

## Princeton/Stanford Working Papers in Classics

### Communal Agriculture in the Ptolemaic and Roman Fayyum

Version 1.0

October 2007

Andrew Monson

Stanford University

**Abstract:** The article presents the model that rising demand for land drives the process of privatization. It likens ancient developments in Ptolemaic and Roman Egypt to similar trends towards privatization in nineteenth-century Egypt. Given the difficulty imposed by the ancient evidence for tracing changes over time, it concentrates on observable regional variations that conform to the model. Differences in population density seem to correlate with differences in agrarian institutions. There are especially good data for tenure on public land in Roman Egypt, so this period is treated in more detail. In the more sparsely populated Fayyum, communal peasant institutions remained important for the cultivation of public land just as they were in the Ptolemaic period. In the Nile Valley, by contrast, private landowners encroached on public land by having it registered into their names and treating it more like private property.

© Andrew Monson. [amonson@stanford.edu](mailto:amonson@stanford.edu)

The enormous documentation from the Fayyum, known administratively as the Arsinoite nome, has tempted scholars in the past to assume that agrarian institutions were similar throughout Egypt. This assumption aligns with the view that the Egyptian state was so highly centralized in comparison with other ancient states that a uniform system of land tenure was possible. As the evidence for regional differences accumulates, this depiction of the Egyptian state has become less plausible. In this paper, I argue that communal agriculture in the Fayyum is not representative of Egypt. My ultimate goal is to explain why land rights in the Fayyum and the Nile Valley were so different. In a previous article, I treated the problem of regional differences in the Ptolemaic period in some detail so here the argument is summarized rather briefly and more emphasis is put on the Roman-period evidence and on the comparison with nineteenth century Egypt.<sup>1</sup> In the first section, I hypothesize that there is link between population density and the level of privatization. Then I discuss regional differences in population density. The third section compares the proportion of public land in the Fayyum and the Nile Valley. Finally, I consider qualitative differences in tenure on public land between these regions.

My approach to land rights is social and economic rather than juristic. In other words, I am not interested in the interpretation of ancient legal terms according to Roman or civil law categories, which risks imposing rigid categories on social relations that have little explanatory power. Egypt was strongly marked by regional differences that are understandable only in terms of competing demands for property rights among peasants, local elites, and the state. In this paper, I use the economic concepts of communal and private land rights to illuminate these relations.<sup>2</sup> Communal rights are rights to use land without the right to deprive others of access to it, except by prior and continuing use. Private rights are exclusive rights to the use and conveyance of land by sale and inheritance. Royal or public land in Ptolemaic and Roman Egypt matches the first concept reasonably well while private land as well as some cleruchic and temple land fits more closely with the second. The advantage of these ideal types over juristic definitions is that one can identify a spectrum of land rights from fully communal to absolute private property. Since the *de facto* rules of land tenure vary and seldom match rigid definitions, even those employed by contemporaries, these simplifying concepts highlight only the important characteristics of property rights and provide an orientation to the complex social relations in which they are embedded.

### Hypothesis

Economic historians have long argued that population growth and agrarian change are closely related.<sup>3</sup> My basic hypothesis is that when land is abundant, it is *ceteris paribus* less likely to be privately owned than land that is scarce. Comparable studies of traditional land tenure regimes and privatization in agrarian societies seem to support this hypothesis.<sup>4</sup>

---

Forthcoming in: S.L. Lippert and M. Schentuleit (eds.), *Graeco-Roman Fayum: Texts and Archaeology*, Wiesbaden (2008).

<sup>1</sup> A. Monson, "Royal Land in Ptolemaic Egypt: A Demographic Model," *Journal of the Economic and Social History of the Orient* 50/4 (forthcoming 2007).

<sup>2</sup> H. Demsetz, "Toward a Theory of Property Rights," *American Economic Review* 57 (1967), 347-59; T.W. Merrill, "Introduction: The Demsetz Thesis and the Evolution of Property Rights," *Journal of Legal Studies* 31 (2002), 331-38; S. Levmore, "Two Stories of the Evolution of Property Rights," *Journal of Legal Studies* 31 (2002), 421-51.

