

# Agriculture in Egypt from Pharaonic to Modern Times

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## Land, Resources, Population

EVEN IN THE EARLIEST written records, Egypt was an ancient land. It was so for Herodotus, whose Greece of the fifth century BCE was by comparison a new world, as it was for the Graeco-Roman geographer Strabo writing early in the first century of the common era. The antiquity of cultivation and prodigious fertility cyclically renewed by the annual flood of the Nile, has given rise to the modern myth of 'eternal Egypt', as a timeless and unchanging land inhabited by a toiling and fatalistic peasantry. It is easy even in the 1990s to stand on the banks of the Nile, to observe the rectangular plots of land, the primitive methods of irrigation, the continued reliance on animal power and basic tools and to aver that agrarian life in Egypt has changed little since Pharaonic times. Were this the case, there would be little to interest scholars of different periods in reading a collection of essays on the agricultural organisation of Egypt. This is not our view. For us—to paraphrase Braudel's encapsulation of the *longue durée* in the Mediterranean—the Nile speaks with many voices; it is a sum of individual histories. As diverse as the voices of the inhabitants who have lived out Egypt's history, the rural history of Egypt is one of dynamism and change, united by geography and the basic factors of production: land, water, labour, tools and seed.

The geography of Egypt is the fundamental unifying factor of agricultural history, though obviously not in itself unchanging. The Nile, on which the diversity of life in its valley is dependent, has shifted course over the centuries.<sup>1</sup> From

<sup>1</sup> For the geography and ecology of ancient Egypt, see Butzer (1976). Cf. Thompson, below, ch. 6. *Proceedings of the British Academy*, 96, 1–31. © The British Academy 1999.

the First Cataract at Aswan to Cairo, where it fans into the Delta, the river reaches 1 km in width, the green belt of its valley spreading some 10 km. Fed by the Blue Nile, the White Nile, and the Atbara tributary, the volume of water at Aswan ranges from 45 million cubic metres at low water (May–June) to over 700 million cubic metres in the high water of mid-September. The flood was dependent on the summer rains which fell on the Ethiopian highlands and varied widely from year to year. From the Pharaonic period onwards, the level of the flood, on which fertility depended, was carefully measured and monitored by Nilometers along the length of the river.<sup>2</sup> The ideal was a fine balance: a low flood failed to irrigate all areas, a high one retarded the harvest.<sup>3</sup> Starting with the tenth-century Fatimid dynasty, the level of the Nile was kept secret by the government in the interest of public order until it reached the necessary minimum of sixteen *dhira'* (lit. 'arms', a cubit of 0.58m) in height. This practice was continued by the Ayyubid and Mamluk dynasties.<sup>4</sup> Wide disparities in the annual flood were a common feature in modern as in ancient times, with the level increasing to 50 per cent more than usual in 1878–9, dropping to 50 per cent less than usual in 1913. The flood-waters carried a thick layer of mineral-rich silt washed down from the volcanic rocks of East Africa. Until the 1960s, some 110 million tons of sediment washed into Egypt with the annual flood.<sup>5</sup> With the closing of the sluices of the Aswan High Dam in 1969, the Nile silt remained trapped in Lake Nasser, after which Egyptian agriculture would remain reliant on chemical fertilisers.

The inundation was by far the most important fundamental continuity in the agricultural life of Egypt from Pharaonic to modern times. The ancient Egyptians devised catchment basins and dykes to trap the flood, and channelled water into their fields through a system of basin irrigation. However, basin irrigation only permits a single crop per year; multiple cropping requires canals. The efficient exploitation of canals was only made feasible with the introduction of water-lifting devices such as the *saqia* (water-wheel) and the Archimedean screw, which began to appear in the Ptolemaic period. It was thus under the Ptolemies that basin irrigation was much extended through a system of canals. Medieval Islamic geographers traced the irrigation network back to pre-Islamic times, and record that the maintenance of canals and irrigation dams was one of the primary duties of the rulers and fief-holders under the Ayyubids and Mamluks.<sup>6</sup> Those canals became a feature of agricultural organisation through to modern times, with periods of extension and neglect. When properly maintained, canals expanded the terrain of cultivation from the immediate banks of the Nile to the widest

<sup>2</sup> Bonneau (1971), 22–39, (1993), 175–97

<sup>3</sup> Bonneau (1964), Pliny, *NH* 5.51–8.

<sup>4</sup> Rabie (1981), 59–60.

<sup>5</sup> Fisher (1971), 484–7.

<sup>6</sup> Rabie (1981), 60–1. Damming of the Nile had not been possible in the pre-Islamic period.

possible extension. Without regular dredging, the canals were ineffectual and the cropped area reduced accordingly, providing another of the enduring dynamics of the agricultural economy.<sup>7</sup>

Not only did the canals extend the area under cultivation, but they made possible multiple cropping.<sup>8</sup> The extension of summer canals under Muhammad 'Ali in the early nineteenth century, dug deep enough to maintain a steady flow of water through the summer months, made possible the triple-cropping and expansion of cotton cultivation as a cash crop. The British invested heavily in irrigation infrastructure to enhance agricultural productivity and ensure that Egypt repaid its European creditors.<sup>9</sup> A network of modern dams and canals was laid, stretching from the Aswan Dam at the First Cataract (built in 1898–1902, with extensions in 1907–10) to the Delta. By the 1920s, the main dams and canals in the network included the barrage at Esneh (1906–8), feeding the Asfun and Kilabiya canals; the Assiut barrage (1899–1902), which alimnts the Ibrahimiyya canal; and the Delta barrage, originally built between 1843 and 1861 and rebuilt between 1886 and 1890. By the 1920s, of the five million *feddans* of land under cultivation, one fifth were still under basin irrigation and four-fifths were watered by perennial irrigation.<sup>10</sup>

The expansion of the irrigation system culminated in the 1960s with the construction of the Aswan High Dam. The Dam produced immediate benefits for Egyptian agriculture, giving the country a vast reservoir in Lake Nasser, the world's largest man-made lake, which protected cultivation from the variations in the Nile flood. Some 800,000 *feddans* of land under basin irrigation were converted to perennial irrigation in Upper Egypt. The cropped area was expanded from 9.4 million *feddans* (approximately 40,500 km<sup>2</sup>) in the 1950s to 10.9 million *feddans* (approximately 46,500 km<sup>2</sup>) in the 1970s through ambitious land reclamation projects. Furthermore, the cropping pattern was rationalised, which allowed for a doubling of the area for rice cultivation, a major increase in the area of sugar cultivation, and an increase in maize yields in the range of 40 per cent between 1960 and 1970.<sup>11</sup> With the extension of irrigation, however, came the need for a major extension in drainage to protect the soil from salination. Following decades of neglect in drainage infrastructure, the opening of the Aswan High Dam and the increase in irrigation led to a raised water-table and

<sup>7</sup> Suetonius, *Augustus* 18.2 records that at the Roman takeover Octavian (Augustus) set his soldiers to work at dredging the canals which had been neglected for many years. For a later period cf. Bagnall (1993), 141.

<sup>8</sup> Double cropping was practised in antiquity but the evidence for it is very slight, see Rowlandson (1996), 20.

<sup>9</sup> A loan for £1 million was negotiated in 1884, and a subsequent £800,000 invested in 1890 to improve the irrigation system, see Lord Cromer (1908), 463–4.

<sup>10</sup> Buckley (1926), 205–8.

<sup>11</sup> Richards (1982), 194. By way of comparison, the best estimates for antiquity are 10,000 km<sup>2</sup> (the Valley), 16,000 km<sup>2</sup> (the Delta) and 1,300 km<sup>2</sup> (the Fayyum) respectively, see Butzer (1976), 82.

salinity problems, problems which afflicted some two-thirds of Egypt's cropland by the late 1970s. In fact, more money will have been spent on field drains than on building the High Dam itself.<sup>12</sup>

Egypt is comprised of two major and distinct agricultural zones: the Nile Valley, running from Wadi Halfa to the Delta, and the Delta itself. To these should be added the Fayyum depression, which may be considered an adjunct to the Valley, and the oases of the Western Desert, which support small populations. At various times in history, these regions have been marked by significant cultural and even linguistic differences, resulting in political fragmentation or decentralisation. The most fertile land is found in the central reaches of the Nile Valley, which stretches some 700 km from the First Cataract at Aswan to the Delta and comprises a ribbon of cultivable land. The Fayyum is a fertile depression some 100 km to the south-west of the apex of the Delta, watered by a branch of the Nile known in Arabic as the Bahr Yusuf (Joseph's Canal), which flows into the depression and alimments Lake Moeris (Birkat Qarun). The total cultivable area of the Fayyum has varied over time, depending on the state of irrigation works, though the depression extends over some 2,400 km<sup>2</sup>. Some 23 km to the north of modern Cairo, the Nile divides to form its Delta. Of the seven branches named by Strabo in the first century of the common era, two main branches define the triangle of the Delta today—the eastern or Rosetta branch, and the longer Damietta branch to the west.<sup>13</sup>

The organisation of agriculture in these zones has varied widely over time. Village-based peasants have worked the fields under a range of land regimes, from peasant small-holdings to large estates with forced labour or sharecroppers. Depending on the system of irrigation, different cropping patterns have been employed to preserve the soil and to correspond to the different growing seasons. The rain-fed cultivation of wheat and barley took place in the winter season (Ar. *shitawi*), cotton, rice and sesame in the summer season (Ar. *sayfi*), maize and sorghum in the aftermath of the annual flood (Ar. *Nili*, season of the Nile).<sup>14</sup>

The agriculture of Egypt has been consistently capable of generating enormous surplus, thanks to the copious waters of the Nile and the annual renewal of topsoil provided by the silt of the flood. This has meant that industrial crops such as fibres (flax and cotton) can be grown alternately with food crops, and

<sup>12</sup> Richards and Waterbury (1990), 166. Cf. Ruf (1995), 307–17.

