon. It is possible, too, that technicians alone were despatched to supervise civil work, although there is far less evidence of this than is implied by MacMullen¹²². Moreover, there are many towns whose plans appear to have a distinctly military character but where there is no direct evidence of military building. For example, the lay-out of the basilica and forum of Calleva and Venta Silurum in Britain has been described as "highly reminiscent of the legionary headquarters building and thought perhaps to derive from it"¹²³, and a similar statement was made about many of the fora of towns in Dalmatia¹²⁴. Certainly in the early years of a province's occupation by the Romans, one might expect the army to have been responsible for much of the new monumental building, especially in hitherto largely undeveloped provinces such as Britain and Germany¹²⁵. Generally, however, it is impossible to determine whether this is due to the fact that the army itself executed or planned the work or to the assimilation of Roman military ideas by local planners¹²⁶. It is clear that the provincial building work of the army was of great importance both for its immense public utility and for its contribution to the peaceful romanization of the Empire. Nevertheless, it seems to me that there is no solid basis for the assumption that the Roman army was regularly employed in any period as a labour force for civilian building projects except in towns where there was a neighbouring camp or fort.

As far as I can judge, no discrimination was made between legionaries and auxiliaries in their employment on building work; they appear to have been used equally on all types of work and in every period¹²⁷. For example, defensive walls were erected at Apulum in 161 by the legio XIII Gemina¹²⁸; at Salva, a burgus was built in 371 by the legio I Martiorum¹²⁹; at Romula in 248, walls were erected by the legio XXII and a group of

Syrian archers¹³⁰; while at Salona in 170, different sections of a wall were erected by the cohors I miliaria Delmatarum and vexillations of the legio II Pia and legio III Concordia¹³¹. The legio III Augusta undertook the building and restoration of aqueducts on several occasions at Lambaesis in the third and fourth centuries¹³², while in Germania Superior a section of an aqueduct was erected by the cohors I Septimia Belgarum Alexandriana between 231 and 241¹³³. And the legio II Adiutrix repaired its thermae at Aquincum in 268¹³⁴, while the cohors I Germanorum restored some baths at Iagsthausen in Germania Superior in 248¹³⁵. Presumably the nature of the labour employed depended to a large extent on both availability and the size of the work involved.

Inscriptions relating to military building work sometimes shed a little light on the organization of the work. Generally, it seems that legionary work was executed under the supervision of (curante) a centurion¹³⁶, the work of auxiliaries under that of the tribunus cohortis¹³⁷, but occasionally one finds a legionary centurion in charge of work undertaken by auxiliaries¹³⁸. We do not know, however, whether these centurions had any 'technical expertise'; nor, as I have said, is there any firm evidence that specialist building technicians were seconded temporarily from one legion to another. There are also numerous inscriptions which record how a particular piece of work was divided up among different contingents. Such records are found exclusively for works that could be divided up by length - walls, roads, aqueducts; an inscription could easily be erected at either or both ends of the particular length of work. For example, at Salona in 170, the cohors I miliaria Delmatarum recorded its erection of 800 feet of a wall together with a tower, while vexillations of the legio II Pia and legio III Concordia built 200 feet of wall¹³⁹; and the work on a road near Ateste in the late first century B.C. was divided up among groups of Roman veterans (Plate XII, fig. 2)¹⁴⁰. The difference in the length of work allocated to

the various contingents in these two cases probably in the first reflects a difference in the size of the respective contingents and in the second is an indication that the shorter section traversed comparatively more difficult terrain. That care was taken to stimulate rivalry by allotting work equitably seems clear from the evidence of the two Walls in Britain¹⁴¹. For the Antonine Wall, for example, it appears that, even after work had begun, an alteration was made in the manner in which the work was divided in order to take account of the fact that one of the original sections covered particularly difficult ground; moreover, the work was still divided in such a way that each of the three legions involved was allocated almost exactly the same distance of work¹⁴². Finally, these examples would perhaps suggest that, although it is not specifically attested, the army's work on amphitheatres, baths etc. was also divided up into sections - for example, by cunei - and we might reasonably use this as a basis for the belief that similar divisions were made in the case of civilian building work. I would re-emphasize, however, that the military evidence scarcely allows us to conclude, as did MacMullen¹⁴³, that in the latter case such divisions corresponded with the speciality of the different collegia¹⁴⁴.

CONCLUSION

A complete picture embracing the many human elements that contributed to the execution of a building project cannot be drawn for any period or area; not only are there too many gaps in the evidence, but some of the extant information is such that it is possible merely to make surmises about the questions that are of most interest to us. It seems that during the Republic there was little if any state organization connected with the erection of public buildings. Certainly the censors or other magistrates were the responsible officials who had the duty of ensuring that the work was carried out satisfactorily, and they probably engaged or were provided with an architect to advise them on technical matters. It was the entrepreneurs who took contracts at the magisterial auctions, however, who undertook the arrangements for the execution of the work, from the provision of materials to the recruitment of labour; the state apparently rendered little or no positive assistance to them at any stage. These entrepreneurs, however, were not themselves 'professional builders', nor did they maintain their own permanent working staff, but they were men who were in a position to organize for the state those services that the state could not furnish itself. Public building projects, at least in the second century B.C., provided another field in which wealthy publicani were able to invest their capital for their own profit.

