

PTOLEMAIC ALEXANDRIA



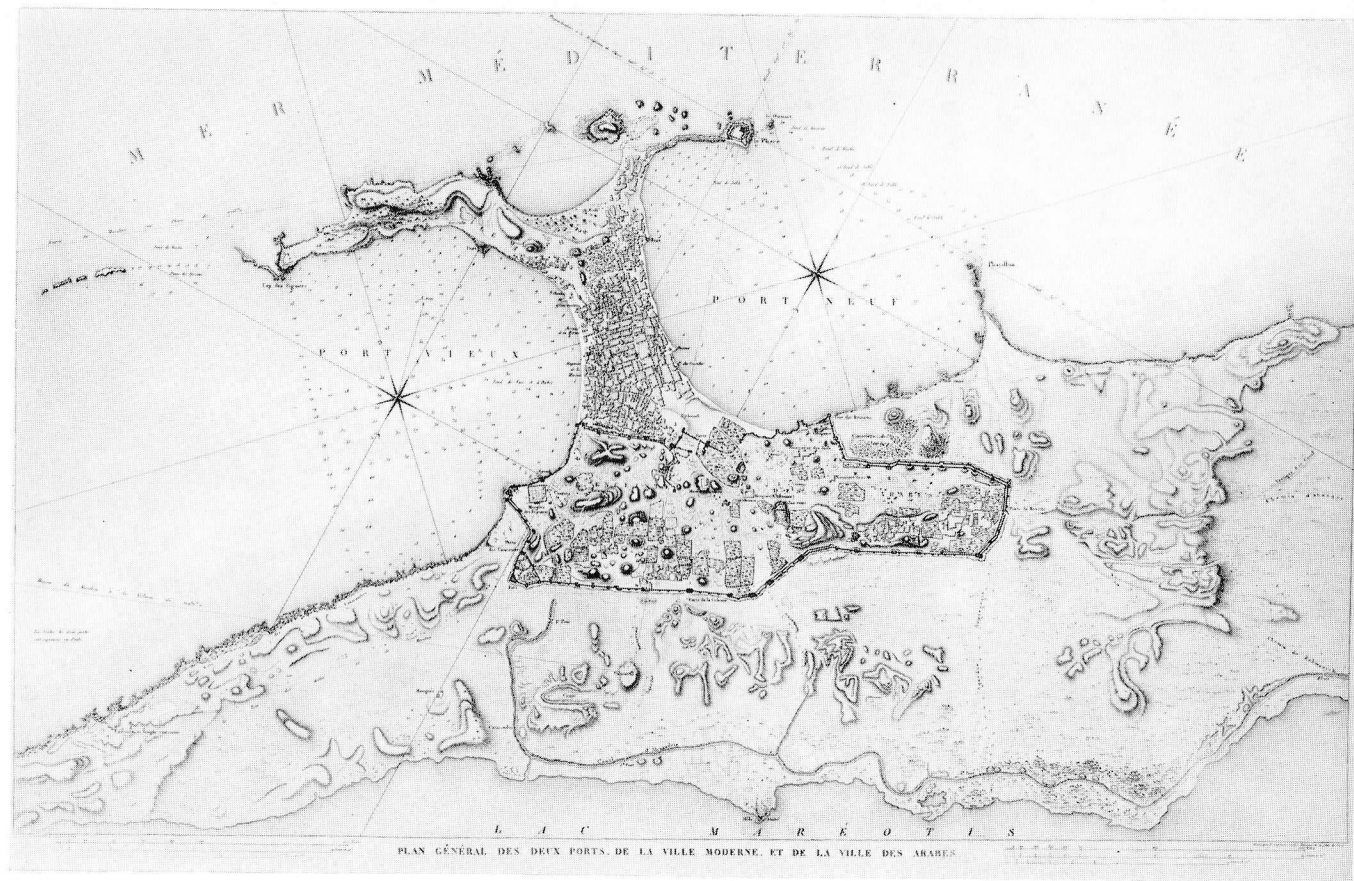
P. M. FRASER



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1. Plan of city and harbours of Alexandria, c. A.D. 1800; cf. ch. 1, note 34

PREFACE

MANY years ago I began to feel the lack of a documented study of even the main aspects of Alexandrian life in the Ptolemaic period. This book is an attempt to provide it, and at the same time to bridge the wide gap between the different fields of Antiquity and the different types of source material. Literary texts of all sorts, inscriptions, and papyri all have their contribution to make to such a study, and the analysis and combination of these sources form the main element in this book.

The aim explains both the scope and the method of the work. In the first part I have attempted to describe the framework of Alexandrian life, against which the real achievements of its civilization, discussed in the second part, can be seen. In this long second part I have had to walk almost entirely in paths more familiar to others than to me, and I have no doubt that I shall be assailed by specialists in those fields in which I have browsed along the way. Nevertheless, I do not regret my decision so to trespass, for these subjects, and the achievements in them, are the legacy of Alexandria to posterity, and until the achievements and the material background are in some fashion brought into one focus by the same pair of eyes, the former cannot be fully appreciated.

I am sensible that there are omissions. It may very naturally be asked why, in view of the length of the book, I have not included a synthetic picture of social life, the Alexandrian 'daily scene', in the first part, and why, in the second, there is no chapter devoted to Alexandrian art. In regard to the first point, I must confess to scepticism as to the value of such synthetic pictures if copious and precise evidence based on a sound chronological framework (such as exists for the study of the social life of Imperial Rome) is not available. I confess further to a reluctance to adding to the length of this book, and to occupying the time of the reader by recounting social phenomena which were in any case largely common to the whole Greek-speaking world, and therefore have no especial significance for Alexandria. I have, however, attempted to portray in all possible lights what seems to me of lasting significance: the society and social milieu of the intelligentsia to which we owe the legacy of Alexandria. My decision not to include a study of Alexandrian art was based on two considerations. First, art criticism and art history are remote both from my competence and from my line of approach to Alexandria, which is essentially through literary and documentary (including archaeological) evidence. To have introduced a different type of criticism would,

even if I had felt myself competent, have marred whatever unity of concept and technique the book may have. Secondly, in spite of progress in this field, it is evident that we are still far from knowing how much of what we call Alexandrian art was the work of Alexandrian artists, how much was imported, and how much was produced by foreign artists. It would, therefore, I think, be premature to attempt to assess the Alexandrian achievement in art. For both these reasons I decided that this subject was better left out of account.

On the other hand it will be observed that I have included some facets of the intellectual life of the city in which the achievement was, so far as I can see, slight: for instance, philosophy, historiography, and dramatic writings. I do not think that their inclusion is a paradox, for to view the achievement as a whole it is necessary to bring into focus the less significant items, and to see why they were not transplanted effectively to Alexandria.

The omissions are, I am afraid, more than balanced by repetitions. I have had to accept the likelihood that the individual chapters may be consulted by those anxious for information on the particular topics dealt with in them, and my wish to make the relevance of each subject in the over-all picture intelligible, has, I am very aware, led to numerous repetitions, particularly of some basic generalizations, which will be a source of irritation to the continuous reader. The episodic reader will, I hope, be the gainer.

It will be clear from what I have already said that this book is in no sense a political history of the Ptolemaic dynasty, or of Ptolemaic Egypt, or of Alexandria. I have only touched on political matters as and when they were relevant, particularly in Chapters 2 and 3. Again, I have not attempted to give a general sketch of the economic regime or conditions of Ptolemaic Egypt, though I have kept them in mind throughout, and hope that I have given them due weight in Chapter 4. Both the detailed work of Mlle Cl. Préaux and Rostovtzeff's brilliant picture in *The Social and Economic History of the Hellenistic World*, though now thirty years old, will long provide unrivalled studies of this topic.

I hope that the wearisome length of the notes is justified by the fact that they contain most of the ancient evidence, either in full or in partial quotation or in the form of references, together with some interpretative material and indications of opinions past and present. I have followed in essentials the doctrine of Jerome: 'Meum fuit citare testes, tuum est de fide testium iudicare'. Though I have done my best to record the most important contributions to the topics discussed, the bibliographies are inevitably incomplete, and here too experts will raise their eyebrows. In the modern flood of learned literature this incompleteness could only have been obviated by the employment of trained

assistants, and even if such persons had been available, I believe that it is better to have prepared the entire material myself. I may add that the book has taken a long time to prepare for the press in its final stages, and that I have only very rarely been able to take heed of articles and publications published during and after 1967. Some more recent material and discussions are noted in the Addenda.