<sup>13</sup> Modern Egyptian geographers have attempted to identify Strabo's seven branches. The Pelusiac is thought to correspond to the eastern branch, the Tanitic with the Bahr Muways, the Mendesian with part of the Bahr al-Saghir, the Phatnitic with the Damietta branch, the Sebennytic with the Bahr Tira, the Bolbitine with the Rosetta branch, and the Canopic with parts of the Bahr Diyab. Two millennia of river activity make any close correspondence highly unlikely. See Safi al-Din *et al.* (1957), 39.

<sup>14</sup> Julien (1926), 232–3.

that harvests could be destined for foreign markets as well as for domestic consumption, without jeopardising domestic food supplies. The types of crops grown and the proportion of harvests consumed domestically or exported provide another example of dynamism and change across the centuries. Cereals were dominant in antiquity: principally husked emmer wheat (*olyra*) in the Pharaonic period and naked tetraploid hard wheat (*triticum durum*) from the Ptolemaic period onwards.<sup>15</sup> Flax, which was grown in antiquity (notably in the area of Oxyrhynchus), was the chief industrial crop for both domestic and foreign markets through the middle ages. In Ayyubid and Mamluk Egypt, sugar emerged as an important cash crop and a network of sugar mills processed the cane.<sup>16</sup> Cotton too came under cultivation, and to some extent displaced the linen so vigorously traded by the Jewish community of thirteenth-century Cairo. These crops in turn experienced periods of expansion and contraction, and the introduction of new strains. Most dramatic for the modern Egyptian economy was the discovery of long-staple Joumel cotton in the early 1820s.

The demands placed on the soil gave rise to experiments in fertilisers. In ancient times, additional fertilisation was supplied by the waste products from the ubiquitous pigeon-houses, also a feature of the modern rural landscape.<sup>17</sup> Agricultural tracts from the Ayyubid and Mamluk periods are quite specific about the types of fertilisers to be used with certain crops. Bird droppings, animal dung and human wastes, on the one hand, and composted grasses and leaves were applied to different crops.<sup>18</sup> Agricultural tracts of the early twentieth century note the mining of decomposed village wastes known as *kufri*, and the need for *sebakh* (fertile earth), which could be dug from the papyrus-rich rubbish mounds of ancient sites, frequently frustrated the efforts of the archaeologists from the 1870s onwards.<sup>19</sup> With the extension of perennial irrigation, particularly in the twentieth century, reliance has come to be placed primarily on chemical fertilisers.<sup>20</sup>

There has been a remarkable continuity in agricultural aids in the Nile Valley. The same animals apparent in Pharaonic friezes continue to assist in the labour of farming in the twentieth century. Oxen, mules, and donkeys were conspicuous in ancient times; the camel was clearly known in Pharaonic times although its use did not become widespread until the Roman period.<sup>21</sup> The water-buffalo is a later introduction. These beasts of burden have driven similar implements across the millennia. To quote Hassanein Rabie, 'the medieval Egyptian peasant used the same tools which were known and used in the Pharaonic period

<sup>15</sup> See Thompson, below, ch. 6.

<sup>16</sup> Ashtor (1981).

<sup>17</sup> Husselman (1953), Lozach and Hug (1930), 151–5.

<sup>18</sup> Rabie (1981), 72–3.

<sup>19</sup> Turner (1980), 21.

<sup>20</sup> Julien (1926), 251–4.

<sup>21</sup> Bulliet (1975), 113–18; Adams (1996), 16–22.

and are still used by the modern fellah without much alteration.'<sup>22</sup> This no doubt reflects both a resistance to technological change and the efficiency of the ancient instruments in performing a set of agricultural tasks that did not change significantly. These standard tools included the mattock, the hoe, the plough, levellers to render the surface sufficiently even for irrigation, and other machines for harvesting and turning the soil after harvests. In addition to farm implements there were the human- and animal-powered water-raising devices. While such devices made possible more extensive agriculture, they did not make it easier for the peasant labour force that had to operate them.

The population of Egypt has varied considerably over time. Whatever estimate may be given for the Late Pharaonic period, there can be no doubt that there was considerable increase under the Ptolemies, and the population probably reached a peak in the early Roman period. Josephus provides a figure of 7.5 million, exclusive of Alexandria, for the first century CE. Evidence is scarce for the Byzantine period, though the Arab conquerors claimed to have found 12–14 million inhabitants in seventh-century Egypt.<sup>23</sup> 'Wars, plagues, and successions of indifferent rulers had destroyed the civic calm needed for population growth until, by the time of the French Expedition [1798], Egypt had fewer than four million inhabitants.'<sup>24</sup> Thereafter, the population began a steady recovery, exceeding 4.5 million by the mid-nineteenth century, when Muhammad 'Ali conducted his census. In the third quarter of the century, the population began to experience rapid growth, exceeding 7 million in 1882, when the first western-style census was conducted. Twenty-five years later, British census figures show the number of inhabitants in Egypt to have exceeded 11 million (1907). The population of Egypt today is believed to exceed 65 million, its rapid growth rate (1.95%) only checked by a vigorous family planning programme.

The cultivators of Egypt have been characterised as a distinct Nilotic or North African people, ruled from the cities by often alien sovereigns, from the Hyksos through to the British.<sup>25</sup> While distinctions were drawn between Nubians of Upper Egypt and an Arabised peasantry in Lower Egypt, emphasis has been placed on continuity 'of lifestyle, of work methods, and of technology, giving rise to the myth of the eternal Egyptian peasant, the analogue of the eternal Nile, reproduced by authors across the nineteenth and twentieth centuries.'<sup>26</sup> Just as

<sup>22</sup> Rabie (1981), 63.

<sup>23</sup> The figures are very contentious. Most scholars now consider Josephus' figure far too high (see Rathbone (1990); Bagnall and Frier (1994), 53–7) and the level of 12–14 million must surely be at the very least a considerable exaggeration.

<sup>24</sup> McCarthy (1976); Panzac (1987) considers this figure too low.

<sup>25</sup> Batrawi (1946), 131–55; Marsot (1985), vii; Bard (1996).

<sup>26</sup> See, for examples, Lord Cromer (1908); Blackman (1927); Ayrout (1938); and, drawing extensively on Ayrout, Critchfield (1978). Nor have Egyptians themselves proved to be above such characterisation: cf. El Mouelhy (1954), essentially a Nasserist tract published at the time of land reform. For a critique of this literature see Mitchell (1990).

the Egyptian peasant was believed to be timeless, so he or she was assumed to be without a history. Peasants were silent through the ages; the best one could do was to study the contemporary peasantry and project backwards. Yet, with the development of social and economic history in recent decades, a start has been made at writing the subalterns into the historical narrative. Somewhat ironically, it is one of the great transformations of the twentieth century that only 34 per cent of the work-force was employed by the agricultural sector in 1984. Until comparatively recent times, the overwhelming majority of Egyptians made their living by agriculture and lived in the countryside. Egyptian peasants emerge most clearly as crowds in revolts and as a labour force, but much more rarely as individuals. To some extent this reflects our sources, and to some extent the questions we put to our sources.