Although the picture changes in the imperial period, there is not the complete contrast, between private enterprise and state control, that is often assumed; rather it seems that private contractors continued to play an important part in public projects until at least the Severan period. The change lies in the nature of the contractors, in that during the imperial period they were themselves 'builders' or 'ex-builders',

they worked on a somewhat smaller scale, and they managed probably at least some permanent labour force. At the same time, however, the Imperial Civil Service provided considerable administrative facilities, which were expanded in the course of time. And the organization of the marble trade by Imperial officials that developed apace during the early Empire greatly eased the task of the building overseer both in Rome and elsewhere, although even within this Imperial organization private enterprise seems to have played a significant part. This mixture of private and state elements, indeed, stands out very clearly from the evidence; it is a mixture which seems to have remained essentially unchanged during the first two-and-a-half centuries of the Empire.

APPENDIX A

Miscellanea Epigraphica

Dating criteria

The two loose termini that have been employed most in this thesis are:

pre-100 A.D. when a citizen name has no cognomen

post-50 A.D. for the formula D(is) M(anibus) or D(is) M(anibus) S(acrum) in its abbreviated form.

For the principles on which these and other termini are based, see R. Duncan-Jones, "An Epigraphic Survey of Costs in Roman Italy", PBSR, XXXIII (n.s. XX) (1965), Appendix, pp. 303-6.

Non-Latin cognomina and Greek cognomina

It is necessary to note first that there is a tendency among scholars to make these terms identical and interchangeable, but by no means were all non-Latin cognomina Greek. There is a great deal of literature on the significance of non-Latin cognomina; for a summary of the opposing views and details of relevant references, see R. Duthoy, "Notes onomastiques sur les Augustales: cognomina et indication de statut", AC, XXXIX (1970), pp. 89-90, nn. 2-6 and 10-14. From it, I would draw two conclusions, the first positive, the second negative. It seems to me to be proven that, where other evidence to the contrary is lacking, a non-Latin cognomen, especially a Greek cognomen, indicates that its bearer was probably either a freedman or of freedman origin. I am not convinced, however, that a Greek cognomen is a certain, or even very probable, indication of Greek origin. A slave of western origin might easily have been given a new and Greek name on his arrival in Rome, especially since a Greek name may well have increased his value. On

this, see especially H. Solin, Beiträge zur Kenntnis der griechischen Personennamen in Rom, Vol. I (*Commentationes Humanarum Litterarum*, 48, Helsinki-Helsingfors 1971).

APPENDIX B

Architects in the Roman world

Many lists of architects in the Roman world have been made that have drawn on both epigraphic and literary sources; a note of almost all the major ones can be found in Calabi Limentani, "Architetto" (hereafter referred to in this appendix as EAA), p. 578. None of these lists is at all complete; Latin epigraphic material is generally assiduously collected, although a few additions, not solely of new material, can be made, but those lists which include Greek material contain serious lacunae, probably because much of the evidence is not readily available in corpora with indices. While I do not claim absolute completeness for my own list, it is based upon a search of all the periodicals and works that collect or publish inscriptions which were available to me.

Conclusions about architects based on the lists compiled in the first three-quarters of the nineteenth century are undermined by the fact that those lists, quite apart from their lack of completeness, contain misreadings and misinterpretations of valid evidence as well as inscriptions which were later condemned as falsae by the editors of CIL. (Many of the latter inscriptions supposedly refer - unfortunately? significantly? - to ingenui at Rome.) These are usually so obvious, however, as to require no specific mention here. There are three lists which have, or at least ought to have, provided the basis for discussion about architects in the Roman world. The earliest (1895) is that of de Ruggiero in DE (hereafter referred to as DE). This list has three main drawbacks. It omits "gli stranieri" on the ground that their legal status was uncertain; its trifold division by social status becomes injudicious when de Ruggiero is confronted by a man whose status is uncertain - there are several occasions when one might reasonably disagree with him, and in a few cases later evidence has proved him incorrect; and