My debt in writing this book is greatest to those scholars, mostly beyond reach of my gratitude, whose example has encouraged me to write it and whose names are recorded repeatedly in the notes. I am also indebted to many individuals and keepers of Museums for information regarding objects, particularly inscriptions, in their custody; these obligations are for the most part noted individually in the appropriate places, but I must acknowledge some particular debts. First, I must express my gratitude to two successive keepers of the Musée gréco-romain of Alexandria, M. Victor Girgis and Dr. Henri Riad, through whose friendliness I have been able over the years to work in the Museum under ideal conditions, untroubled by formalities. All who have had the privilege of working in the Museum, and enjoying the shade of its delightful garden, assisted by its faithful and good-humoured staff, will echo these thanks. To Lucas Benaki, whose unrivalled knowledge of the material remains of Alexandria, and of the history of archaeological discovery there, have been freely at my disposal both in Alexandria and elsewhere, and who has given me unrestricted access to his collections, I owe much of my understanding of the archaeology and topography of the city, and my debt to him for this and for many other acts of friendship is beyond repayment. The late Max Debbane, editor of the *Bulletin de la Société archéologique d'Alexandrie*, to whose friendship and hospitality I owe much, let me draw freely on his profound knowledge of the more recent history of the city, and was unfailingly helpful in answering my many questions; his death in 1965 deprived Alexandria of the most zealous guardian of her traditions.

Others have obliged me greatly by reading some part or parts of the work. Mr. W. G. Forrest has borne the heat of the day in this respect, and there are few chapters which have not profited from his shrewd comments. Mr. C. H. Roberts also found time among the duties of a busy life to read and improve much undigested typescript, and his encouragement, as well as his advice on matters connected with papyri, have meant much to me. The late Professor J. Černý, Mr. J. R. Harris, Dr. T. G. H. James, and Dr. A. F. Shore have all answered questions concerning hieroglyphic and demotic texts, and my colleague the late Dr. S. M. Stern helped me considerably by providing me with fresh translations and interpretations of Arabic texts referring to the topography of Alexandria. Miss Virginia Grace has more than once

read and corrected my observations on the stamped amphora-handles in Chapter 4, and put her unique knowledge at my disposal. If I have in one or two places differed from her I have done so with trepidation. Professor Rudolf Pfeiffer kindly read for me the chapter on Alexandrian scholarship and put me further in his debt by enabling me to read in advance of publication the proofs of his *History of Classical Scholarship* (1968). To Mrs. Dorothy B. Thompson I am indebted for much stimulating discussion both of Alexandrian religion and of more general topics concerning Alexandria. Mr. Ivor Bulmer Thomas cast a critical eye on my section on mathematics, and numerous medical friends have corrected my primitive notions of human anatomy and physiology. In the long chapter on Alexandrian literature I have largely trusted my own interpretation: it is not intended as a philological treatment of the subject.

I am also very grateful to Mrs. Dorothy Crawford and Mrs. Elaine Matthews, who consecutively and steadfastly endured the wearisome task of compiling the General Index.

Finally, I owe a more material debt to three bodies which by their generosity enabled me to study Alexandrian antiquities at first hand. The Leverhulme Trustees awarded me a scholarship by which I was enabled to spend the summer and winter of 1955-6 in Egypt, collating the epigraphical material which plays a large part in this work; the Craven Committee of the University of Oxford and All Souls College both assisted me to revisit Alexandria on several subsequent occasions, and to All Souls College I am also indebted for numerous other subventions over the years. To the Delegates of the Oxford University Press and to their Secretary I am deeply indebted for their courage in undertaking the publication of this book, and for their exemplary display of patience while waiting for its delivery.

A final word of apology is due to the reader for the many misprints which escaped the eyes of all concerned. The most conspicuous of these are noted at the beginning of Vols. I and II.

P. M. FRASER

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compliments of poets,⁴⁷ are often, certainly, mere acts of homage. In one instance at least, however, an introductory paragraph addressed to a king—and, surprisingly perhaps, that king is Auletes—reveals the direct stimulus that writers might receive from their royal patron. Apollonius of Citium states in the introduction to his commentary on Hippocrates' work *On Dislocations* that he undertook the task on the king's orders, and offers the finished work to him for approval.⁴⁸ Again, Philon, the writer on artillery, states that the development of the study owed much to the interest of 'the scientifically-minded kings'.⁴⁹

We have already sketched briefly, and shall shortly examine in more detail, the great change which came over Alexandrian intellectual life, best described as the replacement of external Greek by local Alexandrian talent. In terms of institutions, there is no doubt that in the lean years of the second century B.C. both Mouseion and Library continued to exist, and it is possible also that the same personal royal patronage outside these institutions continued, but we hear little of it;⁵⁰ it will have been in any case less significant, in as much as the potential beneficiaries were all, or almost all, of local extraction. There is some suggestion of an increase in the number of immigrant scholars and medical teachers to be found in Alexandria in the reigns of Auletes and Cleopatra,⁵¹ and it is likely enough that the latter, in whom intellectual interests and political ambition were combined to a remarkable degree, succeeded in forming a circle of intellectuals around her. In general, however, royal patronage of individuals in Alexandria was essentially a phenomenon of the third century.

We may now turn to consider the first of the great institutions of learning, the Mouseion.

II. THE MOUSEION

A Mouseion was, by etymology, a cult-centre built for the cultivation and worship of the Muses, and since Mouseia of this type were frequent in Greek cities, it is from the evolutionary aspect that we must first consider the Mouseion of Alexandria.

Shrines dedicated to the Muses, for the most part comprising open porticoes with an altar, but without a regular temple, are known from a good many places. Very often it lies in the nature of the evidence that no indication emerges of the main features of the cult practised in them, though we know that a funerary cult was sometimes associated with that of the Muses.⁵² Two examples of such shrines may be given. One is provided by an inscription of the third century B.C. from Istria on the Black Sea, which records that the father of the person honoured in the inscription had established a Mouseion for the city and had further bequeathed

a sum of four hundred gold pieces for sacrifices to the Muses and for a banquet for the participants.⁵³ Again, at the end of the century, the main provisions of the will of Epicteta, the Theraean widow, concern a Mouseion erected by her husband, Phoenix, in memory of their dead son Cratesilochus, and by Epicteta in memory of another son, Andragoras. The Mouseion, which included a shrine for the hero-cult of the two youths, is to be the meeting-place of a koinon consisting of all that male relatives of Epicteta; her daughter's son and the eldest-born of subsequent male descendants are to be priests.⁵⁴ This Theraean sanctuary was evidently closely linked to the cult of the dead, and there is no explicit reference to the cultivation of literature and the arts while the Istrian foundation has no stated connection with heroization, and that Mouseia was evidently a festival solely in honour of the Muses as goddesses of 'music', dancing, and letters. In either case, the participants, in addition to the practice of the cult of the Muses, may have formed circles for the pursuit of literary and particularly Homeric studies, but this is not stated, and, if it did occur, must be regarded as a secondary or subordinate pursuit.

On the other hand, there are undoubted instances in which shrines of the Muses formed primarily a centre of a Literary Society, which met and worshipped the Muses and held literary competitions in the shrine. This variation of emphasis is particularly clear with regard to the temple of the Muses at Thespieae, which enjoyed the particular patronage of Ptolemy Philopator.⁵⁵ It was the centre of a synodos concerned particularly with the local poet Hesiod—Ascra lies in the valley of Thespieae—and there survives a boundary-stone of some land belonging to this society, which records the 'boundary of the sacred land of the Hesiodic society of those who sacrifice to the Muses'.⁵⁶ We may compare these literary shrines of the Muses with those dedicated to particular poets, normally in their birthplaces, without express reference to the Muses, for instance the Homeric shrines at Smyrna, Notion, and Chios, the Archilocheion at Paros, and the gymnasium called the Mimmerneion at Smyrna.⁵⁷ There is no reason to doubt that such centres of worship, presided over by a priest of the Muses and concerned particularly with literary studies, existed before the Hellenistic period, to which the evidence already noted belongs, and in this respect the Mouseion at Alexandria takes its place in a combined tradition of cult and religious feeling, and also of literary activity. It is only in the Roman period that the Mouseia develop into secular centres of learning, the ancient equivalent of a University, a development due to the ecumenical prestige of the Alexandrian Mouseion.

There is one particular development of the cult of the Muses which had a decisive influence on the foundation of the Alexandrian Mouseion,

determined its name, and (more important) its whole character: the part played by the Muses in the great philosophical schools of Plato and Aristotle, and particularly of the latter. The association of the Muses with philosophy goes back to an early date, probably as early as Pythagoras,⁵⁸ but it was greatly developed in the fourth century. The Academy was apparently organized by Plato as a *thiasos*, a body of persons associated for a religious purpose, the service of the Muses,⁵⁹ and the evidence that the Lyceum was so organized is substantial and of decisive importance.