<sup>3</sup> M.M. Postan, *Essays on Medieval Agriculture and General Problems of the Medieval Economy*, Cambridge (1973); D.C. North and R.P. Thomas, *The Rise of the Western World: A New Economic History*, Cambridge (1973); for an influential Marxist critique, cf. R. Brenner, "Agrarian Class Structure and Economic Development in Pre-Industrial Europe," *Past and Present* 70 (1976), 30-75.

<sup>4</sup> J.-P. Platteau, "The Evolutionary Theory of Land Rights as Applied to Sub-Saharan Africa: A Critical Assessment," *Development and Change* 27/1 (1996), 29-85; Y. Hayami and M. Kikuchi, *Asian Village Economy*

Communal rights tend to evolve where land is relatively abundant and where there are high risks from variation in flooding or rainfall patterns.<sup>5</sup> In some cases, including pre-modern Egypt, annual redistributions of land were carried out among peasants to lower these risks. In densely populated areas, by contrast, individual landholders tend to have more private and exclusive rights.<sup>6</sup> There are a number of political obstacles that might hinder privatization but the main point is that, as land values increase, people are that much more likely to change their behavior and to loosen existing social norms so as to protect their property or to obtain new rights. They are even willing to accept the higher risks that the breakdown of communal institutions could entail in order to obtain exclusive access. This may lead to social tensions and violence, which necessitate reforms that keep order by instituting and enforcing new rules of land tenure.

The privatization of land in nineteenth century Egypt is an especially good comparison. As Egypt's population grew, due largely to its integration into the world capitalist economy, Egyptian landowners gradually acquired more exclusive and transferable rights to land.<sup>7</sup> Baer traces this evolution through the passage of privatization laws in the second half of the nineteenth century, which have to be seen against the background of economic and demographic change. In 1842, owners of hereditary estates (*ib'adiya*) earned the legal rights to sell or transfer them, which were extended in 1846 to peasants on what we might call public land (*kharajiya*). An 1855 law confirmed peasants' formal rights to inherit public land. It also made the regional governor responsible for the enforcement of land conveyances, which replaced the less formal and less secure system of contracts made in front of local witnesses. An 1858 law explicitly recognized the ownership rights of peasants on public land but they were still charged higher taxes, could not specify their heirs with a written will, and could not dedicate their land as an endowment. An 1866 decree gave the right to leave public land in one's will when one died. Between 1871 and 1880 laws were put in place that allowed owners of public land to convert it into a private estate if they paid several years taxes in advance. Between 1891 and 1899 laws were passed that eliminated public land with all its restrictions and the difference in taxation.<sup>8</sup> Even as the rights to public land gradually became more exclusive, the amount of private land (*ib'adiya*) increased from one-seventh in the 1850s to one-fourth in 1875 and one-third in the 1890s.<sup>9</sup> During the same period the population, the number of investors drawn into the land market, and hence the relative scarcity of land was growing rapidly.

Prior to these privatization laws, Baer suggests that most public land was the communal property of each village and was redistributed by the peasants annually according to the level of the flood.<sup>10</sup> He points to some anecdotal evidence for this type of communal redistribution in the Nile Valley, for example, in the Napoleonic *Description de l'Egypte*. Some communal land tenure institutions persisted at least into the mid-nineteenth century but the evidence comes mainly from the Delta and is insufficient to discern regional differences

---

at the Crossroads: An Economic Approach to Institutional Change, Baltimore (1982); Y. Hayami and V.W. Ruttan, *Agricultural Development: An International Perspective*, Baltimore (1985).

<sup>5</sup> T.K. Park, "Early Trends toward Class Stratification: Chaos, Common Property, and Flood Recession Agriculture," *American Anthropologist* 94/1 (1992), 90-117; J.B. Nugent and N. Sanchez, "Common Property Rights as an Endogenous Response to Risk," *American Journal of Agricultural Economics* 80/3 (1998), 651-7.