### The Political Order

This collection of papers deals with themes and topics which, as the previous section implies, transcend the conventional boundaries of narrative political history and enable us to make useful diachronic connections and comparisons. Yet the organisation of the material in a rough chronological sequence (not the only possible arrangement) is in itself a statement about our acceptance of such a framework. Some exploration of the tension between the overarching themes and the conventional periodisation of Egyptian history in the context of political organisation and the linguistic (dis)continuities is therefore appropriate.<sup>27</sup>

A matter of fundamental importance is the historiographical baggage which we are carrying when we approach the subject. In the case of Egypt, especially pre-Islamic Egypt, this is a particularly interesting, provocative, and sensitive issue, with profound cultural, linguistic, and ethnic implications. This is not the place to explore in detail the questions raised by Martin Bernal and his critics and commentators,<sup>28</sup> but some of the issues need to be addressed briefly. Two connected historiographical points emerge from the debate about the relationship between Egypt, Africa, the Near East, and Europe which we think most modern historians would accept. The first is that the traditional, received view of Egyptian history owes a great deal to classical historiography — a point which hardly needs extensive illustration or emphasis. We could begin with the famous story of Solon's visit to Sais and proceed through Herodotus. We might then recall that the ordering of dynasties of the Pharaonic period, which is still the basis of our chronological framework, was compiled, on the basis of earlier king-lists, in the third century BCE by an Egyptian priest, Manetho of Sebennytos,

<sup>27</sup> For the linguistic issues see below, pp. 14–15.

<sup>28</sup> Bernal (1987–91); Lefkowitz and Rogers (eds) (1996).

working in the early Ptolemaic period.<sup>29</sup> Within this historical universe, which is essentially founded on the classical veneration for the supposed antiquity of Egyptian civilisation, and without weakening its force, we can surely accept some absorption of Egyptian influence by the classical world (even if not to the extent which Bernal proposes). Conversely, there are numerous examples of the 'Egyptianisation' of Egypt's conquerors: the kings of the 25th and the Libyan Dynasties, the story that the Persian king Cambyses was the son of the Pharaoh Apries' daughter, or that the Macedonian conqueror Alexander the Great was the son of Ammon.<sup>30</sup>

The second point is essentially that made by Edward Said, that the modern historical perception of Egypt is a construction developed in the aftermath of the European rediscovery of Egypt following the Napoleonic expedition and based, of course, on the classicising historiographical tradition already mentioned.<sup>31</sup> The significant influence of the large proportion of anglophone Egyptologists who have come to their subject with a classical academic background has been noted more than once. These influences have imposed and continue to impose European cultural and historical perceptions on a society to which some think them inappropriate.<sup>32</sup> 'Egyptomania' has its counterpart in classical times: the Palestrina mosaic with its elaborate and idealised Egyptian landscape decorating a public building complex at Italian Praeneste is by no means the only prominent example of 'Egyptianising' art.<sup>33</sup>

Legitimate though it is to assess and calibrate the historiographical biases, it is not just a matter of historiography. Historians are obliged not to ignore or do violence to the facts which the evidence gives us. Egypt was, as a matter of historical fact, politically dominated at various times by Nubians, Assyrians, Persians, Greeks, Roman, Arabs, Turks, and British. History here as elsewhere has been largely written in 'the rhetoric of the conquerors',<sup>34</sup> with the result that, as far as the 'indigenous Egyptians' are concerned, much of their history might be alleged to be the description of one culture in the language of another, systematically ignoring or suppressing one side of the coin. It is perhaps worth wondering whether anglophone historians have been less sensitive than some others in their approach to multicultural polyglot societies.<sup>35</sup>

One of the effects of the conventional periodisation has been to divide and compartmentalise, making it more difficult for historians to assess the scale and

<sup>29</sup> Plato, *Timaeus* 21e–24d; Herodotus, II; for Manetho see Verbrugghe and Wickersham (1996), ch. 5; Trigger *et al.* (1983), 153; cf. chronological table, above, p. xx–xxi.

<sup>30</sup> Herodotus, III.2; cf. Ray (1988), 261; Bowman (1996), 22.

<sup>31</sup> Said (1995).

<sup>32</sup> See Mitchell (1988).

<sup>33</sup> Meyboom (1995), cf. Roulet (1972); Curl (1994).

<sup>34</sup> Thompson, below, p. 136.

<sup>35</sup> For an attempt to redress the balance see Johnson (ed. 1992).

effects of continuity and change across what have become, in effect, different academic disciplines. For Egypt in the ancient world, the major gulf lies between Pharaonic and Graeco-Roman Egypt. For the historian trained in the western tradition of political and narrative history, Pharaonic Egypt from c. 2000 (the Middle Kingdom, which is the earliest period to come under scrutiny in this volume) to 332 BCE, is baffling and elusive, to the extent that some scholars deny the possibility of writing such an account of Pharaonic Egypt or characterise their accounts as 'ahistorical'.<sup>36</sup> Why? Perhaps because the chronological framework is fraught with uncertainty. Perhaps because the Egyptian evidence itself does not give us the sort of narrative history we are looking for and have been looking for ever since Herodotus, but rather a disjointed series of theocratic and idealised scenarios (the monuments), or random and unconnected archives which are highly specific and difficult to locate in a historical framework. Nonetheless, it emerges clearly from some Egyptian texts that the Egyptians of the Pharaonic period did have a very strong sense of the past and of historical continuity, and not only in terms of explaining the present by myths about the past.<sup>37</sup>

Several themes have characterised the recent historiography of Pharaonic Egypt from the Middle Kingdom to Alexander's conquest. Unity and fragmentation of control of the land is the broadest and most obvious. The Middle and New Kingdoms represent periods of relatively strong and centralised control with unitary succession, the Second and Third Intermediate Periods and the Late Period tendencies to internal strife and fragmentation. Central to the subject is the divine character of the kingship. The tension between central control and the power of the 'provinces' also recurs, with the power of the courtiers, bureaucrats, or regional monarchs to mediate and intervene an important factor. The character of the economy, frequently described as redistributive, is often explored in the context of the dominance of the temples as property-holders. Changes in settlement patterns concentrate on attempts to define and identify 'urbanisation'. Much effort has been put into discussing 'foreign affairs' and periods when Egypt extended its territorial control or was itself subject to 'foreign' domination. Discussion of invasion and Egypt's relations with Africa and the Levant has often had as its subtext contentious racial distinctions involving ethnic labels or descriptions: African, North African, Asiatic, indigenous (not to mention 'black' and 'white').<sup>38</sup>

The Middle Kingdom, the earliest period represented in this collection, began around 2040 BCE with the establishment of rule by the Theban Mentohotep II

<sup>36</sup> Trigger *et al.* (1983), 73.

<sup>37</sup> Illustrated by the existence of 'king-lists', the so-called 'Saite renaissance' and many individual documents such as the Petition of Petiese (*P. Rylands IX*), the Demotic Chronicle (Johnson, 1974), *Papyrus Westcar* (cf. Trigger *et al.* (1983), 77).

<sup>38</sup> The most accessible recent general account in English is that of Trigger *et al.* (1983). On ethnic labels see Bard (1996).

and lasted for four centuries. The first half of the period saw a move to a new centre close to the Fayyum and a vigorous reorganisation and centralisation of the administration, which seems to have maintained political stability. In the latter part of the period this weakened in the face of a challenge from the eastern Delta in the form of the Hyksos kings ('the rulers of foreign countries', immigrants from Palestine), whose rule was acknowledged for about a century, until c. 1540 BCE. The displacement of the rule of the Hyksos was brought about by Amosis, whose reign inaugurated the New Kingdom, and a period of strong centralised rule, vigorous and aggressive military activity in Palestine and Syria and a climax of economic and cultural achievement in the fifteenth and fourteenth centuries. A brief crisis followed in the reign of Amenophis IV, who styled himself Akhenaten, proclaiming worship of the Aten ('sun-disk'), and moved his capital to Amarna in Middle Egypt. This period, which saw a serious undermining of the stability of Egypt's administration, was brought to an end with the accession of the first of the Ramesside Pharaohs (1295 BCE), whose successors established their capital in the north-eastern Delta. In the Third Intermediate Period, beginning with Smenides (1069–1043), an accommodation was reached with the Thebans in the south. From the middle of the tenth century, Egypt was ruled by pharaohs of Libyan origin. The mid-eighth century saw the invasion of the south by the Nubian rulers of Kush, who eventually dominated the whole land, ruling it from Napata as part of their vast African empire, until defeated by the Assyrians.