it includes military architects under the ingenui even though they are later listed separately - there is therefore the danger that a simple counting of the examples would give a distorted picture of the number of citizen architects employed on civilian work. The second list, made by G. N. Olcott, Thesaurus Linguae Latinae Epigraphicae: a dictionary of the Latin inscriptions, Vol. I (Rome 1904), s.v. architectus (hereafter referred to as TILE), has, I feel, been accorded too little attention. It is almost complete within its own limits and largely free from error; and its separation into military, Imperial and private architects is helpful, although there is some misplacement. To his definitions, however, Olcott might have added "engineer". The most recent (1958) list, EAA, is much longer than the other two because it contains not only some inscriptions from the Greek East but also a larger amount of literary evidence than DE. Its collection of Greek material, however, is by no means complete, and there are also some omissions of Latin material that cannot be covered by the stated exclusion of "gli autori" [some of whom are in fact included] "... e i nomi di iscrizioni di autenticità dubbia o di incerta lettura" (p. 576). The references given in it are not always the most recent that were available; there are several errors of fact; and the assignment of status in cases where it is not given in the sources is often disputable (even more frequent use of the question-mark might have been usefully made).

The value of such lists lies largely in their collection of factual material, and it is therefore a duty of their compilers to make clear what is stated as fact in the sources and what is simply their own interpretation or deduction. Lists in handbooks are often consulted and quoted as gospel; for example, the "very full list of architects given by Ruggiero ... [contains] names belonging to all three of these branches of the Roman population in almost equal proportions" (Frothingham, "Architect", p. 187). In fact, it contains 25 ingenui, 23 liberti and 10 slaves even before the

necessary revision and additions. Since the DE, TLLE and EAA lists are those likely to be most often consulted and quoted on architects, their factual accuracy must be assured, and it seems useful to note here both their errors of fact and the deductions which are stated as facts but which might be reasonably disputed. Omissions, additions and up-to-date references are not given except in a few cases where it is necessary for clarification; they may be found in my own list of architects which follows. Insignificant errors - for example, Antistius instead of Antisti[us] (TLLE) - are also not noted here. For ease of reference, I normally use here the form of names found in these three lists, with any necessary corrections made in my comments.

First, the DE and EAA lists contain a large number of men of whom the term architectus or ἀρχιτέκτων is not specifically used: Ammonios (EAA), Ammonis (EAA), Athenaeus (EAA), Auxentius (EAA), Batrachus (EAA), Celer (both - magister et machinator), Cleander (EAA), Cleodamus (EAA), Cluatus (both), Diphilus (both), Hippias (EAA - μυχανικός), C. Iulius Lacer (both), Mustius (both), Pomponius (EAA), L. Quinctius Nicephorus (EAA - machinator), Rabirius (both), Saurus (EAA), Severus (both - magister et machinator), Stallius (EAA), C. and M. Stallius (DE), L. Varronius Rufinus (EAA - geometra) and Vettius Chrysippus (both). In some cases, the attributive noun or other description of their activities might suggest that the men concerned were indeed 'architects', in the ancient or modern sense of the word; a few of these 23, however, are much more doubtfully to be described as 'architects' in either sense, and these I note in the following list of factual errors (the omission there of any of the 23 is not necessarily an indication that I accept him as an 'architect'). There are also a few names in the following list which are not included in the DE, TLLE or EAA but which need to be noted here since some modern scholars still erroneously refer to them as 'architects'. References given in full in my own list are abbreviated here, but with a note of the relevant number in that list.

- Aemilius Crescens to understand the inclusion of the nomen in EAA, see della Corte (no. 126), who also shows that he was a libertus, not a slave, as DE.
- Alcimus probably not an Imperial slave, as EAA, see Ch. 2, p. 60.
- Amandus not necessarily a slave, as DE and EAA; possibly in the army, see nos. 110 and 114.
- Amianthus Nicanorianus probably an Imperial rather than private slave, as DE, TLL and EAA, see I. It. XIII.1, 23, which also gives the correct date of 1 A.D., not 2 A.D. as DE; agnomen omitted in EAA.
- C. Antistius Isochrysus not a certain libertus, as DE and EAA; praenomen omitted in TLL.
- Antonius cited only in TLL; probably military rather than private, see no. 109.
- Athenaeus put in joint charge of fortifying cities, so not necessarily even a military architect, as EAA; evidence also from untrustworthy part of S.H.A.
- Aurelius Antonius so EAA; emend cognomen to Antoninus; also to be dated to 220-36, not 235-40, see CIRB (no. 89).
- Auxentius built a bridge, not a dam, as EAA, see Robert, Hellenica, Vol. IV, p. 74, and Bull. Ep. 1953, 29.
- Batrachos surely a legendary character.
- Q. Caelius from near Minturnae, not Caserta, as EAA; free status highly uncertain.
- M. Caesellius emend DE reference to NS 1885, p. 487; Caesellius was in fact the overseeing magistrate, not the architectus, as DE, see ILLRP 660.
- Celer status unknown; DE - free; EAA - libertus! Possibly an Imperial freedman, see CIL VI 34085 (Plate II, figs. 1 and 2).