<sup>6</sup> J.-P. Platteau, "Land Inheritance Patterns," in J. Mokyr (ed.), *The Oxford Encyclopedia of Economic History*, Oxford (2003), III 261-64.

<sup>7</sup> C. Issawi, "Egypt since 1800: A Study in Lopsided Development," *Journal of Economic History* 21 (1961), 1-25.

<sup>8</sup> G. Baer, *A History of Landownership in Modern Egypt, 1800-1950*, Chicago (1969), 1-12.

<sup>9</sup> G. Baer, "The Evolution of Private Landownership in Egypt and the Fertile Crescent," in C. Issawi (ed.), *The Economic History of the Middle East 1800-1914*, Chicago (1966), 80-90.

<sup>10</sup> G. Baer, *Studies in the Social History of Modern Egypt*, Chicago (1969), 17-26.

that presumably existed.<sup>11</sup> Cuno has argued convincingly that Baer's communal/private dichotomy is misleading because peasants were already buying, selling, and inheriting land informally according to local customs. In other words, it is better to think of property rights on an institutional spectrum with variations in the bundle of rights over time and depending on the local social context. There was even a theoretical debate among Egyptian jurists in the eighteenth and nineteenth centuries about whether the law should recognize the Egyptian peasants' *de facto* rights as legal ownership.<sup>12</sup> The state generally favored the legal school that argued that the ruler owned all of the land in Egypt but a rival school recognized and endorsed the social reality of private ownership. That such a debate over the legal status and such a diversity of land rights existed should caution historians of Ptolemaic and Roman Egypt from drawing conclusions about land tenure from official categories that may have been more normative than descriptive of local practices. The nineteenth century agrarian reforms did not create property rights from nothing but rather made existing property rights more exclusive and transferable through formal legislation and better enforcement of traditional rules that evolved spontaneously within Egyptian rural society.

One might propose the same hypothesis for land privatization in Ptolemaic and Roman Egypt. That is, commercialization and population growth made land scarcer, raising the demand for secure private property rights. Even if this conforms to some impressions, the ancient evidence is insufficient to test it convincingly. What I propose in this paper is to rephrase the hypothesis in terms of regional variation in order to make it more susceptible to falsification with ancient evidence. The implication is that regions where land was relatively scarce should have had more secure property rights than regions where land was abundant just as increasing scarcity relative to demand should correspond with privatization over time. Whereas the historical development of land tenure is difficult to follow, we do have good evidence for regional differences. Thus in the following sections I examine the differences in population density between the Fayyum and the Nile Valley in relation to differences in land tenure.

### Population Density

Next, I consider the differences in population density between the Fayyum and the Nile Valley. Chart 1 presents the population density for cultivable land in each Egyptian province between the years 1895 and 1910. The Fayyum and the Delta stand out as the two least densely populated regions. The most densely populated areas were those in the Nile Valley where there was only a narrow strip of land for cultivation. Even if the population and densities in the nineteenth century were higher than what is plausible for Ptolemaic and Roman Egypt, the overall regional pattern probably cannot be simply a modern phenomenon. The reason the Delta and the Fayyum had such low population density is because they had the highest proportions of marginal land. Chart 2 gives the percentage of land in each province in 1895-1910 that was theoretically cultivable but could not be cultivated in a given year because of variations in the soil, flood, and irrigation conditions.<sup>13</sup> The Delta and the Fayyum probably struggled much more than the Nile Valley against desertification and salinization of the soil.<sup>14</sup> They also had to solve more complex irrigation problems than the Nile Valley.

---

<sup>11</sup> M.A. Ghalwash, "Land Acquisition by the Peasants of Mid-Nineteenth Century Egypt: The Ramya System," *Studia Islamica* 88 (1998), 121-39.