The wills of the successors of Aristotle, Theophrastus, Straton, and Lycon, as preserved in Diogenes Laertius, and deriving mostly from Antigonos of Carystus, reveal the resemblance of the whole establishment to a society possessing a cult-centre with buildings.⁶⁰ The personal interest of Aristotle and his successors in the natural sciences certainly led to a predominance of scientific over purely literary activities, but the original principle of a Mouseion remained unchanged, as the presence of an official with the title 'Overseer of the Muses' (*ἐπιμελητὴς Μουσῶν*) shows.⁶¹ The emphasis on the communal life dedicated to the Muses was probably the particular achievement of Theophrastus and not of Aristotle himself, whose will consists entirely of private bequests and arrangements concerning his family.⁶² In his will Theophrastus refers to the Mouseion—the shrine of the Muses—the dedications in the shrine, the little porch close to the shrine, and an altar, and he also mentions the residential premises and grounds: 'the garden and the cloister and the houses close to the garden'.⁶³ From the will of Straton, Theophrastus' successor, we can see the essentially collegiate nature of this establishment. He leaves to his successor all the dinner plate and glass for the common table.⁶⁴ It is striking that, in quite a different context, Theophrastus refers to a Mouseion at Stageira. Referring to various trees which survive after being felled, he says 'there was at Stageira in the Mouseion a poplar which shot up again after it had fallen'.⁶⁵ (Theophrastus owned property at Stageira, and knew the city well when he was there with Aristotle.)⁶⁶ Though it is not impossible that the city erected a shrine to the Muses to commemorate the greatest of its sons, it is more probable that Aristotle himself was influenced in his conception of his society as a cult brotherhood of the Muses by the shrine of his native city.

The background of the Alexandrian Mouseion should now be clear, and with its background its manifold nature. A direct and immediate link with the Mouseion of the Lyceum is provided by the Peripatetic philosopher, Demetrius of Phaleron, who was tyrant of Athens from 317 to 307 and during those years helped the Peripatos to establish its legal position.⁶⁷ Demetrius, after expulsion from Athens, fled to Egypt and

advised Soter on more than one matter, among them probably the civil code of Alexandria and the foundation of the Library.⁶⁸ It is more than likely that he also advised Soter about the foundation and organization of the Mouseion.⁶⁹ Soter, who had attempted unsuccessfully to obtain the services of Theophrastus himself,⁷⁰ but had to be content with his remarkable pupil, was evidently very anxious to follow the Peripatetic organization of learning, particularly with regard to science; he had been on Alexander's campaign, and no doubt appreciated the importance of the new scientific knowledge won on it.

We must now consider the evidence for the Alexandrian Mouseion, and see if it accords with this picture of a Peripatetic establishment, a cult-centre with permanent members engaged in various branches of study. We must here distinguish carefully between the Ptolemaic and Roman evidence, for we know from Suetonius that the emperor Claudius enlarged the Mouseion,⁷¹ and others may have done so before him. Therefore the later Mouseion, familiar from the Roman period, which served as the model for the Mouseion of Ephesus and one or two other less important foundations,⁷² and which was apparently essentially a secular teaching establishment, must be left out of account; or rather, those elements must be left out of account which are not demonstrably Ptolemaic.

Although Herodas refers to the Mouseion as one of the sights of the city,⁷³ no account of it from the third or second centuries survives, and we have to rely upon Strabo, whose account seems, from the checks that can be applied to it, to be valid at least for the later Ptolemaic period. He says: 'The Mouseion is part of the royal quarter and it has a cloister and an arcade and a large house in which is provided the common meal of the men of learning who share the Mouseion. And this community has common funds, and a priest in charge of the Mouseion, who was appointed previously by the kings, but now by Caesar.'⁷⁴ The various items of this description can be found almost word for word in the various accounts of the Peripatetic Mouseion already noticed, and this is a good guarantee that at the time of Strabo the original organization and physical arrangement persisted.

Strabo tells us that there was a house with a Common Room, such as had certainly already existed in the Lyceum (the dispositions of Straton regarding the common plate and glass and table furniture will be recalled). Should we also suppose that the members lived collegiately to the extent of living within the precincts, as in the colleges of Oxford and Cambridge? On this there is no clear evidence either for Alexandria or for its Athenian prototype, and the point is not perhaps of great importance, for if the members were provided with facilities for work and with free meals, the Mouseion would in any case become naturally

the centre of their activities.⁷⁵ The next point to notice is that the members of the Mouseion were regarded as forming a society for a religious purpose, a 'synodos', like the Peripatetic establishment, and that they were presided over by a priest, who recalls the priest of the Muses who presided over the Mouseion at Istria.⁷⁶ Moreover, a public festival of the Muses at Alexandria, involving literary competitions of the type familiar from Thespieae and elsewhere, is attested for the reign of Philopator by Strabo's contemporary Vitruvius, and, although the Library and not the Mouseion forms the background of the story he tells in this connection, there is no reason to doubt either its general truth or the fact that the festival was associated in the first place with the Mouseion.⁷⁷ Thus the traditional religious element was probably fully preserved at least until the time of Strabo. The Mouseion also possessed its own capital funds held in common, in the manner of all religious foundations in antiquity. Since it was a royal foundation, these were largely, no doubt, provided by the Crown. The importance of such an institution being adequately provided for, and possessing full powers over its funds, had been appreciated in Athens by Demetrius who had himself intervened to secure this for Theophrastus.⁷⁸ The Alexandrian Mouseion no doubt possessed this right from its inception, and was probably free to invest its funds, as temples and similar establishments did in Egypt and throughout the Greek world.⁷⁹

The organization of the members and staff of the Mouseion is hardly touched on by Strabo, except to tell us that it was presided over by a priest appointed by the Ptolemies. The appointment of the priest once more emphasizes the cult-origin of the institution. There is nevertheless a problem here. In the earliest documentary record of the Mouseion, a dedication of the middle or later part of the second century B.C. set up at Delos in honour of Chrysermus,⁸⁰ a member of the distinguished Alexandrian family,⁸¹ he is described as 'Epistates of the Mouseion', and the assumption is frequently made that the epistates was the priest of the Mouseion referred to by Strabo.⁸² It would however be more in conformity with the meaning of the word if it referred to an administrative office. In the Ptolemaic period, the native temples of Egypt each had a supervisor appointed by the Crown, called the epistates, who was quite separate from the priesthood and supervised the collection of taxes and so on,⁸³ and it seems likely that we should regard the epistates of the Mouseion as the administrator of its funds appointed by the Crown, while the priest was the titular head of the community and particularly responsible for its religious activities.

We know little of the condition of the members of the Mouseion. In the Roman period they were customarily, and perhaps officially, referred to individually as 'One of those receiving sustenance in the

Mouseion, and not subject to taxes'.⁸⁴ This peculiar fiscal description is not necessarily Ptolemaic, but it is possible that members of the Mouseion were included in the class of 'teachers of letters', whom we know to have been one of the categories granted exemption from the Salt-tax by decree of Philadelphus. Since, however, they are not expressly named, this is very far from certain.⁸⁵ In any case, the question remains, how the members were paid in the first place. We have already noticed that the Ptolemies disposed of a fund or civil list called the 'royal pension' which was used for the payment of those patronized by them. It is possible that the members of the Mouseion were paid from the same fund, but, as already suggested, it seems more likely that their own endowments, to which Strabo makes express reference, were used for this purpose.

Finally, we may consider the important question, what branches of study were pursued in the Mouseion, and under what conditions? Here again we are reduced to conjecture. Not one of the great literary figures, scholars, and scientists who form the subject-matter of much of this book is ever referred to either as a member of the Mouseion or as having prosecuted his studies or taught there.⁸⁶ This silence, though possibly fortuitous, is a fatal obstacle to any exact knowledge of what fields of knowledge were studied within the establishment. Some conjecture is, however, legitimate. While it is only natural to suppose that literary and kindred studies played a large part in the activity of a centre dedicated to the Muses, the direct Peripatetic influence suggests that scientific research was not neglected. Indeed, it seems likely that, especially in its early period, it developed primarily as a place of research into the physical world in its widest sense, including all those aspects of the study of man and of nature represented for us by the Aristotelian corpus, and other Peripatetic productions known largely by name only. By comparison with the sciences, literary and philological studies, which were naturally closely dependent on the resources of the Library, may, at least until the reign of Philadelphus, have been less prominently represented in the Mouseion. This dual role of the Mouseion may seem at first sight to be contradicted both by the earliest evidence for the Mouseion, the attack on its members by Timon of Phlius, the sillographer, and also by Strabo. In a characteristic parody of Homeric style⁸⁷ Timon said: 'In the populous land of Egypt many are they who get fed, cloistered bookworms, endlessly arguing in the bird-coop of the Muses.' This evident reference to the Mouseion does not to the modern mind suggest scientists so much as grammarians and argumentative philosophers (Athenaeus, be it noted, in quoting Timon, says that he is referring to 'the philosophers supported in the Mouseion').⁸⁸ Again, more precisely, Strabo describes the members as 'the *philologi* who are

members of the Mouseion'.⁸⁹ Neither passage however militates against the view that the Mouseion was among other things a centre of scientific studies. For Strabo *φιλόλογοι* simply means 'men of culture' regardless of their particular interests, and is not restricted to literary scholars, grammarians, or philologists.⁹⁰ In the same way, in more general terms, Timon evidently has the entire menagerie in mind, and the passage cannot be pressed to support one branch of learning rather than another; he is in any case less concerned with nice distinctions than with creating a lively image. We may thus conclude that Timon (and subsequently Strabo) does not really affect the problem of the studies carried on in the Mouseion one way or the other. To Timon's profoundly sceptical and contemptuous mind, they were all—scientists or men of letters—argumentative bookworms, and that was the sum of the matter.⁹¹

