32. Papyri

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The scope of papyrology

For about 4,000 years, roughly 3000 BC to AD 1000, the people of Egypt made writing-paper out of the papyrus plant (*Cyperus papyrus*), which has given its name to the resulting product ('papyrus' for a single piece of paper, 'papyri' in the plural). The manufacturing process was simple. The outer casing of the triangular stem was removed and the pith cut and peeled away in strips about 30 – 40 cm (12–16 in.) long. These strips were laid vertically side by side and then another layer placed crosswise on top; the two layers were pressed together, dried and rubbed smooth into a writing surface that could be of very high quality. Individual sheets were glued together to create a roll, the standard length of which was twenty sheets (approx. 6–8 m, or 20–6 ft.). The modern book form, the codex (quires of sheets folded in half and stitched along the fold; see chapter 33), was a Roman development that, after its adoption by early Christianity, began to supersede the roll. The ink was for a long time made from water, gum and lampblack (a soot product); in later Roman times, iron gall was added.

The story of this paper is very largely an Egyptian one. In the Mediterranean world it was produced commercially, as far as we can see, only in Egypt, where the plant flourished, particularly in the marshy lands of the Nile delta. Although papyrus writing-paper was exported extensively, to survive it must be kept dry and out of the light. There are some rare survivals in the damp lands on the northern side of the Mediterranean, and the dry spots of the Near East have produced important finds, but overwhelmingly it is Egypt that offers the best conditions for its preservation: the tombs of the pharaohs and Egyptian elite, the use of waste paper as a sort of *papier mâché* (called cartonnage) for human and animal mummies, and the dry desert conditions at the edges of modern settlement have combined to preserve an extraordinary wealth of papyrus documentation: hundreds of thousands of papyri, ranging from whole rolls and books to tiny fragments, survive from Egypt. No other region of the ancient world has preserved a comparable record.

While writing on papyrus had a long and multilingual life, the scholarly discipline known as 'papyrology', which developed at the end of the nineteenth century as a subsection of classical scholarship, has limited itself mainly to the thousands of surviving Greek texts written in Egypt between about 300 BC and AD 700. In its narrowest sense, papyrology's primary task is to decipher and produce editions in readable form of these often fragmentary and difficult texts – in other words, to transform them from raw archaeological artefacts into potentially manageable historical and literary data. It has been the standard practice to write an introduction, translation and commentary on the texts so edited, thus putting them into context, pointing out difficulties and suggesting lines of interpretation as an aid to understanding. In a broader sense, papyrology also seeks to study the world revealed in the texts through works of literary, linguistic and historical analysis.

Such a description, however, needs qualification, as it would not cover all papyrologists or all the work carried out by them: the material, linguistic and geographical scope of the subject is, in

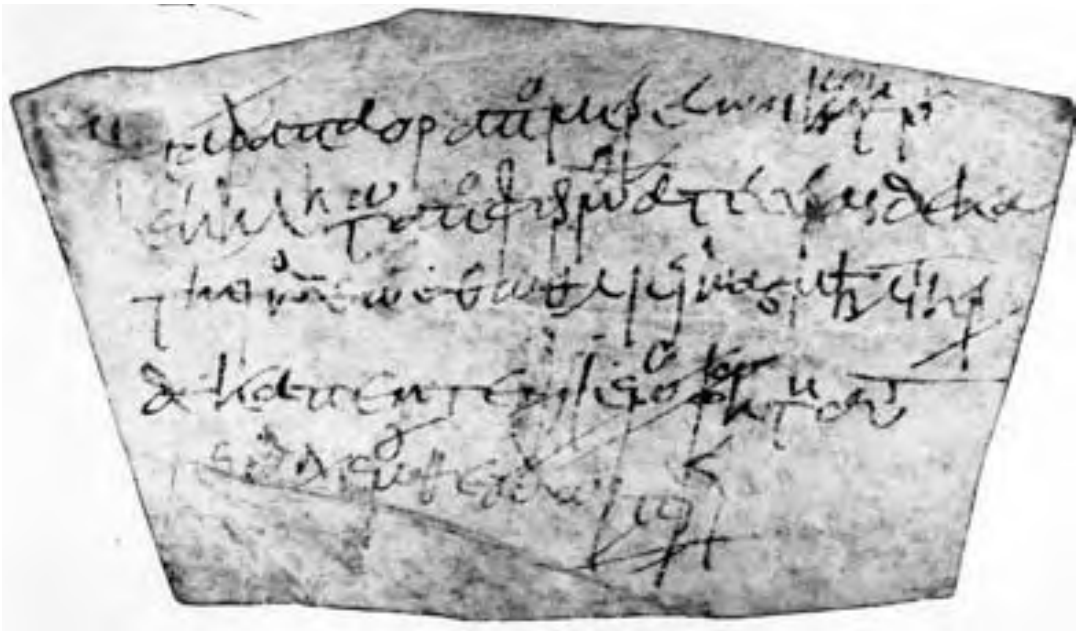

Fig. 32.1 *P. Dub.* 30: rent receipt written on parchment, which began in this period to displace papyrus. Seventh or eighth century AD. Published by kind permission of the Board of Trinity College Dublin.