<sup>12</sup> K.M. Cuno, *The Pasha's Peasants: Land, Society, and Economy in Lower Egypt, 1740-1858*, Cambridge (1992), 19-25.

<sup>13</sup> Data for both charts are from *Annuaire statistique de l'Égypte de 1911*, Cairo (1911).

<sup>14</sup> A.C. Millington, "Physiography, Geology, and Soils," in G.M. Craig (ed.), *The Agriculture of Egypt*, Oxford (1993), 1-15, esp. 9, 12-13; D. Bonneau, "La terre saline (*halmuris*) en Égypte d'après les documents papyrologiques grecs," in *Proceedings of the XIXth International Congress of Papyrology*, Cairo (1992), II 61-75.

Figure 1:  
Population Density, 1895-1910

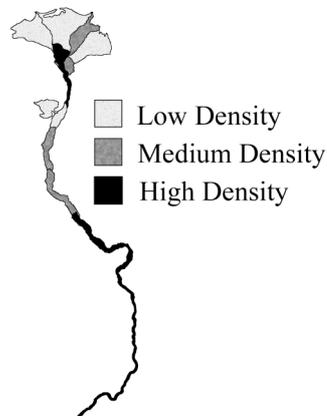
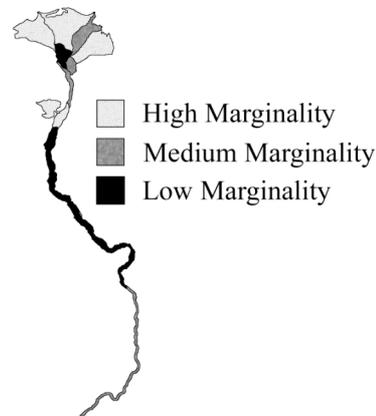


Figure 2:  
Marginal Land, 1895-1910



These proxy data match the estimates for the population density in particular villages or nomes in Ptolemaic and Roman Egypt. For the Fayyum region, the recently studied census lists provide evidence for the early third century BC. They suggest the surprisingly low figure of about 60-80 people per km<sup>2</sup> for the entire Arsinoite nome.<sup>15</sup> The low population density must partially reflect that the Fayyum was still in the process of reclamation and settlement during the third century BC. However, the estimate of about 90 people per km<sup>2</sup> for late Ptolemaic Kerkeosiris, a village in the southern Fayyum, is not much higher. For the Nile Valley, Clarysse's estimate of the population of the Edfu nome suggests a population density of 444 people per km<sup>2</sup>.<sup>16</sup> Judging by the vast regional disparities in the nineteenth century data, according to which the area around Edfu was one of the most densely populated, this pattern seems plausible. Butzer reaches the same conclusion about the high density of the southern Nile Valley in the New Kingdom using a different but less reliable method.<sup>17</sup>

If we turn to the Roman period, we have other evidence from the Delta and the Fayyum. The most reasonable guess for the overall population density in this period is about 200-300 people per km<sup>2</sup>.<sup>18</sup> By contrast, the Fayyum villages of Theadelphia and Karanis before the Antonine plague in the second century AD had a population density of about 124 and 106 people per km<sup>2</sup> respectively. Philadelphia's population density in the first century AD has been estimated at less than 120 people per km<sup>2</sup>. Rathbone finds support for a roughly equivalent population density in the Mendesian nome of the northwest Delta.<sup>19</sup> Extrapolating from these to the whole of Egypt yields a rural population of three million, rising to perhaps 3.5 million with the urban population, if one assumes 25,000 km<sup>2</sup> of arable land, which was

<sup>15</sup> D.W. Rathbone, "Villages, Land and Population in Graeco-Roman Egypt," *Proceedings of the Cambridge Philological Society* new series 36 (1990), 103-42, esp. 132; W. Clarysse and D.J. Thompson, *Counting the People in Hellenistic Egypt*, Cambridge (2006), II 101.