Under the Saite dynasty, established by Psammetichus, a local Assyrian vassal from the western Delta, there was a significant recovery of political independence. At this point, the narrative becomes historically clearer, if not less contentious, when it is possible to fit Egyptian history into a more secure chronological framework in relation to Asia and the classical world. Overseas relations were important in the shape of contacts between Amasis and the Aegean world and military campaigns in Syria and the Levant, until, in 525 BCE, Egypt proved incapable of resisting the aggressive and expansionist Persian empire and fell to Cambyses. Thereafter, periods of control by the Persian Achaemenids alternated with the reassertion of native independence in a context which saw increasing evidence of the penetration of immigrants, of non-Egyptian languages and socio-economic institutions.<sup>39</sup>

The historian intent on emphasising continuities will, of course, at least use the Saite and Persian periods as background to what was to follow—a millennium (332 BCE–642 CE) during which Egypt was politically dominated by the classical world, for which the commonly used term 'Graeco-Roman' is hardly adequate. Control by the Macedonian Ptolemaic dynasty, following Alexander's conquest and eventually locating itself in his newly founded city of Alexandria,

<sup>39</sup> Lloyd in Trigger *et al.* (1983); Ray (1988).

was at first secure and imperialistically successful. The third century BCE saw the acme of the extent and power of the Ptolemaic empire in the Mediterranean; after 200 BCE there are clear signs of its diminution, and native revolts and internal struggles, particularly in the south, threatened the stability of the regime within Egypt. After the middle of the second century, acknowledgement of and capitulation to the power of Rome, the ever more powerful arbiter of Mediterranean affairs and politics, become increasingly clear. Cleopatra VII, the last of the Ptolemaic monarchs, attempted to use her influence first with Julius Caesar and then with Mark Antony to recreate the empire of her ancestors, but with her demise and the fall of Alexandria to Octavian in 30 BCE, Egypt became a province of the Roman empire, ruled, as it had been for shorter periods under the Persians, by an absentee monarch. Although remaining subject to Roman and Byzantine emperors (except for a short period of Persian domination between 619 and 628), its orientation was to change in the Byzantine period (conventionally 284–642), and with the foundation of Constantinople, when it was more uniformly knitted into the structure of the eastern empire and consequently played a more central role in the political history of the eastern Mediterranean world.<sup>40</sup>

Byzantine rule in Egypt was brought to a close by the advent of Islam, the entry of the Arab armies in 639, and the capture of Alexandria in 642, in the reign of the second successor to the Prophet Muhammad, the Caliph 'Umar ibn al-Khattab. The Arabs met comparatively little opposition from the local inhabitants, who hoped the Muslims would prove more tolerant of the monophysite Copts than were the Eastern Orthodox Byzantines. In return for their cooperation and regular payment of taxes, the Arabs granted the residents of Egypt freedom of belief and security of property. In fact, the caliph 'Umar forbade the conquering Arabs to own land in Egypt, to preserve their martial discipline.<sup>41</sup> Egypt thus became an important province of the rapidly expanding Muslim empire, which spread across North Africa and into the Iberian Peninsula.<sup>42</sup>

Initially Egypt was ruled by officials appointed from Mecca, but the government of the Muslims passed to Damascus in 661 with the Umayyad dynasty's seizure of power, leading to important changes in the administration of the country. A new bureaucracy was dispatched to the province and kept its records in Arabic, gradually displacing the Coptic registers. Increased taxation provoked some Copts to rebellion, while others converted to Islam to avoid repression and the poll-tax imposed on non-Muslims. These trends of Arabisation and

<sup>40</sup> Bowman (1996), ch. 2.

<sup>41</sup> A similar prohibition was normally imposed by the Romans, perhaps partly for the same reason but also to prevent soldiers stationed in Egypt from having a personal stake in the country, see Lewis (1982).

<sup>42</sup> See Marsot (1985); Endress (1988); Bosworth (1980).

Islamicisation continued with the transfer of the capital of the Muslim empire to Baghdad in 750 after the successful Abbasid revolution.<sup>43</sup>

From the ninth century it becomes more difficult to speak of a unified Muslim empire. The first challenge came from within the Abbasid state, when Turkish military commanders took *de facto* control of the government and reduced the Abbasid caliphate to a symbolic role. In 834 a Turkish military governor was sent to rule Egypt. The autonomy enjoyed by the Turkish commanders in Egypt led to the emergence of two local Turkish dynasties—the Tulunids (868–905), whose authority spread over Egypt, Palestine, and Syria, and the Ikhshidids (935–69). The separation of Egypt from Abbasid rule was concluded with the Fatimid conquest in 969. A North African Shiite dynasty, the Fatimids built the city of Cairo and endowed it with the mosque-university of al-Azhar. Like the Tulunids before them, the Fatimids extended their authority over Palestine, Syria, and the Hijaz and declared themselves caliphs, a direct challenge to the religious-political legitimacy of the Abbasids in Baghdad. The economic prosperity and cultural vitality of Fatimid Egypt also transcended Abbasid Iraq, as Egypt developed trade links with the Indian Ocean and Mediterranean world alike. This translated into a light tax burden on cultivators and sound administration for much of the Fatimid period. Masters of Egypt until 1171, the Fatimids were forced to retreat from their Syrian possessions by the Crusaders on the one hand, and by the Turkish Seljuk forces on the other, until they were displaced by one of the great heroes of Islamic history, Salah al-Din al-Ayyubi, known in the West as Saladin.

Egypt under the Ayyubids witnessed a Sunni revival and the vigorous pursuit of *jihad* against the Crusaders, which led to the Muslim reconquest of Jerusalem in 1187 under Saladin. The Ayyubid empire, nominally loyal to the Abbasids in Baghdad, was divided by Saladin among various members of his family, resulting in distinct Ayyubid dynasties in Egypt, Damascus, Aleppo, Diyarbakir, and Yemen. Such divisions, and the breakdown in authority of the Ayyubid sultanate, paved the way for the military coup led by the élite Turkic Mamluk slave-soldiers who were to rule Egypt from 1250 to the Ottoman conquest in 1517. The Mamluk and early Ottoman periods constitute one of the regrettable lacunae of the present collection, which witnesses a leap from Ayyubid Fayyum to the early nineteenth century.<sup>44</sup> For the purposes of this survey we need only note the running tension between the agents of the Ottoman state and the Mamluk house-

<sup>43</sup> See Bulliet (1979).

<sup>44</sup> More has perhaps been written on the rural history of the Mamluk period than for the early Ottoman centuries, for which there is relatively more interest in urban history. On Mamluk Egypt cf. Haarmann (1984), 141–68; Halm (1979), (1982); Ashtor (1976); Cahen (1977); and the works of Ayalon (1977), (1979) and Petry (1981), (1993), (1994). For the early Ottoman period (16th–18th centuries) see Shaw (1962); Abd al-Rahim (1974), (1976), 122–38; and the works of Cuno (1980), (1984), (1992).

holds which shaped the early Ottoman period—a tension which was only resolved in the aftermath of the Napoleonic invasion of Egypt in 1798. In the event, power was assumed neither by the Ottoman state, nor by the Mamluk households, but by the second-in-command of an Albanian detachment sent with the Anglo-Ottoman force which oversaw the withdrawal of French troops in 1801.

The rise of Muhammad 'Ali from minor commander to Governor of Egypt in 1805 is a story of political opportunism. The fact that he was able to bolster his position and develop a mass army to support his bid for territorial expansion—his empire embraced the Hijaz, Sudan, Crete, and all of Greater Syria up to the Adana coast—is largely due to an agricultural revolution which he initiated through a ruthless programme of state controls over land and monopolies over its produce. Muhammad 'Ali also established his family's rule over Egypt as a vassal state under Ottoman suzerainty, though with a growing margin of autonomy, particularly in economic affairs. A programme of ambitious infrastructural projects led to a cycle of borrowing from European creditors, leading in turn to insolvency, the breakdown in the political order, and British occupation in 1882. Egypt's colonial experience progressively distanced it from the Ottoman empire until, with the outbreak of the First World War, vassal and suzerain found themselves on opposing sides and Britain severed Egypt's relations with Istanbul for ever. In the aftermath of that war, Britain became the focus of nationalist agitation, and politics revolved around a complex triangle of the nationalists, the Egyptian monarchy and palace, and the British. Full decolonisation only came in the aftermath of the Free Officers' Coup in June 1952 which brought down the last scion of the Muhammad 'Ali dynasty, King Farouk. The new president, Colonel Gamal 'Abd al-Nasir, known to the West as Nasser, oversaw Egypt's decolonisation during the years 1954–6. The Arab Republic of Egypt has to date been ruled by only three men: Nasser (1953–70), Anwar al-Sadat (1970–81) and Husni Mubarak (1981–).

### Sources for the Rural History of Egypt

All our contributors focus to some degree on specific documents or collections of documents, whether the Wilbour or Hauswaldt papyri, farmers' almanacs, the Cairo Geniza, or modern land registers. Certainly, the exceptional quantity and quality of evidence for the more remote periods makes Egypt by far the best-documented area of the ancient world, even in the period of the Roman empire. Wide-ranging discussions of approaches to such documentary material are bound to be fruitful, whether focusing on the questions which can be asked of this or that kind of material or the ways in which it can be handled and analysed.<sup>45</sup>

<sup>45</sup> Cf. Marcus (1980); Bagnall and Frier (1994); Laiou-Thomadakis (1977).