fact, wider. Writing preserved on *ostraka* (broken pieces of pottery) and on waxed wooden tablets (and, in certain cases, on metal and parchment; figure 32.1) has traditionally come under the aegis of papyrology. The time-span to which I have referred, 300 BC to AD 700, is the Graeco-Roman period of Egyptian history, its beginning marked by Alexander the Great's annexation of Egypt in 332/1 BC, its end by the Islamic conquest in AD 642. During this millennium Greek was the official language of the administration, even after Egypt became a province of the Roman Empire in 30 BC, and most of the surviving documentation is in Greek. There is a small amount of Latin. There are also a large number of texts written in Egyptian, particularly in the cursive form (see also chapter 63) we know as 'demotic'. Traditionally, Egyptologists have studied 'Egyptian' Egypt, taken largely to be the Egypt of the pharaohs, with its writing in hieroglyphs, hieratic (an abbreviated version of the hieroglyphic script) and demotic; and papyrologists (or, more generally, classicists) have studied 'Graeco-Roman' Egypt, the Egypt reflected in the Greek papyri and classical authors of antiquity. This is, however, partly an artificial convenience arising out of two distinctly different modes of modern scholarly training ('classics' and 'Egyptology'), both of them difficult and demanding.

The problem for students of Graeco-Roman Egypt is that the Egyptian people continued to go about their Egyptian business, speaking and writing their language, worshipping their gods, tilling their fields and so on, long after the arrival of the Ptolemies. Egyptian continued to be written down deep into the Roman imperial period (the last dated hieroglyphic inscription comes from AD 394; the last demotic text some fifty years later). Admittedly, even by the first century AD it had become marginalised in most contexts, but in the Ptolemaic period (323–30 BC), especially in its first century, demotic Egyptian is still of central importance; and in the second and third centuries AD the Egyptian language gained a new lease of life when it adapted the Greek alpahabet and developed the form we call Coptic. When looking at the bigger picture, one cannot fully understand Ptolemaic or Byzantine Egypt (AD

284–642) without taking into account the demotic and Coptic material respectively. Although the majority of demotic papyri remains unpublished, a small number of papyrologists have mastered both the Egyptian and Greek languages, and have contributed work of exceptional importance. It might also be noted that the transition from Graeco-Roman to Islamic rule in Egypt, and the nature of that fascinating cultural interaction, can ultimately be assessed only with a mastery of Coptic, Greek and Arabic.

Nor are the potential linguistic demands on the papyrologist limited just to Egypt and its languages: the dry sands of its desert areas may have proved the best preserver of papyrus, but not its only one. A volume of Greek papyri from Petra in Jordan has recently been published, and there have been important discoveries from Dura-Europus on the Euphrates and from the Judaean desert. A recent article (Cotton et al., 'Papyrology') listing documentary papyri from the Roman Near East noted just over 600 texts. The authors comment on the variety of languages used: mostly Greek, but also plenty of Latin (especially in a military context) and Hebrew, Aramaic, Nabataean, Palmyrene, Syriac. A new field of Near Eastern, as opposed to Egyptian, papyrology is developing. The carbonised rolls of papyrus from the remains of Herculaneum, destroyed by the eruption of Vesuvius in AD 79, have created another micro-industry within the general field of papyrology, as have the wooden tablets inscribed in Latin from Vindolanda near Hadrian's Wall in Britain (see also chapter 34). However exciting and important these discoveries are – and there is every reason to expect more such finds, particularly from the Near East – the heart of papyrology still lies in Egypt, if only because there is still so much unpublished material from there: in Greek alone, major papyrological collections such as those in Berlin, Vienna and Oxford have many thousands of unedited texts.

The early history of papyrology

The story of modern papyrology begins to all intents and purposes in the second half of the nineteenth century. It was long known that ancient peoples wrote on papyrus, but it was scarcely appreciated until the discovery in 1752 of many hundreds of papyrus rolls in the ruins of Herculaneum. There was huge interest, and expectation that the world would be given exciting new discoveries of Greek and Latin literature. Wordsworth even wrote a poem about it (No. 28, *Poems of Sentiment and Reflection*). Sadly, the reality was disappointing: very little could be made of the rolls because they were carbonised (modern technology has been able to extract much more from them, and the work still goes on). In 1778 a Danish traveller sent a papyrus roll as a gift to Cardinal Stefano Borgia. It had been one of forty or fifty offered to an unknown merchant, who bought one; the others, so the story went, were burned by Turks who liked the smell. When the text was published it was, if anything, an even bigger disappointment: although it was over 10 feet (3m) long, it contained only a list of men liable for work on the irrigation channels at Tebtunis in the Fayyum region of Egypt in the year AD 192. In the early decades of the nineteenth century, travellers, diplomats, scholars and other interested parties competed to form collections of Egyptian antiquities, and Greek papyri began to turn up. They were almost always finds made by locals, and only in small numbers. Collectors wanted big, spectacular rolls or archives of related texts.