Chiattus	see Cluattius
Q. Cissonius Aprilis	<u>nomen</u> of wife <u>Patulcia</u> , not <u>Patricia</u> , as <u>DE</u> .
Cleander	probably the defrayer of the cost rather than the architect, as <u>EAA</u> .
Cleoqamus	see Athenaeus
Cluattius	status unknown; <u>ingenuus</u> perhaps more likely than <u>libertus</u> , as <u>DE</u> , see Ch. 1, p. 20; <u>nomen</u> probably <u>Cluatius</u> .
Coelius D---	emend <u>EAA</u> reference to <u>CIL</u> XII 723; not certainly an <u>ingenuus</u> , as <u>DE</u> and <u>EAA</u> .
Constantius	emend <u>EAA</u> reference to <u>CIL</u> VI 9153.
D. Cossutius	a certain <u>ingenuus</u> , as <u>EAA</u> , not a <u>libertus</u> , as <u>DE</u> .
Crescens	see Aemilius Crescens.
Cyrus	his <u>nomen</u> , <u>Vettius</u> , omitted in <u>EAA</u> , but certain, see Ch. 1, p. 16; so probably a <u>libertus</u> , as <u>DE</u> , not a <u>peregrinus</u> , as <u>EAA</u> .
Dextrianus	so <u>EAA</u> , but Decrianus, as <u>DE</u> , better; status unknown and not necessarily <u>libertus</u> , as <u>DE</u> .
-- anius Dio	so <u>TLLE</u> and <u>EAA</u> , but -- mnius Dio, as <u>DE</u> , almost certain, see Plate III, fig. 3.
Diphilos	status unknown; not necessarily a slave, as <u>DE</u> .
Elegans	status unknown; not necessarily a slave, as <u>DE</u> .
Gratus	<u>nomen</u> probably <u>Oppius</u> , see della Corte (no. 28); so probably not a slave, as <u>DE</u> .
Herakleides	age of Trajan rather than Hadrian, as <u>EAA</u> .
Illyrius	not an architect, as Brunn, <u>Künstler</u> , and Toynbee, "Artists", but a proconsul, see <u>Bull. Ep.</u> 1951, 236a (p. 207) and 1953, 29.
Sex. Iul. Cae(cilianus)	there must be grave doubts about the genuineness

- of this inscription; the man was scarcely a certain ingenuus, as DE and EAA.
- C. Iulius Phosphorus not an Imperial libertus, as EAA, or a libertus as DE, since he claims filiation; stone in fact gives Posphorus, see Plate I, fig. 3.
- L. Licinius Alexander emend EAA reference to CIL VI 9154; praenomen probably C(aius), as DE.
- Messalinus not an architect, as Brunn, Künstler, and Toynbee, "Artists", but a proconsul, see Robert, Hellenica, Vol. IV, pp. 87-9, and Bull. Ep. 1953, 29 and 1961, 536.
- Mustius emend DE and EAA references to Pliny, Ep., 9.39; status unknown, but use of nomen suggests ingenuus rather than libertus, as DE and EAA; praenomen also unknown, not necessarily Caius, as DE.
- Nikon emend EAA reference to IGRR IV 506; not certain whether he or Nikodemus was the father of Galen; nomen known to be Aelius.
- Opponius Iustus so EAA, correctly, not Oppius Iustus, as DE and TLL.
- Philippus inscription suspect, as noted in DE but not in TLL or EAA; emend EAA reference to CIL XII 2993.
- C. Pomponius Heracon not a certain libertus, as DE and EAA.
- Pontius dated to 18th. year after Actium, not 8th., as DE.
- C. Postumius Pollio free status certain, as DE, not doubtful, as EAA.
- L. Quinctius Nicephorus emend EAA reference to NS 1953, pp. 302-3.
- Rabirius not a certain libertus, as DE and EAA; use of nomen perhaps makes free status more likely.
- Saurus see Batrachos.
- Severus not a certain ingenuus, as DE.

- C. Sevius Lupus second century date, as EAA, and free status, as DE and EAA, not certain.
- Stallius EAA references contain no evidence of any Stallius.
- C. and M. Stallius possibly the overseers, not the architects, as DE, see now IG II² 3426.
- M. Valerius Artema a libertus, as TLLE and EAA, not ingenuus, as DE, see CIL XI 6243; praenomen not Lucius, as TLLE; second century date, as EAA, not certain.
- L. Varronius Rufinus fourth century date, as EAA, not certain.
- C. Vedemnius Moderatus so EAA, but nomen in fact Vedennius; TLLE erroneously gives L. Vedennius Modestus.
- T. Vettius praenomen not Quintus, as TLLE; praenomen omitted in EAA.
- C. Vettius Gratus praenomen not Titus, as EAA, see Plate IV, fig. 1.
- Vitruvius emend EAA reference to CIL X 3393; cognomen possibly [Poll]io; not certainly an architectus, whether private, as TLLE, or military, as EAA, see no. 125.
- L. Vitruvius Cerdo probably not the freedman and pupil of the author of De Architectura, as DE and TLLE, since he employs architectural features deplored by the latter; second century date, as EAA, less likely than first century, see P. Marconi, Verona romana (Bergamo 1937), p. 101, and L. Beschi, Verona romana - i monumenti, in F. Zorzi, G. B. Pighi, F. Sartori, L. Beschi and P. L. Zovatto, Verona e il suo territorio, Vol. I (Verona 1960), pp. 433-44.
- Vitruvius Pollio cognomen, given in DE and EAA, uncertain, but better attested than the praenomen, often given