Such introspection has been especially useful, indeed essential, in the last two decades with the development of electronic media capable of storing, comparing and analysing huge quantities of data, even in ways which allow facsimiles of original documents to be assessed and read.<sup>46</sup>

The languages used in our sources are a matter of crucial interest and importance. The relationship between political and economic power and the dominant language or languages in Egypt is significant both historically and historiographically, especially with respect to its connections with the conventional periodisation of Egyptian history. Thus the hieroglyphic pictographic script and its cursive counterpart, hieratic, are dominant in the earlier parts of the Pharaonic period, with demotic coming into existence in the seventh century BCE.<sup>47</sup> Demotic continued to be an important medium through the Ptolemaic period, but after Alexander's conquest Greek became and remained the dominant language until the Arab conquest, with Coptic occupying an increasingly important role alongside it in the Byzantine period. This rather stark and conventional compartmentalisation does to some extent crudely reflect the dominant political power, but its major disadvantage, which cannot easily be overcome, is that it divides scholars of Egyptian history according to their language competence, as has already been noted. One of the justifications for presenting the present collection of papers in this form is precisely to encourage dialogue between scholars working in different periods and with texts in different languages.

Such a collection might also encourage us to think about the ways in which agrarian history can be dealt with and divided by primary criteria other than political and linguistic, which could be considered too unsubtle and simplistic. In Egypt of the Late Period over forty different languages are attested in use.<sup>48</sup> Demotic Egyptian remained very important in the Ptolemaic period (the number of extant texts certainly very heavily underrepresented in published editions compared to the Greek papyri) and it was clearly, although not exclusively, an important medium for emphasising links with the Pharaonic past. If it died out after the early Roman period, its extrusion from the written record because of disuse and the dominance of Greek might not be the whole story.<sup>49</sup> From the third century a new written medium for the Egyptian language appears in the form of Coptic, a response to a need highlighted by the growth of the Christian church at grass-roots level. Again, the importance of that linguistic element is not immediately confined or limited by drastic changes in the political order.<sup>50</sup>

<sup>46</sup> See for example, <http://www.csad.ox.ac.uk>, with links to other sites offering inscriptions and papyri.

<sup>47</sup> For a survey of the available evidence see *Textes et langages* (1972), and for the Late Period, Ray (1994).

<sup>48</sup> Ray (1994), 51.

<sup>49</sup> Lewis (1993).

<sup>50</sup> Cf. Frantz-Murphy, below, p. 242.

Indeed, Coptic survived as the language of accounts for centuries. As already noted,<sup>51</sup> the Arab conquerors preserved the existing rural order and bureaucracy. While the Umayyads made Arabic the official language, Coptic clerks continued to keep their records in a cipher derived from Coptic language as late as the eighteenth century.<sup>51</sup> Yet Arabic increasingly displaced the languages of Byzantine times, which accounts for the relative lack of comparative work in rural history between the two periods. Arabic remained the dominant medium in political and intellectual life until the Ottoman conquests, when a sort of bilingualism resulted from imposition of Ottoman Turkish as the language of state combined with Arabic as the language of local government. Thus fiscal records and orders from the central government tended to Ottoman Turkish, while scholars and courts tended to Arabic. Until recent years, few scholars were literate in both Ottoman Turkish and Arabic, a language barrier which inhibited scholarship on the subject. One good example of this inhibition has been the relative neglect of Muhammad 'Ali's own writings by contemporary Egyptian scholars: Muhammad 'Ali neither spoke nor wrote Arabic, being a native speaker of Turkish. The endurance of Ottoman influences over Egypt's élites across the nineteenth century has, until quite recently, tended to be overlooked by scholars all too willing to treat Egypt as an emerging, Arabic-speaking nation-state.<sup>52</sup> In a sense it was English and French, and not Arabic, that displaced Ottoman Turkish as the language of the ruling élites. By the twentieth century, official records were customarily kept in English and/or French, and Arabic, and the children of the élite were sent to university in Britain or France or later the United States. Perhaps it is one of the defining features of an élite that they have a language or speech that sets them apart from the mass of the population, though for the present study the significance lies more in the linguistic barriers which have made the interpretation of documentary sources difficult across the centuries.

There is nothing innovative or unique about an attempt to write agrarian history primarily by using documents and archives.<sup>53</sup> The attempt to cover such a long period and so many specialisms, albeit very incompletely,<sup>54</sup> perhaps calls for an illustrative account here, emphasising some of the strengths, weaknesses, and potential biases, and referring to some material which is not treated in this collection.

Few will be surprised to find that the Pharaonic evidence is the most difficult to exploit, above all perhaps because the useful material is spread across a huge period and is very difficult to contextualise. Interpretation of the monumental

<sup>51</sup> See Volney (1787), I, 78–128.

<sup>52</sup> This view has been challenged by Toledano (1990).

<sup>53</sup> Cf. Laiou-Thomadakis (1977).

<sup>54</sup> We especially regret the absence of detailed treatment of the Mamluk period, see above, n.45.

evidence is beset by the problems of possible idealisation and of determining source (the temples?) and whom the texts were primarily intended to address. A pictorial representation of the harvest on a painted tomb does tell us something but there is a limit to what it can add to our knowledge of the agricultural economy. The range and potential of texts on papyri and ostraka is greater. Texts on papyrus include long and detailed registers as well as legal documents, petitions, and private papers. Texts written on ostraka (potsherds) are usually shorter and more ephemeral, but their cumulative importance is often considerable.<sup>55</sup> Several individuals and isolated papyri, a few very extensive, provide crucially important evidence in much more detail. Foremost among these is the Wilbour Papyrus, by far our best source for land-tenure in the Ramesside period, but plagued by obscurities and difficulties of interpretation, some of which are addressed by Katary. There are other significant texts whose evidence can be brought to bear on the difficulties raised by the Wilbour Papyrus, but the study of such texts from the point of view of agrarian and economic history has not been widespread and in some cases we lack even the fundamental basis of a secure and full transcription or edition.<sup>56</sup> Even allowing for the amount of necessary hypothesis about the precise nature and purpose of such texts, their context appears relatively limited. The same goes for the few private archives and documents which are marvellously informative on detail. The Hekanakhte Archive (c. 2000 BCE), exploited by Eyre, derives from a servant of the vizier Ipi, living near Thebes, the head of a household and a farmer and landowner of some standing. The texts concern the cultivation and renting of land, and include lists of workmen, rations of foodstuffs, and other commodities and allow us, in the words of the editor, to attempt 'to reconstruct the organisation of a small estate in Middle Kingdom Egypt, c. 2000 BCE.'<sup>57</sup> It requires a tremendous leap of faith and imagination to bring this into relation with the Petition of Petiese, one of our most important and detailed Late Period texts, which evokes for one scholar 'a system chaotic, infuriating, lubricated by chicanery and promises, but redeemed by a certain feeling for the human', or with an Aramaic archive of the later fifth century BCE containing letters from the Persian satrap and other officers concerning the administration of land, collection and transport of revenues, and transfer of tenanted land to the son of the deceased tenant.<sup>58</sup>

With the advent of the Ptolemaic monarchy the papyrus documentation becomes much more extensive. Government and administration is run and written in Greek; there are family archives, notarial documents, registers, and land-lists in demotic and exceptional items such as literary compositions and the

<sup>55</sup> For a non-agricultural example see Ray (1976).

<sup>56</sup> See Katary, below, pp. 61, 80.

<sup>57</sup> James (1962), 6–12, esp. 11.

<sup>58</sup> Ray (1988), 272; Driver (1957).