It was the 1870s that really marked the rediscovery of Greek papyri. Farmers had always known that the soil from ancient sites was richer in nitrates, and had used it as fertiliser, but on a relatively small scale. In the 1870s the cultivated area of Egypt expanded and local farmers now needed much larger quantites of this *sebakh* or fertile earth. As they carted it away in huge amounts from the ancient sites, large numbers of papyri, mostly Greek, but also demotic, Coptic and Arabic, were revealed in the dumps where the original inhabitants had thrown them out. The Austrians were the first to take advantage of this new source and many thousands of texts made their way to Vienna, still one of the biggest collections in the world. But other important museums and centres of classical studies soon began to institute purchasing policies. The antiquities market was the first major supplier of papyri for modern collections, but papyri were also being found on archaeological digs, particu-

larly by the British archaeologist Flinders Petrie in the 1880s.

The year 1891 saw the publication of two volumes of Greek papyri that aroused keen interest: the first volume of the Petrie papyri, edited by J. P. Mahaffy of Trinity College Dublin, and the first of the British Museum papyri, edited by Frederick Kenyon. The latter was the more sensational because it contained an edition of a lost work attributed to Aristotle, the *Constitution of the Athenians* (see also chapter 60). And in the 1890s and the early years of the twentieth century, this was still the main reason for the extraordinary excitement generated by papyri: scholars would be able to recover lost masterpieces of Greek literature and philosophy, and Christian texts. That was the motivation behind the decision of the Egypt Exploration Fund to send, in 1895, the first archaeological expedition to Egypt specifically to search for papyri (see also chapter 1). In the following decade, under the leadership of two remarkable British scholars, Bernard Grenfell and Arthur Hunt, huge numbers of papyri were discovered at Tebtunis, at Hibeh and above all at Oxyrhynchus. Oxyrhynchus yielded enormous quantities of papyrus: at the moment nearly 5,000 texts have been published in 67 volumes, and there is much more to come. Other European nations, particularly the Germans, French and Italians, sent their own expeditions in search of papyri, followed later by the Americans.

What they found, and bought on the antiquities market, forms the basis of the modern collections, but it is important to emphasise how arbitrary, both chronologically and geographically, these finds (and purchases) were. From the Fayyum, the ancient Arsinoite nome (administrative region), some hundred kilometres southwest of modern Cairo, we have what is at certain periods probably a good representative sample of the documentation produced in the area. The same holds true for Oxyrhynchus and some sites in Upper Egypt, but in the Nile Delta, the most populous and fertile area of ancient Egypt, but also the dampest, virtually no papyri survive; and, unfortunately, this is also the case for Alexandria, the capital of a highly bureaucratic administration that produced probably millions of rolls of papyrus: the water table is too high to preserve perishable material. We must recognise the limitations this inconsistency places on our knowledge.

The subject matter and importance of papyri

The first volume of Oxyrhynchus papyri was published in 1898 and the first text was something the editors called 'Sayings of Jesus' (it is now recognised as part of the apocryphal Gospel of Thomas). The second text was a third-century AD copy of the opening chapter of Matthew's Gospel, the oldest text of the New Testament known at that time. In 1897 the British Museum published a magnificent papyrus of the fifth-century BC lyric poet Bacchylides (see also chapter 41) and, as we have seen, the Aristotelian *Constitution of the Athenians* had already appeared. So initially expectations of lost literature were not disappointed, but in fact it very soon became clear that the vast majority of texts, probably as many as 95 per cent of them, were not literature but what we call documentary texts: official business, personal correspondence, forms, receipts, contracts, bills – the unselfconscious record of everyday life. This was a disappointment for many, but others realised how hugely important this material could be for our understanding of the social and economic history of the ancient world.

Literary papyri

Although there are subcategories, the division of papyrus texts into 'literary' and 'documentary' remains fundamental. Literary papyri (figure 32.2) can themselves be divided into two main types: those that give us previously unknown works of ancient literature, and those that give us new texts of works already familiar to us through the medieval manuscript tradition.