as Marcus, although DE gives Lucius; see

W. H. Plommer, Vitruvius and Later Roman Building Manuals (Cambridge 1973), pp. 1 and 87.

For my own list of 'architects', I have followed three basic rules.

(i) I have included only those men who are described in the sources by the word architectus or ἀρχιτέκτων or of whose activities a cognate of either of those words is used. (I include here cases in which the man's name is not extant but not those very few inscriptions on which a general reference is made to an unnamed architect or architects.) Although several men who might have been, but as it happens were not, termed architectus etc. will in consequence be omitted, the excessive zeal with which the term 'architect' has been assigned seems to point to the need for a basic and clearly defined list, to which additions can be made afterwards for one reason or another. (I have appended some names in such a category; others could doubtless be added to them.) (ii) I have separated these men into three groups - civilians, men in the armed forces and shipbuilders. Although it is true that the four men in the last group were probably all civilians, it seems idle not to separate them in view of their avowed or probable occupation. (iii) Within the first (and largest) group, I have divided the men into epigraphic and literary examples; the former are listed according to their provenance - Rome, the rest of Italy and the various provinces - the latter are given in chronological order. My main aim is to provide factual information and ease of cross-reference from other sources; to this end I have avoided categorization by status, nationality, type of monument etc. which can be made more usefully and in more detail elsewhere. Although my threefold division is itself a kind of categorization and creates problems in a few specific cases - some men are only possibly to be classed as military architecti, while the two architecti Augusti in the Praetorian Guard were possibly employed on civilian work (cf. Ch. 2, pp. 61-2) - it seems a necessary and useful

one in view of the difference in the functions of each particular group. The order of the epigraphic civilian architecti within a particular geographical area has no significance. Inscriptions appearing in a major corpus (CIL, IG, IGRR etc.) are listed first, in numerical order; references in other works and periodicals follow in no special order. To assist checking from other sources, the first reference given is always, where possible, to a major corpus, even where I am able to add a reference to a later revision. All 'secondary' references known to me are then given in chronological order. For convenience, any ILS reference is always given. To save space, I give AE, Bull. Ep. and SEG references rather than the original publication wherever they provide a full, or at least sufficient, text. In the few cases where it is not obvious from the title of the corpus etc. whether the inscription is in Greek or Latin, the description employed of the man concerned is added in brackets. The following symbols are used:

- c a cognate of the word architectus or ἀρχιτέκτων is employed; the relevant term is added in brackets after the reference(s)
- x a doubtful example of an architectus etc.
- + a Christian inscription
- * the architectus etc. does not appear in any of the lists in DE, TLL or EAA
- = the following reference contains a text of the inscription
- cf. the following reference does not contain a text of the inscription

1. Civilians

(a) Epigraphic sources

Rome

- 1^{x*} CIL VI 148 = XIV 5 = ILS 3776, cf. CIL VI 30703 (cognomen = profession?)
- 2 CIL VI 5738 = L. Biviona, Iscrizioni latine lapidarie del Museo

- di Palermo (Palermo 1970), no. 107, tav. LVIII
- 3 CIL VI 8724, cf. p. 3463 = ILS 7733 (Plate I, fig. 3)
 - 4 CIL VI 8725 (Plate I, fig. 4)
 - 5 CIL VI 8726, cf. p. 3891 = ILS 7733a (Plate II, fig. 3)
 - 6a CIL VI 9151 = Mem. Pont. Acc., VII (1944), pp. 389-92 =
 * Rend. Pont. Acc., XXXVI (1963-4), pp. 93-105
 - b CIL VI 9152 = as 6a
 - 7 CIL VI 9151 = as 6a
 - 8⁺ CIL VI 9153 = ILS 1145
 - 9 CIL VI 9154 = Diss. Pont. Acc., 2nd. ser., XIII (1918), p. 306
 (Plate III, fig. 2)
 - 10 CIL VI 10395 = I².1, p. 69, no. XIII = I.It. XIII.1, 23, l. 39
 - 11 CIL VI 33763 (Plate II, fig. 4)
 - 12 AE 1953, 57 (= CIL VI 2455 falsa?)
 - 13* AE 1966, 34
 - 14* AE 1971, 61
 - 15* M. Aetorius M.l. Protus - unpublished (Plate I, fig. 1)