There remains the question of the nature of the activity of the members of the Mouseion. In addition to their religious and communal activities, were the members mainly engaged in teaching or in scientific investigation? Here we must beware of thinking too much in terms of modern academic societies, where the dichotomy between these two activities has become almost complete. The members of the Mouseion were no doubt primarily concerned with the advancement of their subject by investigation, but it is natural to suppose that they also taught and gave lectures. A considerable amount of public teaching in the form of lectures of some sort was certainly carried on in the Ptolemaic period, for we hear of many distinguished figures who are described as having been 'the hearer', that is, the pupil, of another. It is nowhere stated that this teaching, either in general, or as it affected the studies embraced by the Mouseion, was carried on in that institution, but it would be very natural that it should be. The alternative is to suppose that, as teachers, the members of the Mouseion had their own private teaching establishments. That is possible, but it certainly seems more likely that Soter and his advisers, when creating the Mouseion, made provision for lectures to be given by its members on its premises. It is worth noting in this connection that many centuries later the teaching staff of the university at Constantinople were prohibited by Imperial edict from remunerative private teaching.⁹² In any case it would be unwise, again under the influence of modern notions, to regard instruction as conducted by means of formal lectures. Much of it, if not all, would be effected by means of informal discussion and conversation, and it is indeed difficult to imagine that the Mouseion did not make provision for this.

The history of the Mouseion in the Ptolemaic period no doubt followed the same course as patronage as a whole. With the departure of the immigrant intelligentsia of the third century, and the general transfer of intellectual activity to the native Alexandrians, we need not doubt

that from the early second century the standard of scientific work fell rapidly. The causes of this need not be repeated here. It is enough to recall once more the passage of Menecles of Barce concerning the exodus of scientists, doctors, philosophers, and members of every branch of the intellectual classes to realize the effect this had on the Mouseion.⁹³ Several notable men of letters and scholars are known to have fled at this time, and on the scientific side we find no distinguished scientists in the later second century,⁹⁴ and only a few doctors in the first.⁹⁵ Nevertheless it would be a mistake to assume that in the absence of outstanding talent the Mouseion declined as an institution. What Strabo says of the intellectual activity of Alexandria in his day, in a passage in which he compares it with that of Tarsus, no doubt reflects the activity of the Mouseion. He says:⁹⁶

'The enthusiasm of the Tarsians for philosophy and the rest of 'encyclopaedic knowledge' surpasses even that of Athens and Alexandria and everywhere else where there are schools and philosophical establishments [note that Pergamon need no longer be reckoned with in this connection]. The difference is that in Tarsus those who come to learn are all local people, and that strangers do not take to the place easily. Nor indeed do the natives themselves stay there, but they complete their studies abroad, and when they have finished they gladly live abroad and only a few return home. The opposite happens in the other cities just mentioned, except Alexandria. For many visit them and reside there with pleasure, but you would not see many natives either studying abroad out of love of learning or eagerly pursuing their studies at home. At Alexandria both phenomena occur: for they receive many foreigners, and not a few of their own citizens are sent to complete their training abroad.

Thus, however much the general level of work had declined in Alexandria in the first century B.C., there is no doubt that it had preserved or recovered a good deal of the prestige which it had enjoyed as an institution before the darkest days of the mid-second century. However, the mere fact that it was much frequented as a centre of learning does not prove that the learning in itself was of a very high standard. This cannot be maintained in view of what we know of the life of Alexandria at that time. It can only be said that it may still have offered the best academic training that was available—but it was immeasurably below what was available in the third century, when the scientific work of the Mouseion in particular reached a level of achievement which was unique in antiquity. When we turn to study the history of literary scholarship, we shall note a different curve of development in the field of grammar and philology. The background for this lies not only in the Mouseion, as a teaching establishment, but also in the Library, to which we must now turn our attention.

III. THE LIBRARY

The other great organ and fruit of Ptolemaic patronage was the Library. Of this we know more than we do of the Mouseion, but still very little, and the interpretation of much of the material is highly controversial. As with the Mouseion, we may first consider the Library as an institution. There is, as might be expected, a considerable amount of evidence for libraries in Greece, or what at least may be loosely described as 'book collections' and 'book collectors', long before the age of Alexander.⁹⁷ Most of this refers to private collections but, given the difficulties of the production and multiplication of texts, it does not seem likely that libraries, if they existed at all, were either extensive in themselves or particularly common.⁹⁸ The fourth century certainly witnessed an increase in such collections, not least in the possession of tyrants,⁹⁹ and in the second half of it there is no doubt that Aristotle collected a very considerable library at the Lyceum.¹⁰⁰ Consequently, as with the Mouseion, there is a likelihood of direct Peripatetic influence in the establishment of the Library. Strabo, in fact, in his account of the lost library of Aristotle, says that he 'taught the kings of Egypt to establish a library', and this statement, which cannot be literally true,¹⁰¹ is evidently to be understood as referring to a specific Peripatetic impetus. We shall consider this in greater detail shortly. Here it is enough to note that the Library, like the Mouseion, has unmistakable links with those traditions of the Lyceum which account for the nature and trend of much of the intellectual life of Alexandria, with its emphasis on the collection and comparison of material rather than on abstract philosophy in the tradition of the Academy, and which at a later date led to the use of the word 'Peripatetic' as equivalent to 'Alexandrian'.¹⁰² The civic libraries of the Hellenistic age, like the later Mouseia, no doubt looked to Alexandria and Pergamon as models in some respects, though there is no evidence that they were centres of learning in the same way. It does not appear that such libraries existed sufficiently early to have exercised an influence on the Alexandrian foundation.¹⁰³ However, though we can glimpse the early influences at work in the establishment of the Library, of its history as a public building in Alexandria we know next to nothing. Herodas, in his brief account of the wonders of the city in the third century B.C.,¹⁰⁴ does not mention the Library, and we possess no evidence relating to it earlier than the so-called *Letter of Aristeeas*, which records the legend of the seventy Translators of the Hebrew Bible who worked in Alexandria in the reign of Philadelphus. In this story Demetrius of Phaleron is described as 'in charge of the Royal Library', and it was with a view to acquiring a copy of the Hebrew Bible in translation for that institution that Philadelphus

despatched his envoys to collect the Translators. Since however the *Letter* was probably composed in the reign of Philometor (180-145), it is not reliable historically, and the information it provides must be used with caution.¹⁰⁵ At a later date the silence of Strabo in his account of the city is noteworthy. Thus, while we have reliable historical evidence for the Mouseion both in the lampoon of Timon,¹⁰⁶ and in Strabo's description of it, such is wholly lacking for the Library as an institution.

Our prime source both for the early organization of the Library and for the sequence of the early Librarians, and incidentally the only detailed source which we possess on the Library at all, is the account of John Tzetzes, preserved in three slightly differing versions of his *Prolegomena* to his Commentary on Aristophanes, composed by him at different times.¹⁰⁷ The tradition of this text is therefore complicated, and the value of the accounts is problematical. Tzetzes evidently reaches back ultimately to some Alexandrian sources of the Ptolemaic period,¹⁰⁸ but his immediate authorities were much later material, such as grammarians' editions and prolegomena to Aristophanes, and the scholia to Dionysius of Thrace.¹¹⁰ In spite of confusions and obscurities his account of the early activity of the Library is of outstanding importance, and we shall have occasion to refer to it frequently.

A second main source consists of the various *Lives* of the poets and scholars contained in the 'Suda' and deriving indirectly from the *Onomatology* of Hesychius of Miletus.¹¹⁰ These *Lives*, to which reference is made very frequently in the course of this work, are often corrupt and confused, but the biographical details they preserve provide the framework of all our knowledge of the grammarians and poets.