Demotic Chronicle which provide a link to the past. Demotic documents constitute an important source of evidence for agrarian history, notably in the form of contracts and other transactions concerning land, which can sometimes be related to important and under-utilised monumental evidence such as the Edfu Donation text, discussed by Manning.<sup>59</sup> This warns us against being too heavily influenced by the hellenocentric nature of the evidence and classical historiography. Nevertheless, it has proved difficult to escape from the plentiful and powerful evidence, described by Thompson, for the heavily Greek agricultural development of the Fayyum. The core of this is the huge archive which gives immensely detailed evidence for the management of the estate of Apollonius by Zenon in the third century BCE, often taken as a paradigm.<sup>60</sup> The text covers an immense range of agricultural and commercial exploitation over a large geographical area, with ramifications well beyond the confines of Egypt. However, Apollonius (the king's finance minister), Zenon, and the Fayyum cannot and should not be taken to stand for Egypt as a whole. The Fayyum also predominates in the two chapters here concerned with the Roman period (Sharp, Rowlandson). This is hardly an accident, for the Fayyum villages supply, for better or worse, our best and most detailed evidence for agricultural village life. More could have been added: on Karanis, one of the best-documented sites in Egypt, or on the Heroninus Archive from Theadelphia of which the published portion, by no means all the texts known to exist, has allowed a remarkable reconstruction of the system of estate-management in the third century.<sup>61</sup>

There are, of course, significant and regrettable gaps. As in other periods, we lack evidence for the Delta.<sup>62</sup> In Middle Egypt we have relatively good evidence for two of the largest and most important towns in the Roman and Byzantine periods, Oxyrhynchus and Hermopolis; this affords us some picture of their agricultural hinterland as well, but it is a view which emerges not from the villages themselves but largely from the documentation left behind by the urban-dwelling landholders and agriculturalists. For the village perspective in the Byzantine and early Islamic periods, Aphrodite (Aphrodito) provides our best evidence.<sup>63</sup>

The implication is that much of the documentary evidence for ancient Egypt is archival, and dependent on the hazard of preservation and discovery, not to mention the vagaries of the commercial antiquities market which has been responsible, directly or indirectly, for the dispersal of more than one archive. This appears to be more emphatically the case with Byzantine Egypt. The amount of official documentation decreases and more of what we have relates to private estates and religious foundations, leaving us with the impression of a reduced

<sup>59</sup> Johnson (1974); Meeks (1972); cf. Manning, below, pp. 93–5.

<sup>60</sup> Particularly because of the influence of Rostovtzeff (1922).

<sup>61</sup> Geremek (1969); Rathbone (1991); Bagnall (1993).

<sup>62</sup> For an exception see Kambitsis (1985).

<sup>63</sup> Rowlandson (1996); Krüger (1990); Lewis (1983), ch. 3; Bell (1908), (1994); Keenan (1984).

state role and an increase in the power of the private landowners and the Christian Church. For the former we need only refer to extensively documented estates of the Apiones of Oxyrhynchus, a family which made its political mark in Constantinople, though there are others which operated on a smaller scale. Here coherent management and documentation has in the past too easily been made to support a 'feudal' or 'servile' model, a picture now undergoing much-needed revision, as Banaji's contribution emphasises.<sup>64</sup> Documents illustrating the role and agricultural activities of the Church and the monasteries are in many respects complementary, particularly, for instance, when we find a monastery and a powerful family in dispute over the ownership of a piece of land.<sup>65</sup> But Christianity can also be seen to bring an extra dimension, partly but not solely related to the intrusion of the Coptic language, a medium for administrative and legal transactions and also for semi-literary accounts of daily life in the rural setting, as well as almanacs in literary form with practical application.<sup>66</sup>

Early Islamic documents, on papyrus, paper and parchment, provide a vast if problematic corpus for researchers. Fragmentary, in a difficult script, seldom dated, and seldom of known provenance, early Islamic papyri pose challenges in deciphering and interpretation alike. At the beginning of the twentieth century, large numbers of papyri were sold through dealers, most assumed to come from the ruined Tulunid city of Fustat, now a district of Old Cairo. The other prime sources for Islamic papyri have been the Fayyum, and to a lesser extent Upper Egypt, where the arid conditions have preserved the fragile documents. While there are today a number of important papyrus collections, virtually none can be shown to represent a genuine archive.<sup>67</sup> Patterns of use may have tended to militate against the storing of texts in archives, as sheets were often reused, either by the filling in of blank spaces or by washing a sheet clean of all writing. Shortage of papyrus even afflicted government offices, particularly in the countryside, where scribes had to resort to such recycling.<sup>68</sup> What remains are random texts, including letters, private receipts and accounts, legal and official documents, and some literary fragments.<sup>69</sup> Such documents raise evident methodological difficulties, though as a corpus they provide valuable insights into social and economic life in the first few centuries after the Islamic conquests, as is demonstrated by Frantz-Murphy's contribution to this volume.

By the Fatimid period, paper had largely displaced papyrus as the preferred writing material, imported to the Muslim world via Samarkand, where the secret had been forced from Chinese prisoners in the mid-eighth century. The best cache

<sup>64</sup> Hardy (1931); Gascou (1985), 1–90.

<sup>65</sup> *P. Oxy.* LXIII 4397.

<sup>66</sup> E.g. Schiller (1968); Ward and Russell (1980); Wilfong (below, ch. 10).

<sup>67</sup> See Bell (1908).

<sup>68</sup> Ragib (1990), 22.

<sup>69</sup> See for example Khan (1992), (1993a).

of paper texts from medieval Egypt is of course the Cairo Geniza. Though not in any sense an archive, the Geniza was a storehouse of used paper, preserved by the Jewish community out of respect for the written name of God. The Cairo Geniza was located in the Fustat district, next to a synagogue which dates back to the Fatimid period. The synagogue continued to be used across the centuries and in the 1890s, during major repairs, the Geniza was rediscovered after centuries of neglect. Hundred of texts were sold by antique dealers to collectors and universities in North America, Europe and Russia. Thousands of fragments of documents, in Hebrew, Judaeo-Arabic and Arabic, dating to the Fatimid and Ayyubid periods (eleventh–thirteenth centuries), were discovered in the Geniza. The breadth of the subjects covered is reflected by the volumes of Goitein's *magnum opus*—economic foundations, the community, the family.<sup>70</sup> The wealth of the Geniza collection has been exploited by Udovitch in his contribution to this volume. Thus the paucity of archival sources has not precluded documented studies of rural Egypt in the medieval period. In addition to the textual sources there are the Arabic manuscript sources of the geographers and government agents, exemplified by the detailed study of al-Fayyum conducted by the Ayyubid official al-Nabulsi, examined by Keenan in his study.<sup>71</sup>

Archival sources begin in earnest in the Mamluk period (1250–1516), where the deeds pertaining to pious endowments (*waqfiyyat*) have proved an important source for social and economic history. With as much as 50 per cent of agricultural land endowed in *waqf*, the importance for rural history of these deeds, which define the properties and their terms of exploitation, is enormous.<sup>72</sup> Some administrative documents from the Mamluk period have been preserved in the Egyptian archives, though without the regularity of the registers of the Ottoman period.<sup>73</sup> The records of *waqfiyyat* continue from the Mamluk era right through the Ottoman period.<sup>74</sup> Added to these sources are the Ottoman documents, many of which are preserved in the Prime Ministry Archives in Istanbul.<sup>75</sup> Further, Islamic court registers survive in the thousands, dating back to the early eighteenth century for some rural areas. These have proved extremely valuable for rural historians, and represent one of the sources of Cuno's work. By the nineteenth century, however, the number of sources available through the Ministry of Finance Archives and the National Archives in Cairo expands dramatically.

Muhammad 'Ali was the founder of a bureaucratic state, which compiled cadasters, tax registers, and censuses, in addition to the sources already named—

<sup>70</sup> Goitein (1967–93). See also Khan (1993b).

<sup>71</sup> For a survey of the medieval Islamic manuscript sources on Egyptian agriculture, see Rabie (1981), 81–90.

<sup>72</sup> Amin (1980), esp. 286–320.

<sup>73</sup> On Mamluk documents, see Richards (1977), (1991), (1992).

<sup>74</sup> Crecelius (1992).

<sup>75</sup> See for example Hathaway (1997).

sources which inform the work of Cuno and Alleaume. With the British occupation in 1882, the bureaucratic state entered a new era of statistical precision which characterised the colonial period. The people of Egypt, the goods and services they produced, the articles they consumed, the ills they suffered from, and countless other categories were quantified, compared over time, and applied to policy-making. Owen's work on cotton trends over the past two centuries is a reflection of this capacity to keep rigorous statistics. Yet, despite the growing diversity of sources as we move from the early modern period to the present, it is only those conducting fieldwork in Egypt today who stand a chance of understanding agriculture through its cultivators. Indeed, Reem Saad's is the only paper to benefit from the peasant's voice.<sup>76</sup>

### Perennial Themes in Egypt's Agricultural History

No reader of this volume will be surprised to discover that we think there is much to be learned from the comparative study of Egyptian agriculture across the centuries: for instance, by comparing practices in the inheritance of land in an agrarian context over long periods, or by tracing the survival of toponyms in documents through different periods and languages.<sup>77</sup> We hope, however, that we have avoided unreflecting comparison of broadly similar phenomena, since this may tell us little of value and act as a substitute for real historical analysis. We need to ask how we read our documents from different periods, what can they tell us and what not? This is not a simple matter. For one thing, we need to take careful account of cultural perceptions which are embedded, without being explicit, in the documents themselves. For another, serious historians rightly regard imagination as part of the required equipment, but the danger is that the dividing line between history and fiction may become less clear-cut than it ought to be, especially when documents, alleged or real, are brought into play.<sup>78</sup>

Can we imaginatively recreate the lives of Egyptian agriculturalists? The contents of this volume suggest that, within limits, we think we can. A major bias lies in overrepresentation of the literate classes, the result of our dependence on written records, with all their shortcomings. Idealisation and propaganda may pervade and distort the picture, especially where it is not entirely clear 'what the document is for' or where metaphorical and psychological factors come into play. And there is much that documents do not tell us. A legal division of a plot of land may not tell us who worked it; key factors in social organisation of

<sup>76</sup> See also the work of Ghosh (1992).