Italy

- 16 CIL V 1886 = ILS 5378
- 17 CIL V 2095
- 18 CIL V 3464, cf. p. 1075 = ILS 7730
- 19 CIL IX 1052
- 20 CIL IX 2986
- 21^{x*} CIL IX 5279 = ILS 7732 = CIL I² 1916 = ILLRP 780 (arte tecta)
- 22 CIL X 841 = ILS 5638a (Plate III, fig. 1) (cf. also CIL X 807)
- 23a CIL X 1443 = ILS 5637
- b CIL X 1446 = ILS 5637b
- 24 CIL X 1614, cf. p. 1009 = ILS 7731a
- 25 CIL X 4587 = I² 1576 = ILLRP 559 (Plate I, fig. 2)

- 26a CIL X 6126
- b CIL X 6339 = ILS 7731
- 27 CIL X 8093 = ILS 5539
- 28 CIL X 8146 = della Corte, Case, p. 136, nos. 297-299a
- 29 CIL XI 2134
- 30 CIL XI 3945 (Plate III, fig. 3)
- 31 CIL XI 6243
- 32 CIL XI 6509 = I² 2124 = ILLRP 660
- 33 ILS 7729 (not in CIL) (Plate IV, fig. 3)
- 34* NS 1939, p. 128, no. 158
- 35* M. Mello and G. Voza, Le iscrizioni latine di Paestum (Naples 1968), pp. 229-30, no. 155, and tav. XXV

Sicily

- 36* IG XIV 455

Gallia Narbonensis

- 37^x CIL XII 186 (architector)
- 38^x CIL XII 2993

Gallaecia

- 39 CIL II 2559, cf. 5639 = ILS 7728

Germania Superior

- 40^x CIL XIII 6403 (military?)

Achaea

- 41* IG V.1, 168, l. 10, cf. SEG XI 625
- 42^c* IG V.1, 690 (ἀρχιτεκτονῶν)
- 43* Bull. Ep. 1963, 115 = SEG XXII 435
- 44* FD III, fasc. IV.2, 96, cf. Bull. Ep. 1951, 122
- 45* Inscriptionen v. Olympia, 62, ll. 14-15, cf. SEG XI 1252

Macedonia

- 46^{C*} IG X.2, 31, l. 22 (ἀρχιτεκτονῶν)
 47^{C*} IG X.2, 128, l. 8 (ἀρχιτεκτονῶν)
 48* IG X.2, 133, l. 15
 49^{C*} M. G. Demitsas, Ἡ Μακεδονία (Athens 1896), Vol. I, p. 572, no. 678,
 , ll. 9-10, cf. D. K. Kanatsoules, Ἡ Μακεδονικὴ προσωπογραφία
 (Thessalonica 1955), no. 560 (ἀρχιτεκτονῶν)

Moesia Inferior

- 50^{C*} IGRR I 854 = IOSPE I 174, ll. 12-13 (ἀρχιτεκτονῶν)
 51^{C*} IGBulg. I² 293, cf. Bull. Ep. 1954, 181 (ἀρχιτεκτονῶν)

Thrace

- 52^{C*} SEG I 333, cf. XXIV 1083 (ἀρχιτεκτονῶν)

Africa Proconsularis

- 53 IRT 656
 54^{x*} ILTunisie 1085

Cyrenaica

- 55* SEG IX 126, cf. XVIII 805

Asia

- 56* IGRR IV 396b, l. 6
 57 IGRR IV 504
 58 IGRR IV 506
 59 IGRR IV 727
 60* SEG I 442
 61 AE 1905, 222, cf. Milet III, pp. 396-7, no. 176 (ἀρχιτέκτων)
 62^{C*} Bull. Ep. 1941, 138a (ἀρχιτεκτονέων)
 63a* Lindos II, Vol. II, 419, ll. 141-2, cf. Bull. Ep. 1942, 112, and
SEG XVI 461
 b* Lindos II, Vol. II, 420, b, l. 32

- 64* Greek Inscriptions BM, III.II, DC, l. 6
- 65* Buckler, Anatolian Studies, pp. 34-6, no. 3, ll. 4-5
- 66^{C*} MDAI(A), XV (1890), p. 278, no. 28 (ἀρχιτεκτοσύνη)
- 67* BCH, VII (1883), p. 271, no. 14

Bithynia

- 68* Sitz. Ak. Wiss. Berlin, 1888, p. 888, no. 60
- 69^{C*} REA, XLII (1940), p. 315, no. 12 (ἀρχιτεκτονῶν)

Galatia

- 70^{C*} BCH, X (1886), p. 500 (ἀρχιτεκτοσύνη)

Pamphylia

- 71 CIG 4342d add. (pp. 1161-2), cf. K. G. Lanckoronski, Städte Pamphyliens und Pisidiens, (Vienna 1890), Vol. I, p. 179, no. 64, notes e-g