Thirdly, there is a relatively new and much earlier piece of evidence, which throws light on the problem of the order in which the Librarians held office. This is an Oxyrhynchus papyrus of the second century A.D., containing a historical and mythological chrestomathy; the second column of this gives a list of the Alexandrian Librarians, with some undoubted errors and not a few obscurities.¹¹¹

Our sources for the most part regard Philadelphus as the founder of the Library. The statement in the *Letter of Aristeeas*, and later Christian writers deriving from it, that Demetrius of Phaleron was its first Librarian is irreconcilable with this, since Philadelphus' first act on accession was to exile his father's adviser, who had urged Soter to prefer the children of Eurydice to those of Berenice I.¹¹² There is, however, no reason to doubt the part played by Demetrius before the accession of Philadelphus, which corresponds well with what we know and can imagine of Peripatetic influence in most aspects of Alexandrian intellectual activity,¹¹³ and especially in the foundation of the Mouseion; and equally little reason to doubt that the idea, and first stages of planning

of the Library, as of the Mouseion, were due to Soter, whose work in this as in other respects seems to have been overshadowed, deliberately or otherwise, by that of his magnificent son.

The history of the Library as an institution in the third century is very much the history of the activity of the succession of men in charge of it, and much of the evidence for this, the most important period, is concerned with the tiresome problem of the order in which the Librarians succeeded each other. We shall be treating the history of the Library and of Alexandrian scholarship very largely within the chronological framework of this succession, and consequently we shall have to consider this difficult matter in some detail in due course.

For the present our task is to consider the organization and arrangement of the Library.¹¹⁴ This was presided over by a Librarian, whose office is expressed in the *Suda-Lives* verbally in the phrase *προεστάναι τῆς βιβλιοθήκης*, and we also find the office described as *προστασία τῆς βιβλιοθήκης*.¹¹⁵ It does not follow that this is the true original title, although *προστάτης* is not uncommon in Ptolemaic Egypt, as elsewhere, as the designation of the head of different sorts of private and public bodies. Tzetzes refers to Eratosthenes as *βιβλιοφύλαξ*, and to the office held by him as that of *βιβλιοφυλάκιον*,¹¹⁶ but *βιβλιοφύλαξ* in Ptolemaic papyri means a 'keeper of archives' in a local government office,¹¹⁷ and there is no contemporary evidence for the meaning 'librarian'.¹¹⁸ The only Ptolemaic documentary evidence for the title of the Librarian, a Paphian honorific inscription commemorating Onasander of Paphos, refers to him as *τεταγμένος ἐπὶ τῆς ἐν Ἀλεξανδρείᾳ μεγάλης βιβλιοθήκης*.¹¹⁹ The inscription belongs to the reign of Soter II, and it could be argued that the office, and with it the title, may have changed by this late date in the history of the institution. It is, however, equally possible that this was the official title throughout, for offices expressed by (*τεταγμένος*) *ἐπὶ* followed by the necessary substantive are common throughout the Hellenistic world. Consequently the matter is best left open,¹²⁰ since an alternative title such as *ἐπιστάτης*, used of the administrative head of the Mouseion, is perfectly possible.¹²¹

The post of Librarian was naturally, like all important appointments in Alexandria outside the civic cadre, a royal appointment, and as already noticed we find it associated from its inception with a very influential post, that of tutor to the children of the royal house. The earliest tutors of whom we hear—Philitas¹²² the Coan poet and scholar, and Straton of Lampsacus, the physicist,¹²³ who were among the leading figures of Alexandrian life in the reign of Soter—probably belong to the period before the establishment of the post of Librarian, but as soon as that was established the posts were often held concurrently, Zenodotus,¹²⁴ Apollonius,¹²⁵ and Aristarchus¹²⁶ all being expressly attested

to have held both. On the other hand, neither Eratosthenes nor Aristophanes of Byzantium are said to have held the tutorial post, and it seems on the whole probable that they did not.¹²⁷

When we turn to the administration of the Library the first question which we have to consider is how many libraries there were.¹²⁸ On this point we have no direct Ptolemaic evidence, and the usual uncertainties arise. Later sources may invent, when they are not vague, and are not likely to be reliable in detail.¹²⁹ Tzetzes says that there were two libraries, which he describes respectively as 'the Library outside the Palace' and 'the Library within the Palace',¹³⁰ and this general statement of fact should be accepted.¹³¹ However, while it fixes one library within the royal quarter, it tells us of the other only that it was outside it. Epiphanius, writing in the fourth century A.D., is more precise. In his account of the translation of the Septuagint, he says that the finished translation was placed 'in the first library', which was situated in the Broucheion. He goes on: 'And still later another library was built in the Serapeum, smaller than the first, which was called the daughter of the first one.'¹³² Thus, while Tzetzes and Epiphanius agree that there were two libraries, they disagree fundamentally in that Epiphanius states that the second was considerably later than the first, while Tzetzes does not call the second library—the 'Outer Library'—the library of the Serapeum.¹³³ Other Christian writers also refer to the library of the Serapeum as the repository of the Septuagint and of commentaries on it.¹³⁴ Evidently Christian (and possibly Jewish) tradition particularly associated the Scriptures with a library in the Serapeum, and it seems unlikely that this is an invention. Probably, then, the Serapeum housed an important library in the Imperial period. But when was it founded, and are we to identify it with the 'second library' said by Tzetzes to have existed in the third century?

For an answer to this question we must consider the evidence from the Serapeum itself. Excavation of the sanctuary has shown that the original Ptolemaic temple was built by Euergetes and not by Philadelphus, even if there are grounds for supposing that a shrine to the god already stood on the hill early in the reign of Philadelphus.¹³⁵ It is therefore natural to suppose that, if there was a library there, then, as Epiphanius indicates by his statement that the Serapeum library was later than the royal one, it was the work of Euergetes. In fact the stoa-like structure at the south end of the sanctuary (consisting of two long corridors with small rooms leading off them), which is certainly of Ptolemaic date, would not be unsuitable as a repository for rolls, and it is very possible that the excavator correctly identified the site as that of the Library.¹³⁶ To that extent the evidence on the ground permits the inference that the daughter library was already at the Serapeum in the

Ptolemaic period, and probably from the time of Euergetes. In this connection it is worthy of note that the library at Pergamon was built within a temple precinct, that of Athena Polias.¹³⁷

We may then accept it as probable that a second library existed from the third century B.C., and as compatible with the archaeological evidence that already at this date it was attached to the Serapeum. There can be no doubt that the structure in question was demolished in the Roman period and replaced by a Roman construction, which served a different purpose, and the library was from that time onward housed within the main precinct of the temple.¹³⁸ The function of this Serapeum library, and its relation to the main library in the Ptolemaic period are alike uncertain.¹³⁹

We may now consider an associated problem which concerns the Royal Library: was there in the Ptolemaic period a separate building, a library in the modern sense of a building with shelves, rolls, and (possibly) accommodation for reading and study, or were there only book-stores attached to some other building such as a stoa? As we have already noted, the literary evidence is silent about a library building: Strabo,¹⁴⁰ in his account of the 'Palaces', mentions the Mouseion, but not the Library, and a great deal earlier Herodas, in his very brief description of the sights of Alexandria, also includes the Mouseion, but says nothing of a library.¹⁴¹ This may not be conclusive. For instance, if the Library had been destroyed in the Alexandrine War twenty years before Strabo was in Alexandria, it is not likely that he would have mentioned it, while Herodas for his part could not mention everything in Alexandria in the semi-dramatic context in which he was writing. Thus their silence is nothing more than suspicious, and perhaps not that. There are, however, several other, less immediately relevant factors which support the view that there was no separate library building. First, the word *βιβλιοθήκη* need not in itself mean more than a book-store, where rolls were placed on shelves, and does not necessarily imply a reading-room and the other amenities of a developed library such as existed in Imperial Rome and Imperial Athens.¹⁴² Secondly, the only Hellenistic library of which we have any material knowledge, that of Pergamum, if correctly identified, seems essentially to have consisted of store-rooms and a large cult-room, attached to the back of one of the stoai of the precinct of Athena Polias.¹⁴³ It does not seem likely that the kings of Pergamon would have been content with such a modest structure if a separate library stood in the capital of the Ptolemies. Indeed, even if the motive of direct emulation be dismissed,¹⁴⁴ it is hardly likely that the Attalids would have been content with accommodation which fell markedly below the standard of the day. Probably then, the Library at Alexandria also formed part of

another building, and that which suggests itself at once is the Mouseion.¹⁴⁵ To judge by what we know of the Athenian Lyceum,¹⁴⁶ which probably served as a model for the Alexandrian Mouseion, and by Strabo's brief description of the Mouseion, there were abundant courtyards and colonnades which could have served as reading-rooms and study-quarters, while the 'book-stacks' may have been accommodated in rooms attached to the stoa. There were also administrative offices, such as 'accession rooms', which were probably separate.