The most dramatic example of the former is probably the third-century BC comic playwright Menander. Greatly admired in the ancient world as a leading practitioner of Greek New Comedy, his works were known to the modern world only in scattered quotations by ancient writers: papyrus texts have now provided a number of almost complete plays. But there have been many other vital gains; indeed there is scarcely any genre

Fig. 32.2 *P. Dub.* 1: Hippocrates, *Epidemics* 7. 80. The handwriting, with the letters separately and neatly written, is characteristic of literary texts. First or second century AD. Published by kind permission of the Board of Trinity College Dublin.

of Greek literature to which papyrus discoveries have not added new material. For instance, new works (often fragmentary), of Archilochus, Sappho, Simonides, Bacchylides and others, have vastly expanded our knowledge of Greek lyric poetry in the archaic age (see also chapter 41). Philosophy has benefited recently with the publication of a new text of the Presocratic philosopher Empedocles, and Herculaneum has, among other gifts to the world, given us fragments of Epicurus' work *On Nature*, and some of the prose writings of Philodemus of Gadara. Hyperides, the fourth-century BC orator, was another entirely lost to literature until papyrological texts led to his rediscovery in the nineteenth century (see also chapter 45). The substantial

papyrus fragments of the fourth-century Oxyrhynchus historian, whose name is unknown, undoubtedly represent an important addition to the surviving corpus of Greek history (see also chapter 49). Callimachus and Cercidas are two major beneficiaries among Hellenistic poets. And, lest we forget the Greek literature written by Christian authors (see also chapter 53), part of Origen's *Dialogue with Heraclides* was found on papyrus in 1941, along with extensive remains of the voluminous biblical commentaries of the great fourth-century AD teacher Didymus the Blind. Even Latin literature, although very rarely represented in the finds, gained one startling addition to its ranks, when twelve lines of the Roman elegist Cornelius Gallus were discovered in 1978 (see also chapter 42). There are also many fragments of unknown literary works, to which we cannot assign an author, providing a useful reminder that the canon of Greek literature preserved in the medieval tradition represents only a small proportion of what was actually written in the ancient world.

The primary importance of the second category of literary text mentioned above, where papyri contain works we already know, lies in the enormous contribution they have made to textual criticism, the scholarly task of establishing the most accurate texts of ancient authors. We rely for the survival of ancient literature very largely on the medieval manuscript tradition, which rarely dates much before about the ninth century AD. Papyri, of course, represent a much earlier stage in the transmission of literary works from the ancient world. Our earliest papyri of Homer, for instance, bring us nearly a millennium nearer the original writing down of the Homeric poems than the first complete manuscripts we have. This does not necessarily mean they are 'better', more reliable texts, only that they provide an independent means of checking and assessing the medieval tradition.

While papyri of known works have revolutionised textual criticism, they have also made other important contributions to literary and cultural history. For instance, they have enabled scholars to redate, sometimes quite drastically, the careers of certain ancient writers. The most spectacular examples would include Chariton, author of the novel *Chaereas and Callirhoe* (see also chapter 43), who is now known to have lived in the second century AD, not the fifth or sixth as earlier supposed; Achilles Tatius, author of *The Story of Leucippe and Clitophon*, who also finds himself redated earlier by some 400 years to the mid-second century AD; the epic poet Triphiodorus, who belongs to the third or early fourth century AD, not the fifth.

Another contribution made by literary texts is the way in which their distribution in the towns and villages of the Egyptian countryside gives us a unique insight into small-town Greek life, what Greek-educated people were reading away from the famous centres of Hellenic cultural and intellectual activity. Some of these papyri are clearly school texts and tell us much about the syllabus of Greek education (see also chapter 59). Numbers of surviving papyri indicate just how dominantly popular Homer, particularly the *Iliad*, was: the *Leuven Databank of Ancient Books* lists just over 1,100 papyri of Homer (833 of them from the *Iliad*); in second place, so to speak, comes Euripides with 176 fragments, although the 324 papyri of the New Testament and 431 of the Old Testament give a good indication of Christianity's success in Egypt.

Documentary papyri

As already noted, the vast majority of papyri from Egypt fall into the category identified as 'documentary', covering virtually every imaginable area of public and private life. A list (abbreviated) of subjects represented in the texts collected in a standard primer illustrates the point: administration, adoption, applications, apprenticeship, Christians, complaints, contracts, divorce, foundlings, inheritance, Jews, law suits, leases, letters, loans, magic, marriage, mummies, Nile levels, notifications of birth and death, oracles, property registers, receipts, revolts (figure 32.3), sales, school exercises, slaves, soldiers, taxes, transport, wet-nurses, wills, women (legal rights of). This extraordinary bulk of material, although, as we have observed, not distributed equally over time or location, makes Graeco-Roman Egypt both the best-documented area and the best-documented period in the ancient world.

Fig. 32.3 *Pap. Gr. TCD* 274: text containing important historical information on the contemporary revolt in the Thebaid (see *APF* 43 (1997), 273–314). Early second century BC. Published by kind permission of the Board of Trinity College Dublin.