Cilicia

- 72* CIG 4443b add. (p. 1171) = Denkschr. Öst. Akad. Wiss., XLIV (1896), VI, p. 12, no. 29

Syria

- 73a IGRR III 1287, cf. SEG XVI 812
- b SEG VII 951 = XVI 810
- 74* SEG I 516
- 75* SEG I 516
- 76* SEG VII 155
- 77* SEG VII 330
- 78* SEG XX 330
- 79* IGLS III 1126 (ἀρχιτέκτων)
- 80* Syria (Princeton), III A, Part 7, 797⁸
- 81* LBW 2471

Egypt

- 82^c CIL III 6588 = ILS 5483a = IGRR I 1072 (architectans, ἀρχιτεκτονῶν)
 83* IG XIV 2421, 1 = IGRR I 529 (Plate IV, fig. 2)
 84a IG XIV 2421, 2 = IGRR I 530, cf. Bull. Ep. 1971, 717
 b IGRR I 1260 = SEG XV 867, cf. Bull. Ep. 1971, 717
 85a* IGRR I 1236
 b* AE 1910, 207 = SEG XX 670 (ἀρχιτεκτων)
 86 IGRR I 1254, cf. SEG XV 865
 87* AE 1910, 207 = SEG XX 670 (ἀρχιτεκτων)
 88* BCH, XX (1896), p. 248

Client Kingdoms

- 89a IOSPE II 429 = CIRB 1252
 b IOSPE II 430 = CIRB 1245
 c IOSPE II 433 = IGRR I 925 = CIRB 1249
 d IOSPE II 434 = IGRR I 926 = CIRB 1250
 90* IOSPE II 430 = CIRB 1245
 91* IOSPE II 430 = CIRB 1245
 92^{x*} CIRB 1258
 93* SEG II 480 = CIRB 1112
 94* Bull. Ep. 1958, 516 (p. 345)

(b) Literary sources

- | | | |
|-----------------|-----------------------|--|
| 95 | D. Cossutius | Vitr., 7.praef.15 and 17 (<u>architectus</u> ,
<u>architectari</u>); cf. <u>IG</u> II ² 4099 |
| 96 ^c | Hermodorus of Salamis | Nep. <u>apud</u> Prisc., <u>Inst.</u> , 8.17 (<u>architectari</u> ,
ἀρχιτεκτονεύειν); cf. Vitr., 3.2.5 |
| 97 | C. Mucius | Vitr., 7.praef.17, cf. 15 <u>init.</u> (<u>architectus</u>);
cf. also <u>id.</u> , 3.2.5 |
| 98 | Valerius of Ostia | Pliny, <u>NH</u> , 36.24.102 (<u>architectus</u>) |
| 99 | (Vettius) Cyrus | Cic., <u>Fam.</u> , 7.14.1 (<u>architectus</u>) |
| 100 | Corumbus | Cic., <u>Att.</u> , 14.3.1 (<u>architectus</u>) |

- 101 M.(?) Vitruvius Pollio (?) Vitr., passim, e.g. 1.1.17; Frontin.,
Aq., 1.25; Sid. Apoll., Epist., 8.6.10
(architectus)
- 102 Apollodorus of Damascus Dio Cass., 69.4.1; S.H.A., Hadr., 19.13;
Procop., Aed., 4.6.13 (architectus,
ἀρχιτέκτων)
- 103 Decrianus S.H.A., Hadr., 19.12 (architectus)
- 104^{C*} Sex. Iulius Africanus Afric., Cest., 18 fin. (in P. Oxy., III,
412, l. 67) (ἀρχιτεκτονεῖν)
- 105 Aloysius Cassiod., Var., 2.39, cf. 7.15 (architectus)
- 106* Iulianus Aeneas Gazaetus, Ep., 25, pp. 31-2 (ed.
Hercher) (architectus, ἀρχιτέκτων)

2. Military 'architects'

(i) The Army

- 107 CIL III 6178, 1.5
- 108 CIL III 7688, 4.12
- 109 CIL III 14492 (legionary?) (Plate V, fig. 2)
- 110 CIL VII 1062 = ILS 4718 = RIB 2091 (legionary?); = no. 114?
- 111^x CIL VII 1065 = ILS 4744 = RIB 2096 (legionary?)
- 112 CIL VIII 2350
- 113 CIL XIII 6680 = ILS 2421
- 114^{Cx} CIL XIII 7945, cf. XIII.4, p. 137 = ILS 2459 add. = Epig. Studien 5,
p. 20, no. 4b (architectans?); = no. 110?
- 115a CIL XIII 8082
- b* AE 1953, 93, cf. AE 1960, 160
- 116 RIB 1542 (legionary?)
- 117* AE 1929, 213
- 118* AE 1936, 12 = Berytus, XI (1954), p. 45, no. 29 (bad transcript)
= CIMRM II, 2314