We may turn now to the operation of the Library, with reference to the acquisition of rolls. For information on this topic we are largely dependent on various stories recounted by Galen, in his discussion of the authenticity of certain works of the Hippocratic Corpus and in particular of the origin of the Hippocratic 'signs'. In the second part of his commentary on the third book of the *Epidemics* Galen says that he will discuss the origin of these signs in detail, since the work of Zeuxis containing the discussion is no longer to be easily found. He proceeds to give a detailed account of how the copy of the *Epidemics* belonging to the physician Mnemon of Side, marked with signs, reached Alexandria in the reign of Euergetes I.¹⁴⁷ He records that 'Ptolemy' was so jealous for the reputation of his library that he issued an order that all books found on ships unloading in Alexandria were to be seized and copied, and the copies given to the owners. Books thus acquired received a special label, ἐκ πλοίων, 'from the ships', presumably to distinguish them from books bought by the Crown agents in the two main book markets in the Aegean at that time, Athens and Rhodes.¹⁴⁸ Galen then illustrates this bibliomania by the story of how this Ptolemy (eventually Euergetes I) tricked the Athenians by borrowing from them their official copies of the three tragedians—that is, those which formed the basis of public performances—and depositing, as security for their safe return, the sum of fifteen talents. He then had splendid copies on papyrus of the finest quality made by the library staff, and kept the Athenian exemplars.¹⁴⁹ This appetite for books, and the rivalry which it inspired—particularly in the second century, it may be supposed, after the Pergamene library developed as a rival—led to one unfortunate result to which Galen makes reference more than once: forgery flourished for the sake of the profit to be derived from the royal rivals.¹⁵⁰ Similarly we read, it may be observed in passing, in the late commentators of Aristotle that a similar cause—the purchasing-power of Egyptian money—led to the false ascription of many works to Aristotle.¹⁵¹ Galen contrasts this situation with the earlier period, before the Hellenistic age when, he says (wrongly) there were no forgeries in circulation.¹⁵² There is no doubt that deliberate forgery was wide-spread already in the Hellenistic world, and medical writings, as being the product of schools

rather than individuals, were especially liable to pseudepigraphic attributions, and it seems quite likely that Galen has laid his finger on one major cause, the continuing demand for old books. At the same time the labours of the Alexandrian scholars themselves no doubt counteracted this to a very considerable extent by the production of improved texts.¹⁵³

The process of registration and copying which took place before the books were finally made available to readers is briefly described by Galen in the same passage as that in which he discusses the Hippocratic signs. He says that when books arrived in Alexandria destined, in the circumstances already described, for the Library they were labelled with the name of the person who had arrived with the books in his possession, and placed in the stores. 'For', he continues, 'they were not in the habit of placing the books straightway in the *bibliothekai*; they were first placed in some warehouses all heaped together.'¹⁵⁴ Though the details are not clear, there are indications here of an 'accessions department', where the rolls were stored on first arrival, and of a system of entry of books under provenance. Both these points merit further examination.

The depots, which Galen calls *ἀποθήκαι* and *οἴκοι*, may correspond to the *ἀποθήκαι τῶν βιβλίων* which, according to Dio Cassius, were burned in the fire during Caesar's Alexandrine War.¹⁵⁵ There is no reason to doubt that this system of accessions was already in existence in the early Ptolemaic period. Galen took the story from Zeuxis, who cannot indeed be dated independently of this whole affair, but seems to have written shortly after Mnemon, who lived in the mid-third century. We may therefore regard the provision of a department for newly acquired books, with a rudimentary system of labelling, as an early feature of the Library. It is natural to suppose that this department, which at least in early days, before the main library was finally in full working order, presumably held, temporarily, a very large number of books, was in close proximity to the final book accommodation in the section of the Library used for reading and consultation.

The system of labelling, as described by Galen, is of considerable interest. In the same passage concerning Mnemon and the 'signs' he gives three separate indications on this score. He says that according to some authorities Mnemon took the copy of the third book of the *Epidemics* from the Library at Alexandria to read it, and handed it back adorned with *χαρακτῆρες*, that is critical marks, while others maintained that Mnemon had brought the copy in question with him from Pamphylia, and that—as a result of the measures taken by the Ptolemies, already discussed—this copy was found in the Library labelled *τῶν ἐκ πλοίων κατὰ διορθωτὴν Μνήμονα Σιδήτην*.¹⁵⁶ Others again main-

tained that the label simply had the name of Mnemon, ἀπλῶς τὸ ὄνομα τοῦ Μνήμονος. The complicated details of this controversy do not concern us at this juncture; what is here significant is that, to judge by this narrative, books might be labelled either by geographical provenance, by the name of the corrector (diorthote) or editor of the copy, or by the name of the owner of the copy itself. In different ways each of these three different labels may be said to represent provenance.¹⁵⁷

This labelling by provenance, which was apparently done, as was natural, in the accessions department when the information was still available at first hand, was probably of fundamental importance. We may imagine that after the details of accession had been recorded the work would be sent on to the main Library itself for cataloguing for public use. This is a process of which we know very little. All copies of individual works were no doubt entered alphabetically according to the author's full name,¹⁵⁸ and the various versions or copies of a particular work would be differentiated either by the place from which the copy came, or by the name of the previous owner, or, in the case of an edition of a classic text, by the name of the diorthote or editor. In the task of establishing the history of a text, or of determining the superiority of one exemplar over another, the provenance would provide the only satisfactory form of description. This system of cataloguing by author and provenance was of course for use within the Library itself, in the manner of a modern catalogue, and is to be distinguished from published work such as the *Πίνακες* of Callimachus, which was concerned only, or at least primarily, with individual authors and their works in the manner of a bibliography, though it may have contained a good deal of information in addition to bibliography.

Work of this kind, whether it took place in the 'accessions department' or in the Library itself, involved a considerable amount of scribal activity over and above that which is attested for the preparation of copies, be it on first arrival, as in the story of Ptolemy and the copies of the Athenian dramatists, or in the repair and recopying of existing copies. There must have been a *scriptorium* associated with the Library, and it is reasonable to ask whether, as a natural process and in the interests of economy, some standardization in book production, and even in script, resulted. This would seem very likely in itself, but the evidence for it is unfortunately very meagre, since most of our literary papyri are of Imperial date, and throw little light on the practice of the Ptolemaic period.¹⁵⁹ However, there seems good reason to suppose that standardization in such matters as the use of rolls, adjustment of single books to single rolls, and so on,¹⁶⁰ occurred in Alexandria in the course of the third century, and the Library probably contributed considerably to this, directly or indirectly; standardization of script and format would

however be equally in the interests of the book trade, and might very well originate with it. In any case even if the Library did not play a unique role in this respect, at the very least its indirect influence as a large-scale purchaser with (presumably) a marked preference for uniformity of format and legible writing was probably considerable.¹⁶¹

In view of the importance attaching to provenance we may ask what trace of an arrangement according to the provenance of texts survives. Very little, it must be admitted. References to editions named after the editor, such as ἡ Ζηνοδότειος or ἡ Ζηνοδότου, abound,¹⁶² but these are marks not of provenance but of editorship, and are not relevant here. Actual marks of provenance are rare, but one group of labels calls for note, even though it is unfortunately of uncertain purport. The Homeric scholia make frequent reference to texts of Homer designated by place names, ἡ Χία, ἡ Ἀργεῖα, ἡ Μασσαλιωτική, ἡ Σιωπική, and so on,¹⁶³ known collectively to the scholiasts as αἱ κατὰ πόλεις. Although the meaning of these expressions is not certain, it seems fairly clear that they are provenance labels of the type now under review, and that they refer to the copy or copies which came from the places named.¹⁶⁴ A possible difficulty of this view is that, to judge by analogies, in this context provenance was commonly denoted by the preposition ἐκ followed by the place name. Thus the text of Homer which had belonged to Alexander, and is perhaps identical with that collated by Aristotle, was known, from the fact that it was preserved in a precious casket which the conqueror took from the ruins of Persepolis, as ἡ ἐκ τοῦ νάρθηκος,¹⁶⁵ and a text of the *Odyssey*, the 'origin' of which is obscure, but which may derive its title from its being placed in the Mouseion,¹⁶⁶ was known as ἡ ἐκ Μουσείου. This, however, is not a very serious objection, and the alternative explanation, that the 'city-texts' were versions of the *Iliad* deriving from a text current in the particular city and forming an official public version there, is open to insuperable objections.¹⁶⁷ It is quite uncertain when these 'city-texts' first appeared, for although the scholiasts quote the Alexandrian editors as agreeing or disagreeing with them, they do not positively indicate the priority of the former over the latter, although this seems very probable of most of them.¹⁶⁸ These apart, few examples of provenance-labels remain, but the survival of these titles is itself an indication of the important part which provenance evidently, and—in the circumstances—naturally, played in the arrangement and classification of books from the time that they arrived in the accessions department to their inclusion in the general catalogue.¹⁶⁹