On the whole, papyri do not help us to write a narrative of Egyptian history. They very rarely deal with political events, although the exceptions can be exciting. A recently published papyrus (*P. Bingen* 45), written on 23 February 33 BC, lists various bribes offered to a Roman senator to keep him on the side of Cleopatra and Antony in the coming conflict with Octavian. When first published, it was misidentified and the potential significance of the word at the bottom of the document was not seen by the editor: it is a single Greek word, *genesthoi*, meaning 'make it happen', and the possibility that attracted the world's press, which they soon turned into a virtual certainty, was that it was written by Cleopatra herself. This is quite possible, but it is also possible that it was written by a senior civil servant. The real importance of the text was not who wrote it down, but what it says. It is a rare example of a document originating at the highest levels of the Ptolemaic government and relating directly to the political situation, the cold war in the late 30s BC before the battle of Actium. It is only seldom that something like this appears, or Claudius' famous letter to the Alexandrians (giving his answers to requests made to him and particularly his decision concerning the aftermath of riots between Alexandrians and Jews) (*Select Papyri* 212), and while details about, for instance, senior members of the imperial family and court, or the movements of emperors, or matters pertaining to imperial chronology, crop up from time to time, and will continue to do so,

the main importance of documentary papyri lies elsewhere – what they tell us about the administration of the country, its agricultural, tax and legal systems, the military, religion, and the private lives of ordinary people in their relations with the state and with each other.

Although our knowledge of the higher echelons of the Egyptian bureaucracy, the king or governor and other senior officers of state who mostly lived and worked in Alexandria, is rich in comparison with other Hellenistic kingdoms and Roman provinces – official correspondence up and down, and across, the chain of command from the very top to the bottom provides invaluable information – the papyrological record is, so to speak, bottom-heavy: we know much more about middle and lower officialdom and life in the towns and villages of the countryside (see also chapter 60). Here the primary concern of both government and governed was agriculture. The Nile, flooding each summer and leaving behind its rich residue of fertilising silt, made Egypt famously productive. With the grain surplus contributing vitally to the food supply of Rome and, later, Constantinople, the way this great gift of fertility was exploited is, not surprisingly, the subject of thousands of papyri: patterns of landownership, how it was irrigated, who worked it under what conditions, what was grown on it, transport of produce (especially grain), government supervision, survey and modes of official record-keeping, rents (figure 32.4, and see figure 32.1 above) and taxes and other impositions on the farmer. Animal husbandry is also well documented, as is, indeed, the working of all natural resources, animal, vegetable or the valuable mineral deposits. Economic policy is not easy to assess, but some of the mechanics of economic exploitation are reasonably clear, whether it is the monopolistic control of important products such as oil, salt or papyrus in Ptolemaic times, or the Romans' much greater reliance on tax income (see also chapter 5). We certainly do not understand all aspects of the tax system of Roman Egypt, but it is recorded in massive detail; and tax assessments and receipts, along particularly with employment contracts, tell us much about the types of economic activity people engaged in, from doctors to donkey-drivers, weavers to wet-nurses, plumbers to prostitutes.

Mention of contracts brings up the important matter of law, a complicated mixture of Egyptian, Greek and Roman. This is a subject illuminated by various types of papyrus document: royal and imperial edicts, copies of laws and legal texts, court proceedings, official orders and letters, wills, petitions. Some of the most generally informative, from the point of view of social history, are the thousands of petitions that individuals submitted to various officials in their search for legal redress. Because petitioners had to explain the details of their grievance, we learn a great deal not just about the law, but also about the relationship of individuals with each other and with the state. The age-old problems of property and inheritance loom large, just as do marital breakdown and other family disputes; the failure to pay money owed, or to meet other contractual obligations; the disagreements between neighbours; larceny, assault or more organised banditry; and the complaints of unfair treatment by the state, whether its failure to recognise tax and labour exemptions, or the inefficiency and corruption of its officials.

Fig. 32.4 *Pap. Gr. TCD* 107: unpublished receipt from the reign of Antoninus Pius. AD 158/9. Published by kind permission of the Board of Trinity College Dublin.

Petitions highlight problems, when understandings and processes break down or threaten to do so; declarations required by the state and many thousands of private letters are perhaps more neutrally illustrative of social life. Census declarations, for instance, which in Roman times had to be submitted by householders every fourteen years, have made possible modern demographic analysis of household stuctures, gender ratio, life expectancy, the role of disease, age at marriage, sibling marriage. Although private letters are often slightly stiff and formulaic by modern standards, they open a fascinating window onto social conventions and attitudes, and the minutiae of family life. The writers of private letters (and other private documents), although obviously in command of a basic literacy, tended not to be highly educated, and their spelling and syntax, especially the simplifications and 'mistakes' (that is, relative to the 'correct' practice of high literature), constitute one of the most important sources we have for studying the development of the Greek language, as it was spoken and written by ordinary people over a thousand-year period: the documentary papyri in general provide vital evidence in any assessment of ancient literacy, and a whole chapter in the history of the Greek language.