<sup>16</sup> W. Clarysse, "The Archive of the *Praktor* Milon," in W. Clarysse and K. Vandorpe (eds.), *Edfu, an Egyptian Provincial Capital in the Ptolemaic Period*, Brussels (2003), 17-27, esp. 21 n. 14; Clarysse and Thompson, *Counting the People* (n. 15), II 95 n. 20; for the nome's area, T. Christensen, *The Edfu Nome Surveyed. P. Haun inv. 407 (119-118 B.C.)*, Ph.D. Thesis, Cambridge (2002), 111-7.

<sup>17</sup> K. Butzer, *Early Hydraulic Civilization in Egypt: A Study in Cultural Ecology*, Chicago (1976), 74, 76-80.

<sup>18</sup> W. Scheidel, *Death on the Nile: Disease and the Demography of Roman Egypt*, Leiden (2001), 115, 178 n. 137, 223, 246; cf. Monson, "Royal Land" (n. 1) for comparison with the probable density in the early nineteenth century.

<sup>19</sup> Rathbone, "Villages" (n. 15), 132-7.

the theoretical maximum in the late nineteenth century.<sup>20</sup> It would imply, unrealistically, that the population of Roman Egypt was less than the four million in the early nineteenth century, when Egypt had been ravaged by war and disease, despite having an even greater amount of arable land. Hence one must conclude that the Fayyum and the Delta were underpopulated relative to the Nile Valley in the Roman period, which is entirely consistent with proxy data from the nineteenth and twentieth centuries.

### The Proportion of Public and Private Land

The prevalence of land designated as royal or public, that is, state-owned land, in the Fayyum stands in contrast to its more limited appearance in the Nile Valley. During the Ptolemaic period this difference is not much more than an impression, even if it is an overwhelming one, because there is only one village, Kerkeosiris in the Fayyum, for which there is quantifiable evidence. In about 118 BC, about 52% of the village territory was classified as royal land and was either leased out to royal farmers or left uncultivated. 34% was cleruchic land, 6% temple land, and the remainder either common pasture or land unsuitable for cultivation.<sup>21</sup> That this pattern cannot have been typical, at least not for the Nile Valley, is shown by the recently discovered land survey of the Edfu nome in southern Egypt, also from 118 BC.<sup>22</sup> Unfortunately, this text preserves a record for only 22,000 arouras out of an estimated 57,000 arouras in the nome.<sup>23</sup> Of the former, 21,023 arouras or 96% were classified as private land (ιδιόκτητος γῆ) and assessed a variable harvest tax averaging 6.34 artabas per aroura. The survey excludes private land that was uncultivated in that year. The only other land reported was cleruchic land and land in release (mainly belonging to temples) that was charged at similar variable rates. This suggests that the survey relates only to land subject to the harvest tax regime, as we know was the case for some cleruchic and temple land.<sup>24</sup> Unless royal land and other temple land were included under the designation of private land, which is conceivable given the tendency for *de facto* private rights in Upper Egypt, then they must have been treated separately.<sup>25</sup> Estimating 57,000 arouras for the whole Edfu nome, then 37% would have cultivated private land according to the survey, to which one must add an unknown amount of uncultivated private land. Judging from the uncultivated cleruchic land that was reported, it may have been extensive.<sup>26</sup> Nevertheless, even on a conservative estimation, the proportion of private land had to have been much larger in the Apollonopolite nome than in the Fayyum village of Kerkeosiris.

In the Roman period there is enough quantifiable evidence to draw firmer conclusions about regional differences in the proportion of public to private land. While land categories in Roman Egypt retained a variety of designations, the Roman fiscal administration introduced a

---

<sup>20</sup> *Annuaire statistique* (n. 13); Scheidel, *Death on the Nile* (n. 18), 220-3; cf. Monson, "Royal Land" (n. 1) for the difference between cultivable and cultivated land.

<sup>21</sup> P.Tebt. I 60, 4-47; D.J. Crawford, *Kerkeosiris: An Egyptian Village in the Ptolemaic Period*, Cambridge (1971).