(ii) Cohortes Praetoriae119 CIL X 1757 = ILS 2057120 CIL XI 20 = ILS 2082121 CIL XI 630 (Plate V, fig. 1)(iii) Evocatus Augusti122 * CIL VI 2725, cf. 37189 = ILS 2034 (Plate VI, fig. 1)(iv) Equites Singulares123 CIL VI 3182(v) The Fleet124 CIL X 3392 = ILS 2872 (Plate IV, fig. 1)125^x CIL X 3393 (or archi[gybernus]) (Plate V, fig. 3)3. Shipbuilders

126a CIL IV 4716 }
 b CIL IV 4755 } cf. della Corte, Case, p. 181 f., no. 430a

127 CIL VI 33833 = ILS 7735 (architectus faber navalis)128 CIL X 5371 = ILS 7734 (architectus navalis)129 CIL XII 723 (architectus navalis)

Finally I give a list of men who, to judge from our evidence, are probably to be considered as architects (in the broad Roman sense of the word), although they are not so called. The list, which covers only the Republic and early Empire, is not intended to be exhaustive; my selection must obviously be somewhat subjective.

Aristainetus IGRR IV 140, cf. SEG XIX 730

Auxentius Robert, Hellenica, Vol. IV, p. 74, cf. Bull. Ep.
 1953, 29

Celer Tac., Ann., 15.42, cf. CIL VI 34085 (Plate II,
 figs. 1 and 2)

Costunius Rufinus	<u>Anth. Pal.</u> , 9.656, 14; Aristides, <u>Or.</u> , 50.28 (II 423 K)
Dionysius of Tralles	<u>TAM</u> II 417 = Robert, <u>Villes</u> , p. 276, n. 1
C. Iulius Lacer	<u>CIL</u> II 761, cf. p. 826 = <u>ILS</u> 287b
Mazgaba	Suet., <u>Aug.</u> , 98.4, <u>CIL</u> IV 1917, cf. <u>Atti Acc. Nap.</u> , XIII (1933), pp. 69-81
Mustius	Pliny, <u>Ep.</u> , 9.39
Numisius	Cic., <u>QF</u> , 2.2.1
(Pomponius?)	Cic., <u>Att.</u> , 13.35
Rabirius	Mart., 7.56, cf. 10.71
Rufio	Cic., <u>Fam.</u> , 7.20.1, cf. <u>CIL</u> VI 16120
Severus	see Celer
Vettius Chrysippus	Cic., <u>Fam.</u> , 7.14; <u>Att.</u> , 11.2.3, 13.29.1 and 14.9.1

APPENDIX C

Statistical Summary of the Cognomina borne by 'architecti','mensores aedificiorum' and 'mensores' in Rome and Italy

(see Ch. 4, n. 99)

Column (a) - no cognomen borne (in the case of ingenui)Column (b) - Latin cognomen or nameColumn (c) - non-Latin cognomen or nameColumn (d) - cognomen not extant or insufficiently extant1. ArchitectiRome

	(a)	(b)	(c)	(d)	Total
<u>ingenui</u>	1	1	1	0	3
<u>incerti</u>	-	1	1	0	2
<u>liberti</u>	-	2	4	1	7
<u>servi</u>	-	0	2	0	2
Total	1	4	8	1	14

Italy

	(a)	(b)	(c)	(d)	Total	<u>Rome and Italy</u>
<u>ingenui</u>	5	2	0	0	7	10
<u>incerti</u>	-	2	3	1	6	8
<u>liberti</u>	-	3	2	0	5	12
<u>servi</u>	-	0	1	0	1	3
Total	5	7	6	1	9	33

Rome and Italy 6 11 14 2 33

2. Mensores aedificiorumRome and Italy

	(a)	(b)	(c)	(d)	Total
<u>ingenui</u>	0	3	0	0	3
<u>incerti</u>	-	3	1	2	6
<u>liberti</u>	-	0	0	0	0
<u>servi</u>	-	0	0	0	0
Total	0	6	1	2	9

3. Mensores (civilian)Rome

	(a)	(b)	(c)	(d)	Total
<u>ingenui</u>	0	1	0	0	1
<u>incerti</u>	-	3	5	0	8
<u>liberti</u>	-	1	2	0	3
<u>servi</u>	-	1	1	0	2
Total	0	6	8	0	14

Italy

	(a)	(b)	(c)	(d)	Total	<u>Rome and Italy</u>
<u>ingenui</u>	0	0	1	0	1	2
<u>incerti</u>	-	2	1	0	3	11
<u>liberti</u>	-	1	5	1	7	10
<u>servi</u>	-	3	1	0	4	6
Total	0	6	8	1	15	29

Rome and Italy 0 12 16 1 29