<sup>77</sup> Keenan, below, ch. 13. For the use of onomastics in general cf. Hobson (1989).

<sup>78</sup> For an example which irritated a distinguished Roman historian see Syme (1991), on Marguerite Yourcenar's *Memoirs of Hadrian*. More meticulous and scholarly examples of historical fiction include Ghosh (1992).

labour are very often matters of unwritten hierarchical relations and the perception of social differences, which can only be recognised by contemporary observers.<sup>79</sup>

Despite these reservations we believe positively and firmly that documents from Egypt across this long period of time do supply significant and comparable evidence for the organisation of natural and human resources, mainly 'from the top down', and for some important facets of the human response to it. We hope that this will at the least help us to contextualise Egypt economically, socially and culturally in the Mediterranean and Middle Eastern worlds.

One of the main reasons for juxtaposing these different areas of expertise and for collecting these papers together was not so much in order to ignore the conventional linguistic and political divisions as to explore the ways in which we might transcend and minimise the significance of the divisions in a field of study which clearly displays important unifying factors and continuities in geography and agrarian organisation, as well as illuminating contrasts and differences. The purpose of what follows is not to summarise the content of the different contributions, but to indicate the important areas and themes within which we think dialogue between the contributions, and hence further research, is possible and desirable. In highlighting the themes and issues which are shared concerns of the various contributors we do not attempt to make simple comparisons, but to allow for important differences and changes, to emphasise the complexities and the nuances within the framework of Egypt's agrarian history.

As far as the broader patterns of demography and settlement are concerned, the basic unit in the Egyptian agrarian scenario is the village, of which there have been very large numbers at all times (even if we do not believe Diodorus' total of over 30,000 settlements for the ancient period.)<sup>80</sup> The village, then, is fundamental and pervasive but the morphology of the countryside is far from simple and undergoes noticeable and important change, not only in the modern period. For much of this long period of time, it is hardly possible to be certain what proportion of Egypt's population lived in villages, even disregarding the question of definitions and of urban/rural relations (see Udovitch's paper). Settlement patterns change, internal population movement and immigration have their effects, sometimes characterised as colonisation (Eyre, Thompson (b), Alleaume). They may bring new capital and new patterns of habitation and social culture into particular areas, as they did in the Ptolemaic Fayyum (Thompson (b), Manning). Questions of definition cannot and should not be avoided. There are clearly hierarchies of settlement, with larger and smaller villages grouped by relations of dependency, as Nabulsi's description of the Fayyum shows, ranging down to very small hamlets indeed (Keenan). The temptation to identify or

<sup>79</sup> Stauth (1990), 124-5; see also Arlacchi (1983).

<sup>80</sup> Rathbone (1990), 104-5.

construct models is perennially tempting, but we should not lightly yield, even to the blandishments of anthropology and a comparative methodology:<sup>81</sup> there is no such thing as an archetypal Egyptian village (Cuno).

This is, as much as anything, a product of regional differences, a factor which is important to several of our contributors. Local identities were strong and important at various periods (Eyre), reinforced by or expressed in dialect, particular religious cults, idiosyncratic emblems and associations, or simply by different physical characteristics in the population. Most obviously, in the following pages, the Fayyum has its own character, influenced by heavy Greek immigration and not 'typical' (Thompson (b)). Upper Egypt is more 'Egyptian'. We may observe changes which have some general impact and importance but are nevertheless subject to regional variation, taking account of local characteristics. The broader political importance of regional differences is one of the enduring and pervasive themes of Egyptian history, beginning with the uniting of the 'two lands' and the drive to political unity which is evident in the Old Kingdom (Eyre). The balance between strong central control and regional (sometimes called 'provincial') individuality and independence (sometimes identified as a general political fragmentation, sometimes as so-called 'native revolts') obviously has serious repercussions on the organisation of the agrarian economy and society.

The strength of political control, internally and externally, plays a key role in determining the role of the state in the formation and manipulation of the agricultural economy. A politically strong government, whether monarchical, despotic, or democratic, devises effective means of state control and exploitation, suppressing, or sometimes benevolently controlling, regional independence (Manning). Whether a loosening of such control is a matter of choice or is necessarily a symptom of political weakness is an interesting question (raised by implication by both Banaji and Hopkins). The means of exerting such control might, on the face of it, be a rigid and hierarchical bureaucracy, although that construct does not always stand up to rigorous scrutiny (Manning, Hopkins). A state which has built an internally secure empire (Katary, Thompson (b)) can also be strong overseas; conversely, the shape of Egypt's foreign relations can be determined by rulers whose seat of power is external (Rome, Constantinople, Baghdad). In either case, we have to assess the impact of foreign involvement on domestic agricultural production. Thus in the Ptolemaic period there is the drive to maintain foreign possessions, a drive which certainly had economic implications (Manning, Thompson (b)) and in the Roman and Byzantine periods there was the need to provide food for the imperial capitals, Rome and Constantinople, as well as for Alexandria. The drive of the export market for textiles is a force in the medieval period (Udovitch), as was the international

<sup>81</sup> Hobson (1988).

demand for cotton by the foreign markets in the nineteenth and twentieth centuries (Owen). Integration into the world economy might impel or induce the state to be more intrusive in the domestic agricultural economy (Cuno, Alleaume). Whether that is true of all periods is a question worth considering.

As to the instruments of state control, several themes recur in this collection: control of information, the nature of the bureaucracy and its officers, fiscal policy, regulation of the water supply, patterns of land-tenure and exploitation.

The state directs and controls the form in which information is issued to its subjects as well as the nature and practice of information gathering. In the first area, the more limited the media (as in Pharaonic times), the simpler the task. The government may control information output more or less completely, without necessarily resorting to overt censorship; it may idealise itself (Eyre), or validate its administrative authority by public statements in the form of decrees or other sorts of inscriptions (Manning), the equivalent of modern control of the press (Saad). The more stable and secure the government, the greater its control of information; the weaker its control of information, the more insecure the government is likely to be (Frantz-Murphy). Likewise, a strong and stable government supports efficient collection of information and determines its form (land-survey, census etc.), which underlies its ability to exploit its resources. This is an area in which the expansion of literacy, or literate practices, has important implications. The record-gathering bureaucracy is crucial here. Several contributors note the key role of the local intermediaries (who may be trained bureaucrats or local élites): their loyalty and their security of control is critical in allowing the central authority to retain power and the integrity of the kingdom (Frantz-Murphy). It is not necessarily the case that the strongest and most effective form of government is a centralised and hierarchical bureaucratic state, exercising a considerable degree of direct participation or intervention. The nature of fiscal policy is a key factor here, involving, as Frantz-Murphy makes clear, control of the surplus, the mechanics of taxation and rental, the balance between rent and tax and between communal and individual liability (in which local intermediaries are vital). The government may intervene directly with price control (as Diocletian attempted to do<sup>82</sup>), legislation, imposition of monopolies, control of co-operatives, regulation of the transition from a controlled to a free market or from state to private ownership (Owen, Alleaume), subsidies and loans (Hopkins), all features which can be identified in analyses of both ancient and modern periods. What determines the level of government intrusion, participation or supervision is, or should be, a key question.<sup>83</sup>

Whatever the answers, it is clear that organisation of the water supply and

<sup>82</sup> The Currency Edict and the Maximum Price Edict, on which see Bagnall (1985a).

<sup>83</sup> For important and stimulating discussions of these issues in late antique and early medieval Europe see Wickham (1994).

patterns of land-tenure are central issues underlying all the contributions in this volume. The significance of the flood and of religious and secular attitudes to it in all periods before the construction of the High Dam have already been mentioned. Improvements in irrigation, whether in the Ptolemaic period (Thompson (a)) or the nineteenth century (Owen), are likely to be at least partially government-driven; the decline of the water distribution system is thought to indicate weakening of the government and its economic base, though it may be more marginal than is sometimes thought (for example, the fourth-century Fayyum).<sup>84</sup> The responsibility of the government to provide water is still clear, and its use of market conditions as a guide is explicit (Hopkins). Modern smallholders operate collective use of technology, with shares in water-pumps which they cannot afford to own wholly, a practice which is also evident in documentation from the Byzantine period.