<sup>22</sup> T. Christensen, *The Edfu Nome Surveyed: P. Haun. Inv. 407 (119-118 BC)*, Ph.D. Dissertation, Cambridge University, Cambridge (2002).

<sup>23</sup> Christensen, *Edfu Nome* (n. 22), 111-7.

<sup>24</sup> For cleruchic land subject to the harvest tax, P.Lips. II 124, R. Duttonhöfer, *Griechische Urkunden der Papyrussammlung zu Leipzig*, Leipzig (2002), 1-43; for temple land, K. Vandorpe, "The Ptolemaic Epigraphic or Harvest Tax (*shemu*)," *Archiv für Papyrusforschung* 46 (2000), 169-232, esp. 199.

<sup>25</sup> The 9,182 arouras endowed to the Horus temple according to the Edfu Donation Text are absent; Christensen, *Edfu Nome* (n. 22), 117.

<sup>26</sup> Christensen, *Edfu Nome* (n. 22), 159-61. Only 17.4% of the cultivable cleruchic land was cultivated in the year of the survey, which is extremely low. A 35% cultivation rate would make the entire area not treated in the survey private land. A 44% rate would leave room only for the 9,182 arouras of the temple of Edfu. Presumably, the rate was higher than this assuming that there was also royal land and other temple land and that these were not subsumed under the heading of private land in the survey.

simple dichotomy between public and private land that encompassed the main categories. For the present purpose, the distinction is useful because it reflects differences in land tenure that Ptolemaic terminology often obscures and it corresponds roughly to the ideal types of communal and private land rights introduced above. Public land was essentially the same as the Ptolemaic category of royal land, a term that continued to be used for it. It also comprised temple land that was removed from the administration of temples in the reign of Augustus.<sup>27</sup> This was probably only temple land that had always been leased out by temples rather than temple land that had been in *de facto* private ownership.<sup>28</sup> Imperial estates (οὐσιακὴ γῆ) acquired a similar status to public land at least by the second century AD and public farmers cultivated them communally together with public land.

Private land in Roman Egypt is often designated by the Ptolemaic term for privileged allotments of cleruchic land to soldiers even though they were no longer tied to military or official service.<sup>29</sup> In regions like the Fayyum where such allotments had been common, these probably constituted the core of the new private land. Purchasing public land from the Roman state could also make it private. However, private land was so common in the Nile Valley in the Roman period that it cannot be explained simply as the continuity of Ptolemaic cleruchic land or the results of land purchases. Already by 47 AD, 79% of the land in Krokodilon Polis in the Thinite nome was apparently privately owned, which was not untypical of other nomes in the Nile Valley as Figure 3 below shows. It is unlikely either that there was so much Ptolemaic cleruchic land in the southern Nile Valley or that there was a massive auction of royal land in the early Roman period, so one must assume that Ptolemaic private land, as illustrated in the Edfu land survey, was the origin of most private land in Roman Egypt. It probably became synonymous with the privileged category of cleruchic land because the latter's fiscal regime of flat one-artaba taxes replaced the harvest tax regime that prevailed on private land in the Ptolemaic period.<sup>30</sup> Moreover, historians have exaggerated the confiscation of temple land by the Romans because they have not recognized that much of it had long been in *de facto* private ownership in the Nile Valley and presumably became reclassified as private or cleruchic land under Roman rule.<sup>31</sup>

Figure 3 presents the proportion of public and private land from each village, district, or nome for which data are available from the first to fourth centuries AD. The distinction in the Roman period between public and private land brought some order to these messy sub-categories but eliminated them only gradually and incompletely. By the fourth century AD, there was effectively only public and private land and by then private ownership had superseded the communal aspects of public land, so the two differed simply in the rate of taxation.<sup>32</sup> Previous studies have sought to identify a trend towards increasing privatization but the data currently available fit much better into a pattern of regional variation that is consistent with the hypothesis proposed in this paper.<sup>33</sup> Despite the complex sub-categories found in the texts on which Figure 3 is based, one can identify the proportion of public or

---

<sup>27</sup> A. Monson, "Sacred Land in Ptolemaic and Roman Tebtunis," in S.L. Lippert and M. Schentuleit (eds.), *Tebtynis und Soknopaiu Nesos: Leben im römerzeitlichen Fajum*. Wiesbaden (2005), 79-91.