All this organization existed for the greater ease of those who wished to consult works in the Library. We may finally consider how many rolls there were in the Library, and what their contents were. Our only evidence as to the number comes from the same passage of Tzetzes to

which reference has previously been made, in which he states that the 'external library' contained 42,800 'books', while the 'Palace Library' contained 400,000 books described as *συμμιγείς* and 90,000 described as *ἁμιγείς*.¹⁷⁰ The natural meaning of these two terms seems clear,¹⁷¹ *συμμιγείς* being rolls containing more than one work, whether it be by the same or by different authors, and *ἁμιγείς* being rolls containing single works or parts of a single work. The alternative view, that the two terms refer respectively to works of which several copies, and those of which only one copy, existed—that is, that they represent maximum and minimum figures—falls on linguistic grounds alone: *συμμιγείς* and *ἁμιγείς* cannot bear this meaning.¹⁷² We may then accept that *συμμιγείς* are rolls of papyrus containing several works (normally of one author) on one roll, and *ἁμιγείς* rolls containing only one work.¹⁷³ While surviving papyri on the whole belong to the latter class, there are grounds for supposing that 'mixed' rolls were common in the early days of the Alexandrian Library. Diogenes Laertius refers in his lists of philosophical writings to several individual works which were all contained in one *βιβλος* or *τόμος*. Mixed rolls of this unwieldy size were no doubt unusual, but perfectly possible in the period before standardization prevailed.¹⁷⁴ Though there are occasional instances of much shorter mixed rolls,¹⁷⁵ there seems little doubt that they went out of fashion and gave place to a smaller, more convenient format, in which one work occupied a single roll.¹⁷⁶ This is not surprising, since even if large, compendious rolls might be convenient in a private library where less storage space would be available, it would obviously be a substantial disadvantage in a public library where different readers might want different parts of the same roll. The reduction in size and the simplification of content were therefore probably a direct result of the conditions obtaining in the Library.¹⁷⁷

The total figure of rolls in the Royal Library alone, 490,000, suggests that the works of individual writers existed in many copies. The significance of the figure given for the Outer Library, 42,800 rolls, is not clear. It is not presented as a divided total of partly mixed and partly simple rolls, and this might suggest that they had not been catalogued in detail. However, it seems improbable that they were, for example, mere duplicates, recognized as such, for duplicates are hardly likely to have been subject to a careful count, and little would be served by recording their total. We must accept that we are no less completely in the dark in respect of the contents of the daughter library than we are concerning its connection with the Royal Library.¹⁷⁸

In regard to the contents of the Library, it is likely enough that the early organizers aimed at a complete corpus of Greek literature, although they did not succeed; in spite of the vast total given for the library in the passage of Tzetzes, we know of several works which did

not survive to be included in Alexandrian pinacographic compilations.¹⁷⁹ In addition there are grounds for supposing that works in other languages were represented in translation. That this was so was repeated in antiquity, from the time of the *Letter of Aristaeas* onwards, in connection with the translation of the Hebrew Bible into Greek, and certainly it is natural to suppose that translations of these books were deposited in the Library as they became available.¹⁸⁰ It is also quite likely that translations of ancient Egyptian texts were available. Both Manethon, the Egyptian author of a history of Egypt in Greek, and Eratosthenes are said to have translated chronological tables from the Egyptian records, and although the lists now passing under the name of Manethon have been modified by many hands,¹⁸¹ and the actual association with the name of Eratosthenes is spurious,¹⁸² the former at least certainly must have translated such texts, which were no doubt subsequently included in the Library. Again, the statement that Hermippus, the pupil of Callimachus, wrote a commentary on the writings of Zoroaster,¹⁸³ if true, suggests that translations of Persian texts were also available for study in the Library. Although we may dismiss the statement in Syncellus and the grammarians quoted by Tzetzes that Roman works were represented in the library in the time of Philadelphus¹⁸⁴—when Roman literature barely existed—it is possible that works of Latin literature were acquired before the end of the Ptolemaic period.¹⁸⁵

In all, it must be admitted that we know very little both about the functioning of the Library and of the works which might be found there. When we turn to consider the Librarians responsible for its administration, we are better informed, even if here the outline of the whole is marred by more than one obscurity. Since we must treat the history of the Library from now on largely in terms of the Librarians who administered it, and who left their imprint on the Alexandrian tradition of learning, we must first try to establish the sequence of the Librarians, and to do this we must examine a connected series of chronological problems.

All our sources agree that Zenodotus was the first Librarian.¹⁸⁶ It is after this that our troubles begin, and they concern three great names, Callimachus, Apollonius Rhodius, and Eratosthenes. Were each of the three Librarians, and, if so, in what order?¹⁸⁷ On the first point, it is generally agreed¹⁸⁸ that the second and third named were indeed Librarians, but there is considerable disagreement regarding Callimachus. Neither the *Suda-Life* of Callimachus nor the Oxyrhynchus papyrus, nor indeed any ancient source, except one, suggests that he was Librarian.¹⁸⁹ The papyrus brought new material, but not new light, for unfortunately it begins in the middle of the list,¹⁹⁰ with Apollonius, and

therefore no conclusions can be drawn from it for the present problem, since it could be argued that Callimachus preceded Apollonius, following immediately upon Zenodotus.¹⁹¹ In fact, in view of the lack of evidence in support of Callimachus having been Librarian, and the absence of any cogent argument as to why, notwithstanding the lack of evidence, he must nevertheless have held the office,¹⁹² we should only include him in the list if the addition of one librarian is absolutely essential on grounds of chronology.¹⁹³ We shall see that this is not the case. This brings us to the question of Eratosthenes and Apollonius.¹⁹⁴

The date of the death of Zenodotus, which is an essential element in this inquiry, depends entirely upon the chronology assigned to his successors as Librarians, and may for the moment be left out of account.¹⁹⁵ The papyrus says that Apollonius preceded Eratosthenes as Librarian.¹⁹⁶ The second *Life* of Apollonius says that some (apparently a minority) maintained that he became Librarian, but that this occurred after his return to Alexandria from Rhodes—a return journey not otherwise attested.¹⁹⁷ It was pointed out by Grenfell and Hunt, when they first published the papyrus,¹⁹⁸ that the Apollonius of Alexandria, the ‘eidograph’, mentioned in it, was the second holder of the office named Apollonius, and that it may have been this which led to the assumption that the author of the *Argonautica* had returned to Alexandria and held the office after his return. This does not solve all the problems, however. Grenfell and Hunt further pointed out that if, as is commonly maintained, Apollonius went to Rhodes about 260 B.C., after having held the office of Librarian, this leaves a very substantial gap between the librarianship of Apollonius and that of Eratosthenes. They therefore suggested that Apollonius may indeed have returned and held the office for a short time early in the reign of Euergetes.¹⁹⁹ There is, however, no good reason to set the departure of Apollonius as early as 260; it may well not have occurred until about 245, and have been followed at once by the appointment of Eratosthenes;²⁰⁰ if any reason over and above the latter’s distinction is needed to explain his summons from Athens, that is provided by the sudden vacation of the office of Librarian by Apollonius. If we accept this later date for Apollonius’ departure, and abandon the notion of his having returned, the situation becomes clearer. The papyrus also states that he was tutor to Euergetes I (in fact, by error, it says ‘the first Ptolemy’), who was born about 282, and was therefore probably equipped with a tutor in about 272–270. Though there is no specified link between tenure of the tutorship and the Librarianship, the two go together very often, and it is likely that the Librarian held the office of tutor *ex officio* simultaneously, though naturally he continued to hold the principle office after his tutorial duties had been discharged. If we assume that the tenure of the

two offices actually began simultaneously, it will follow that Apollonius was already Librarian by about 270. Euergetes in any case will hardly have been in need of a tutor after about 260 B.C., so, on the same assumption, Apollonius' tenure cannot have begun after 260 at the latest. If that is correct, Zenodotus, who is said to have been the teacher of Aristophanes of Byzantium, who was probably born about 265–263, and thus probably heard him in the later forties, must have retired from the Librarianship a good many years before he died.²⁰² At all events we may reject the thesis that Apollonius left Alexandria as a youth as a result of the disapproval felt for the *Argonautica*;²⁰³ we may rather suppose that the quarrel between Callimachus and him developed or at least persisted in middle life. This is perfectly compatible with the nature of that quarrel as it may be reconstructed against the general background of their personal relations.²⁰⁴ We shall see that it was in fact the hostile reception accorded by Callimachus and others to the already known portions of his poem which led to Apollonius' resignation from office and withdrawal to Rhodes. We may then finally say that Zenodotus held the Librarianship till about 270 or a few years later, and that he was succeeded by Apollonius, who held the office until his departure for Rhodes in about 246/5. Eratosthenes was then summoned to Alexandria from Athens by Euergetes in about 245, probably to assume office forthwith; his death at the age of eighty did not occur until the reign of Epiphanes, at the end of the century or early in the second century.²⁰⁵