Various texts inform us about religion, Egyptian, Graeco-Roman, Jewish and Christian. Priestly decrees, temple archives and administrative documents tell us much about the important political, economic and religious role of the Egyptian temples and priesthood in the Ptolemaic period. A collection of recently published texts (*P. Polit. Iud.*) concerns the *politeuma* (community) of the Jews in the town of Heracleopolis in the second half of the second century BC. It provides dramatic new evidence about the internal organisation of Jewish communities in Egypt, adding to an already substantial body of texts concerning Jews and Judaism. Private letters, lists of questions to be put to oracles, prayers, spells, curses and magical texts illuminate the religious practices, beliefs and superstitions of ordinary people. Monasticism developed first in Egypt, and we have plenty of documentation with which to trace its organisation and development; indeed, in the Byzantine period there is a mass of material about the monasteries, churches and clergy of Egyptian Christianity.

Such a bald summary neither covers all the subject matter of documentary papyri, nor does justice to the contribution to the study of the ancient world made by this body of material. New inscriptions, coins and archaeological excavations constantly add to our knowledge, and they have the advantage of not being geographically limited, as papyri are to Egypt (at least largely), but papyri constitute the single biggest addition in the modern age to the body of written primary evidence we have from the ancient world.

The future of papyrology

New texts

New texts will continue to emerge, from three sources: existing collections formed in the early years of papyrology, archaeological digs, and the antiquities market.

Of the big existing collections, Oxyrhynchus volumes will no doubt continue to flow off the presses. Editorial leadership has maintained an impressive pace, coupled with the highest quality, of publication. Vienna is another great collection with many thousands of unpublished documents. The Vienna team have had in the past few years a big publication project, with valuable new volumes appearing. On the whole they deal with Egypt in later Roman and Byzantine times. A very recent volume of Berlin papyri resulted from the dismantling of cartonnage from one piece of a coffin, yielding over 100 texts; cartonnage still has a great deal to offer. Smaller collections all over the world will also, presumably, continue to produce new editions, either in volumes, or in article form. I am thinking here of documentary texts, but the same applies to literature. On the whole the main collections have been searched for obviously spectacular literary texts, so it is unlikely that we will find in an existing collection a new text of Bacchylides to match the magnificent British Museum papyrus to which I have already referred. But, as already noted, recently an important new passage from the Greek philosopher Empedocles was recognised in the Strasbourg collection. And the work on the literary material from Herculaneum continues.

Within Egypt, excavations in the late 1980s at ancient Kellis in the Dakleh Oasis in the Western desert uncovered hundreds of papyri, *ostraka* and wooden boards in situ in houses. They were mostly Greek (including a fine wooden codex of works of Isocrates) and Coptic, but some Latin and Syriac. This was an exciting discovery because we had virtually no documentation from the oasis, and the material was found scattered in houses and other buildings, allowing for a careful contextualising (see also chapter 3) of the papyri (in contrast to purchased material, for which the archaeological context has invariably been lost). Kellis is 300 km from the Nile valley, so we might expect to get a slightly different view of life, not, for instance, so dominated by the Nile flood. In fact we seem to have the same sort of general mixture of documents found elsewhere, but it is none the less revealing new material from an area we knew little about before. Another most productive source of new documentation has been the excavations at the Roman quarry site of Mons Claudianus in the Eastern desert, which has yielded thousands of *ostraka*. Other digs are bringing to light more new texts and Near Eastern archaeology, it is hoped, will also continue to discover new papyri.

Purchases on the antiquities market formed the core of many European and American papyrus collections, and although it now operates under much tighter restrictions than a century ago, the market continues to have an important role. The University of Trier in Germany started its papyrus collection only in 1982, but has already built up a small but valuable collection, highlighted by two interesting dossiers: the papers of the second-century BC Ptolemaic official Boethus, and those of the fourth-century AD monastery head Nepherus. The Jewish texts from Heracleopolis, to which I have referred, came from the antiquities market; and it will continue, no doubt, to give us small numbers of new texts.

Editorial work on old texts

Papyri published a long time ago often need re-editing. There has recently appeared the second edition of the first volume of Geneva papyri. They were published first in the years 1896 to 1906, and, as the new editors observe, at that time very few volumes of papyri had been published, so that the parallels we now have available – which are absolutely crucial for our understanding of new texts – did not exist at the time; nor did the dictionaries, lexica and electronic search devices. The result is that some of these early texts were simply not as fully exploited as they now can be. In some cases there was no translation, and sometimes little or no commentary, as in the early volumes of the Berlin papyri. So it can be a very valuable service to re-edit them: it gives underused, or misunderstood, texts a whole new life. The Petrie papyri, published initially in the early 1890s, are a case in point. Even allowing for the absence of parallels and of a developed papyrological methodology, this was a confusing publication, and the systematic republication of these texts currently under way is a valuable new contribution to scholarship. There are other older volumes of papyri that would benefit from a complete republication.