The importance of patterns of land-tenure is pervasive, with varying degrees of state control in different periods. The state, institutional landholders (Egyptian temples, the Christian Church and its monasteries), kleruchs and private landholders are all part of the picture, with the emphasis varying according to period and preference. Sometimes the state is observed to have less influence on the distribution of ownership, sometimes more (Banaji, Hopkins, contrast Katary, Rowlandson, Alleaume). At all periods it is diverse and hierarchical, though the smallholder is crucial because the standard unit of exploitation tended to be small, not large. It is within these terms that the relative incidence of 'feudalism', small farms, state tenancy, sometimes enforced but sometimes relatively privileged, and alienable tenure (the nature of which in the early periods, if it existed, is still open to question) need to be discussed. Granted the variety of land-tenure patterns which may differ regionally and depend on local traditions and social structure (Manning), the incidence of women owners and tenants (Katary, Rowlandson), the extent to which the landless have access to land (Cuno), leasing and tenancy is clearly a fundamental and pervasive theme, as is amply attested by the 'similarity of clauses in lease documents from widely divided periods (Rowlandson). Yet while the nature of tenure and liability may be ambiguous, there is a considerable degree of flexibility in leases, and land is itself an important underpinning of credit and deployment of financial resources (Alleaume). Much may depend on custom and practice, as well as on written legal documentation, in which the power to terminate a lease or evict a tenant is crucial (Saad). Any restructuring of such relations may depend on an implicit deal between the state and the landholder, in which 'democratic' principles may or may not be influential and the weight given to the legal principle of justice may dominate the political principle of social justice (Banaji, Saad).

At a somewhat less abstract level, it is possible to observe something of the

<sup>84</sup> Bagnall (1985b), 296-9).

way in which the land was actually worked and exploited (Wilfong), whether well or badly depending on a variety of factors, including some already discussed. Does secure tenancy or the availability of incentives to acquire ownership of more land stimulate improvement? What counts as 'improvement' might be expected to be different in pre-industrial and modern periods (where the availability of technologically driven progress is the significant factor). In the Fayyum of the Ptolemaic period agricultural improvements were government-stimulated, culturally and economically based (Thompson, (a, b)). Elsewhere and at other times, rotation of crop, changes of land use, or specifications of type and proportion of crop might come into play by government mandate, in effect (Rowlandson, Sharp, Keenan). Even when there is theoretical freedom of choice, powerful economic determinants are not far below the surface (Udovitch, Owen, Hopkins).

Hence we may turn our attention to the economic structures and forces which underlie the agricultural patterns. Four main themes stand out among the concerns of our contributors: the availability and provision of labour, the operation of markets, the commercialisation of agriculture, and the general character of Egypt's agrarian economy. The balance of availability of land and labour is sensitive and interdependent — when there is a superfluity of land there is a shortage of labour, and vice versa (Frantz-Murphy). The provision of labour cannot be seen in isolation from land-tenure since it can by no means be the case that the whole, or even the main, source of labour is the landless; provision in leasing and tenancy arrangements may be flexible and varied (Rowlandson, Wilfong). The organisation of tenancy and labour by private estate-owners involves such matters as the definition of 'the peasantry', questions of status and juridical relations, and the stratification of rural society, which are not confined to one period. To this some definition and identification of agricultural occupations may be crucial and the importance of non-agricultural activities in agricultural village communities must be recognised (Banaji, Cuno). Conversely, agricultural labour may be found in towns as well as villages.

In general, there is a steady growth in the pervasiveness and sophistication of markets, for which villages as well as towns provide foci, while the growth of the market economy in agriculture continues (Hopkins). The move away from what is viewed as an essentially redistributive economy in Pharaonic Egypt has certainly begun before the advent of the Greeks, but the deployment of a market economy and extensive monetisation are features of the Ptolemaic period (Thompson (b)). The introduction of a currency system based on silver and bronze denominations is novel and extremely important. This suggests that a simple notion of subsistence agriculture is not a useful tool of analysis for any period. Despite good evidence for Egyptian governments raising revenue in cash and in kind, and varying the balance between them, there is good reason to think that even rural exchange was fairly extensively monetised from an early

date<sup>85</sup> (Udovitch). This must all be part of a growing degree of commercialisation in agriculture, in which technology and manufacture play an increasingly important part as the villages and towns develop the ability to turn raw materials into saleable products — whether papyrus, flax, or cotton — or gain access to trading networks which can do so (Udovitch, Owen). The influence of the latter is important because it can introduce an element of competition and provoke change and growth, which can also be stimulated, perhaps especially when the seat of government is remote, by a greater emphasis on the responsibility and involvement of local officials rather than ‘carpetbaggers’ (Udovitch, Franz-Murphy). The character and development of the Egyptian agrarian economy is another matter. Few would insist, we think, on retaining the notion of a peasant or subsistence economy, even for periods in which our evidence is far less than adequate. Storage and redistribution play their role. Ancient historians are now apt to insist on a fair degree of economic sophistication and rationalism, which qualifies a minimalist or primitivist model of the type suggested by M. I. Finley.<sup>86</sup> Thus a kind of agrarian capitalism emerges even in the pre-Islamic period which stands comparison with the situation of the later nineteenth century, after the reforms of Muhammad ‘Ali (Udovitch).

For the present contributors, as for many others, these issues in particular raise the question of urban/rural relations in an acute form.<sup>87</sup> The hierarchical organisation of settlement patterns is one matter: at what point of development (not just size, but complexity of social, administrative, and economic structures) does a village become a town? This has particularly sharp relevance both to antiquity, when some Fayyum villages seem more like small Greek towns, and to the modern period, when the distinctions between urban and rural settlements are being eroded (Hopkins). Yet there are clear differences, some of them perhaps inherent in the biases of the evidence, between a local metropolis and a village. Villages may nor may not be self-sufficient agriculturally and in other respects (there is a good comparison here between Eyre and Cuno). If they are not, deficiencies may be compensated by inter-village exchanges or village–town exchanges. Towns often provide a major source of labour for the agricultural countryside (Wilfong). Economic exchange is central: for manufacture and sale outside the village or abroad, regional and more distant urban centres are developed; in the economic exchange between town and village, the movement of money and goods is not one-directional (Udovitch).

Although it is difficult and often misleading to make such distinctions, these relationships have an equally important set of social dimensions, which perhaps emerge from the following pages and are the most complex and nuanced of all

<sup>85</sup> Cf. Howgego (1992).

<sup>86</sup> Finley (1985); see Rathbone (1991), (1989); Banaji, below, ch. 9.

<sup>87</sup> Cf. Hopkins (1978); Whittaker (1995).

the approaches we discern. Although we would like to be able to dismiss the cliché of the 'voiceless' peasantry, we cannot and should not deny that in all periods the political structures systematically prevent its voice and influence being heard and that the more influential sectors create their own stereotypes of peasants (Saad). The documents allow us to observe social stratification in rural society and changes in that stratification over time (Banaji, Hopkins). Social differentiation in small rural communities is evident, and the notion that there is a single peasant class (also rather outmoded in other areas of enquiry) seems to have had its day (Cuno). The question of status, juridical relations and 'freedom' are important, and the answers to them are changing (Banaji). The family as the base of the social organisation of rural society is evident at all periods and its place in local social organisation may help to highlight the evolving relationship between tradition and change or development (Eyre, Cuno, Hopkins). The typology of households is also an issue, with household complexity related to amount of property held or controlled and, in the broader picture, inequality of distribution (Cuno).<sup>88</sup> So too is the importance of social relationships between landlords and tenants, owners and labourers, which is intimately connected with the relationships of city or town and village, since some significant proportion of ownership rests in the urban centres (Sharp). This, then, further involves the analysis of the 'anatomy' of the ruling élite, the character and role of the local notables, particularly as they develop (or not, as the case may be) a role as middlemen between the agrarian population and the political centre.

We need hardly say that none of the crucial questions or issues is susceptible to a valid answer for all, or even several, periods. That they are indeed common concerns and that we can approach the documentary evidence with some commonality of purpose will, we hope, justify this collection. There are explicit and illuminating diachronic comparisons or contrasts to be made: basic economic patterns in the Pharaonic and other periods (Eyre), the character of estates in the Byzantine period and the nineteenth century, calandologiae of the Pharaonic and Islamic periods (Wilfong), the formulary of leases and other documents (Frantz-Murphy, Rowlandson), as well as more general matters such as the presence or absence of cyclic patterns of growth and decline. Finally, we emphasise that whatever the virtues of this comparative approach, which we think are considerable, we make no claim to exhaustiveness. Quite the contrary. There are many themes and issues not treated in this volume, such as demography and epidemiology, which are susceptible to comparative analysis and equally important for agriculture. We hope that the present volume and the contributions which follow will encourage fruitful debates and further dialogue between specialists of different periods.

<sup>88</sup> Cf. Bowman (1985); Bagnall, (1992); Bagnall and Frier (1994).

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