The sequence is less difficult after Eratosthenes. He was followed as Librarian by Aristophanes of Byzantium, whose death also fell within the reign of Epiphanes, and who is said to have held the office for fifteen years. These are good grounds for assigning him to the period from about 204/201 to 189/186.²⁰⁶ The papyrus has 'and Aristarchus' after the name of Aristophanes, which should indicate that the two men shared the office, but the statement runs counter to chronology, since Aristarchus, who was Aristophanes' pupil, lived on into the second half of the second century. Moreover, the way in which Aristarchus is added suggests an insertion at some stage after the list was originally compiled: it is not stated that the two men shared the office, it simply says 'and Aristarchus', nor does it give Aristarchus' civil status. There is therefore every justification for regarding the words as an interpolation.²⁰⁷ Aristophanes was succeeded in his turn by the second Apollonius, the so-called 'Eidograph', and he in turn by Aristarchus.²⁰⁸ The latter was tutor to the children of Philometor²⁰⁹—wrongly called Philopator in the papyrus—who, as we know, had no children until about 165.²¹⁰ Subsequently Aristarchus fled from Alexandria to Cyprus when Euergetes,²¹¹ who had been his pupil or had at least heard him lecture, launched his great

persecution of the scholars of Alexandria and their disciples, in or shortly after 145.²¹² Aristarchus may have been Librarian considerably before 165, for his great activity and authority, and the large number of pupils assigned to him, alike suggest that he held the office for a long span. A conjectural date about 175 would leave about ten years of office for Apollonius the Eidograph.²¹³ After Aristarchus other problems arise concerning the office of Librarian, but before continuing the story, we may here summarize the order of the Librarians as we have seen it to be on the most probable hypothesis. It is: Zenodotus, *c.* 285–*c.* 270, Apollonius Rhodius *c.* 270–245, Eratosthenes 245–204/201, Aristophanes 204/201–189/186, Apollonius the Eidograph *c.* 189/186–175, and Aristarchus *c.* 175(?)–145.

The measures of Euergetes II against the Greek population of Alexandria affected the Library profoundly, and the effect is immediately evident in the office of Librarian.

In the Oxyrhynchus papyrus Aristarchus is followed by a strange figure, Cydas, 'One of the Spearmen', ἐκ τῶν λογχοφόρων.²¹⁴ Cydas, otherwise unknown, was no doubt an officer of this branch, perhaps one of the χιλίαρχοι λογχοφόροι known from contemporary documents.²¹⁵ He seems curiously out of place in this context, and the suggestion of the original editors that he was a 'caretaker' Librarian put in by Euergetes II after the departure of Aristarchus seems likely to be correct. The list then says that under the ninth Ptolemy, that is (strictly speaking) Soter II, 'there flourished Ammonios and Zeno . . . and Diokles and Apollodoros, the grammarians'.²¹⁶ Probably by 'under the ninth king' we should understand most of the two reigns of Soter II and also the intervening reign of Ptolemy Alexander II.²¹⁷ If so, the four persons mentioned belong to the period from about 120 to 80 B.C. Whether they were actually Librarians seems uncertain. They are only said to have 'flourished', and it might be thought that if they were Librarians they would be designated as such. On the other hand, they are not, so far as we can tell, all persons of great scholarly distinction in their own right.²¹⁸ The answer may well be that the author of the list was himself not certain: the biographical tradition concerning grammarians and similar persons which survives in the *Suda-Lives* has no precise information about any figures of the period between Aristarchus and Augustus.²¹⁹ Such formulae as 'in the time of Cicero'²²⁰ or 'in the time of Augustus'²²¹ may thus cover a period of anything up to a hundred years. This explains not only the uncertain date given to many of the later grammarians, but also (probably) the vague terminology of the Oxyrhynchus list, the author of which was, on this assumption, in doubt both as to the order and to the exact status of some, if not all, of the four. It can hardly be chance that at about the same time almost all reference to the

Library vanishes from our other sources. A final Librarian occurs in the dedication of the reign of Soter II from Paphos, already mentioned, in honour of Onasander, the son of Nausicrates, 'the kinsman and priest for life of Ptolemaios the God and Saviour . . . secretary of the city of the Paphians and supervisor of the great Library at Alexandria'. Onesander had no doubt been a supporter of Soter II during his exile in Cyprus, and was rewarded with the office of Librarian when Soter returned to Alexandria in 88 B.C.²²² It is noticeable that the author of the papyrus list of librarians did not think Onasander worthy of inclusion.²²³ He is the last Librarian of whom we hear, and being a political nominee like Kydas before him, he probably contributed little or nothing to scholarship. His appointment certainly indicates that, whatever may have been the condition of scholarship at this time, the office of Librarian at least had lost much of its importance. From this it probably follows that the Library was far less a centre of active research than it had previously been. This too may be the inevitable result of the persecutions of Euergetes, but in any case from now on there appears to be a change, no doubt the result of circumstances, in the general organization of teaching and research in the field of grammatical and philological studies: the library appears to lose its importance in this connection, and its place is taken by the 'schools' of individual scholars who carried on the work of Aristarchus in different ways until the beginning of the Roman period.

This decline in the importance of the Library appears to have begun in the later second century B.C., and it may be doubted whether it ever subsequently recovered its prestige as a centre of research in the way that the Mouseion seems to have done. In this connection it is necessary to consider the problem of the accidental destruction of the Library by fire during Caesar's brief Alexandrine War in 48 B.C. This difficult question is ultimately a matter of individual judgement regarding the value of sources. It is a fundamental weakness in the situation that Strabo, though he describes the Mouseion, does not mention the Library, and though this silence is probably due to the fact that the Library was within the precincts of the Mouseion, that does not diminish the uncertainty of the situation. With one exception later writers, who mostly derive their information from Livy, concur that the fire, which started in the warehouse area, spread to, and destroyed the contents of the royal library, which, if it was within the Mouseion, lay near the shore in the Palaces area. Various totals are given for the number of rolls lost, among which that of 400,000 seems to derive most directly from Livy.²²⁴ Dio Cassius, who also derives from Livy, states in a brief reference to the event in his historical narrative, that the fire consumed the dockyards, and stores of grain and books.²²⁵ Quite apart

from the uncertainty as to the sense to be given to 'stores' here (for although in the context, with reference to both grain and books, it would most naturally apply to a warehouse, it could also apply to a store within the Library, or even to the Library itself),²²⁶ the authority of this passage cannot stand against the statements of our other sources which also derive from Livy, to the effect that it was the contents of the Library that were destroyed. It is also to be noted that almost all references to the Alexandrian Library in the Imperial period, other than merely historical references to the past, are to the Serapeum library,²²⁷ and although this already existed in the Ptolemaic period, the natural conclusion is that it was now that it took the place of the Inner or Royal Library as the main repository of books and rolls. All considered, then, we are justified in supposing that the contents of the Royal Library, if not wholly destroyed, were at least seriously diminished in the fire of 48 B.C.²²⁸ As to the fate of the building itself nothing is said, and since it probably formed part of the Mouseion, which is not mentioned at all in this context, we should suppose that, though damaged, it was not destroyed.

However, even if we accept that the contents of the Library itself were severely depleted, the significance of the event must not be overestimated. Although much irreplaceable material may well have perished, Antony's gift to Cleopatra of the Pergamene library, said to have contained two hundred thousand books, if indeed it actually occurred, must have gone some way towards compensating for the loss,²²⁹ and the activity of the last generation of Alexandrian scholars, in particular Didymus, Tryphon, and Theon, shows quite clearly that, even if some important works were not available, they were still able to undertake exhaustive research in the city, either on the basis of original texts or of copies,²³⁰ while the decline in the importance of the Library as a centre of learning and research belongs to a considerably earlier period, and is in no way connected with the fire.²³¹ It would then probably be wrong to attribute to the fire any decisive importance in the history of Alexandrian scholarship.

We have now examined the background of the Alexandrian achievement in science and literary scholarship as seen in the two sister institutions of the Mouseion and the Library. We must now turn to our main task, that of seeing how the two transplanted Peripatetic foundations succeeded in the task for which they were created.