Another way of working with existing editions, which has proved helpful in the past and could be further developed, is the collecting into one place of texts of the same type. Even in the ancient world texts that belonged together became scattered, a process exacerbated by the mostly random way in which modern collections were formed. Modern scholarship can very profitably gather into one publication texts from the same dossier, town or office, or even collect documents that may not have been stored together. There is, for instance, a good collection of wet-nurse contracts; another of texts related to Jews and Judaism; an important one of Ptolemaic ordinances; another on certificates issued to people who had fulfilled their annual obligation to work on the irrigation channels. Other possibilities beckon.

Interpretative studies

If it were possible, or desirable, to devise a grand strategy for the future of documentary papyrology, one of the tensions it might face is between continuing to publish new texts and digesting, or processing in one way or another, what we already have. These are, of course, not mutually exclusive activities; indeed they are interdependent. I am

referring only to a matter of emphasis. An argument of diminishing returns might be proposed, that the parameters of subjects identified in the papyrological record so far have been more or less set: another private letter, another tax receipt, another certificate is unlikely to add much to the sum of what we know; scholars should, therefore, try to move more into wider interpretative issues. Even if there were thought to be a certain force in the point, as long as unpublished papyri exist, scholars will want to publish them, if only because it is such an exciting process. And even with a type of document or literary text that is already heavily represented in the published record, there is always something new, however small, in every text. If editorial work (and its attendant service industry of lexical dictionaries, lists of corrections, etc.) has dominated for a century it is hardly surprising. It has, however, left a situation in which there is far more raw material than there is analysis of it.

Much of the broader papyrological analysis so far carried out, the questions it asks and the answers it proposes, have been dictated by traditional concerns arising directly out of the texts themselves and the need to understand them in their own terms. It is difficult to interpret a document involving the state official known as the Royal Scribe without understanding what Royal Scribes did; and a massive new study, of impressive and exacting scholarship, will tell you anything you need to know of this official in the Roman period (T. Kruse, *Der königliche Schreiber und die Gauverwaltung: Untersuchungen zur Verwaltungsgeschichte Ägyptens in der Zeit von Augustus bis Philippus Arabs (20 v. Chr. – 245 n. Chr.)* (*Archiv für Papyrusforschung*, Beiheft 11, 2 vols), Munich and Leipzig: K. G. Saur, 2002). Similar (if usually shorter) treatment has been devoted to other officials, to administrative, religious and military institutions, to different types of document; but there is still a great deal to do, with many 'gaps', so to speak, in the modern coverage of what we might call the traditional approach to historical papyrology – an approach, it should be said, that has yielded rich results. In addition, just as other areas of classical scholarship have been influenced by new theoretical approaches borrowed from other disciplines, so too papyrology has begun to embrace models originating outside the papyri themselves. An already, and justifiably, much-cited example is in the field of demography (Bagnall and Frier, *Demography of Roman Egypt*): we have 300 or so census declarations that survive on papyrus, which give us raw data, the usefulness of which is transformed by the authors' application of modern demographic techniques and models. In the same area, an investigation of disease and demography (Scheidel, *Death on the Nile*) is driven by the same sort of application of modern theory. So too the theoretical underpinnings of a recent book on the structure of land tenure in the Ptolemaic period (Manning, *Land and Power in Ptolemaic Egypt*) pose questions of the papyrological evidence formulated, at least partly, by modern theoretical approaches using comparative data from different periods and other parts of the world.

This type of approach, in placing ancient Egypt in a wider theoretical and evidentiary framework, has the beneficial effect of broadening the applicability of Egypt as a subject of scholarly investigation. For one of the big questions about the nature of papyrological evidence has been its typicality: to what extent can we apply conclusions drawn from the abundant evidence of Egypt to other areas of the Hellenistic and Roman world where we have less, or no, evidence? I think it is fair to say that ancient historians have generally regarded Egypt as exceptional rather than typical, thus isolating it in its own narrow field of studies. A particularly effective case for typicality, or at least for a greater typicality than is often assumed, is made by Dominic Rathbone in his study of the Heroninus archive (*Economic Rationalism and Rural Society in Third Century AD Egypt*), a collection of nearly 1,000 papers concerning the running of a large private estate in the Fayyum in the third century AD. From the published material (only about half the total) Rathbone paints a detailed picture of how the estate was run – management, labour, production, transport, the accounting system – but his economic modelling also enabled him to bring the Heroninus material to bear on wider questions of Roman estate management and economic behaviour.

Translation and accessibility of papyri

Papyrology is a very well-organised area of classical scholarship. Very early on in its history, editorial practice was standardised; new lexica, indexing systems and journals were started, along with a standard list of corrections to published texts, and a standard collection of texts published in articles. More recently papyrology was quick to spot the potential of computer technology. Since the late 1980s the *Duke Databank of Documentary Papyri* (available on CD, or online through the Perseus Project, www.perseus.tufts.edu/Texts/papyri.html) has given immediate access to all published documentary texts (including important collections of inscriptions) – a huge advance in working methods, especially when taken with the *Thesaurus Linguae Graecae*, a computerised database of all Greek literature from Homer to AD 1453. And there are a great many more recent electronic developments such as the *Leuven Databank of Ancient Books* (on CD), the Heidelberg catalogue of dated papyri (www.rzuser.uni-heidelberg.de/~gv0/gvz.html) and the creation of digitised images of texts from many papyrus collections around the world. In short, the tools of papyrology are increasingly sophisticated and helpful.

Taking this into account, as well as the extraordinary immediacy and freshness of the material, it may seem surprising that papyrology has in fact developed as a highly specialised, inaccessible area of scholarship. The sheer bulk and complicated detail of the material, coupled with the technical skills necessary to deal with it at first hand, the massive scholarly bibliography that has grown up and the perception of the limited applicability of papyri outside Egypt, have given papyrology a somewhat forbidding aspect. For undergraduate students in the English-speaking world, although a recent and excellent sourcebook on women points the way to future possibilities (Rowlandson, *Women and Society*), there has in the past scarcely been enough material in English to facilitate classical civilisation courses on Graeco-Roman Egypt, attractive as they must surely be. But this is changing. The APIS (Advanced Papyrological Information System) programme now gives computer access to some 18,000 papyrus texts in major American university collections, with bibliography and description, and in many cases with image and English translation (www.columbia.edu/cu/lweb/projects/digital/ apis/index.html). This is a huge addition to the limited body of source material in translation, and a major new scholarly and pedagogical tool.

The study of papyri and of the fascinating world they reveal will, necessarily, continue to be carried out by a small body of 'experts'; but it is far too good a subject to leave entirely to them.

Further reading

Resources

J. F. Oates, R. S. Bagnall, W. H. Willis and K. A. Worp, *Checklist of Editions of Greek, Latin, Demotic and Coptic Papyri, Ostraca and Tablets* (5th edn), Oakville, CT, and Oxford: Oxbow for American Society of Papyrologists, 2001 (web edition at http://scriptorium.lib.duke.edu/papyrus/texts/clist.html) – editions of papyri and all the associated tools of papyrology, abbreviated in scholarly literature in a standard manner.

Sourcebooks

J. Rowlandson, *Women and Society in Greek and Roman Egypt: A Sourcebook*, Cambridge: Cambridge University Press, 1998.

Texts in translation

C. C. Edgar, A. S. Hunt and D. L. Page, *Select Papyri* (3 vols) (Loeb Classical Library), Cambridge MA: Harvard University Press, 1932–41.

Introductions

R. S. Bagnall, *Reading Papyri, Writing Ancient History*, London and New York: Routledge, 1995 – a stimulating appraisal of the nature and use of papyrus as a historical source.

I. Gallo, *Greek and Latin Papyrology*, London: Institute of Classical Studies, 1986.

E. G. Turner, *Greek Papyri*, (2nd edn), Oxford: Clarendon Press, 1980 – the best general work.

Graeco-Roman Egypt

R. S. Bagnall, *Egypt in Late Antiquity*, Princeton: Princeton University Press, 1993.

R. S. Bagnall and B. W. Frier, *The Demography of Roman Egypt*, Cambridge: Cambridge University Press, 1994.

H. I. Bell, *Egypt from Alexander the Great to the Arab Conquest*, Oxford: Clarendon Press, 1956.

A. K. Bowman, *Egypt after the Pharaohs, 332 BC–AD 642: From Alexander the Great to the Arab Conquest*, London: British Museum Press, 1986.

H. M. Cotton, W. E. H. Cockle and F. G. B. Millar, 'The papyrology of the Roman Near East: a survey', *JRS* 85 (1995), 214–35.

N. Lewis, *Life in Egypt under Roman Rule*, Oxford: Clarendon Press, 1983.

N. Lewis, *Greeks in Ptolemaic Egypt*, Oxford: Clarendon Press, 1986.

J. Manning, *Land and Power in Ptolemaic Egypt*, Cambridge: Cambridge University Press, 2003.

D. W. Rathbone, *Economic Rationalism and Rural Society in Third-Century AD Egypt*, Cambridge: Cambridge University Press, 1991.

W. Scheidel, *Death on the Nile: Disease and the Demography of Roman Egypt*, Leiden: Brill, 2001.

Website

Many of the most important links will be found on the site of the International Association of Papyrologists, www.ulb.ac.be/assoc/aip.