<sup>28</sup> P.Berl.Leih. 5 (Theadelphia, 158/9), for example, shows that some temple land was classified as public land and some as private land and thus charged rent (ἐκφορὰ) and the flat-rate land tax respectively.

<sup>29</sup> E.g. P.Giss. 60 and W.Chr. 341 (Naboo, 118 AD); P.Berl.Leih. 5 (Theadelphia, 158/9 AD) uses "cleruchs" simply to refer to all private landowners in opposition to public farmers.

<sup>30</sup> A. Monson, "Rule and Revenue in Egypt and Rome: Political Stability and Fiscal Institutions," in A. Frings and J. Marx (eds.), Special Issue: Explanatory Political History, *Historical Social Research (Historische Sozialforschung)* 32/4 (forthcoming 2007).

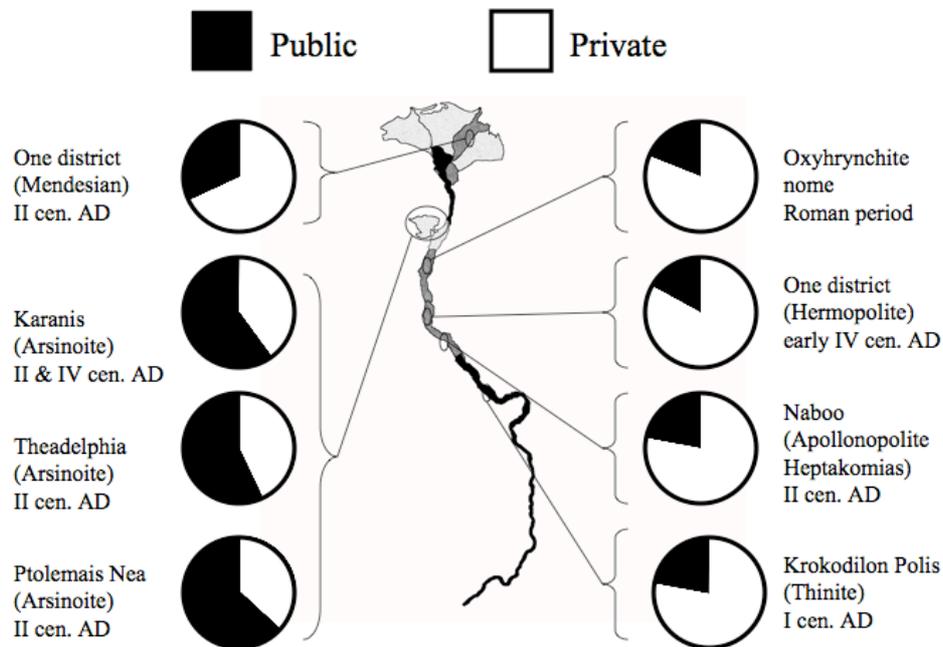
<sup>31</sup> Monson, "Sacred Land" (n. 27).

<sup>32</sup> A.K. Bowman, "Landholding in the Hermopolite Nome in the Fourth Century A.D.," *Journal of Roman Studies* 75 (1985), 137-63.

<sup>33</sup> J. Rowlandson, *Landowners and Tenants in Roman Egypt*, Oxford (1996), 63-9.

private land to use as a meaningful quantitative indicator of the level of privatization in Roman Egypt.<sup>34</sup>

Figure 3:  
Proportion of Public and Private Land in Roman Egypt<sup>35</sup>



There must have been differences from village to village within each region. That is what makes it astonishing to find results that are so consistent. It is unfortunate that there is only one area from the Delta where it is possible to estimate the proportion of public and private land. Public land was more common there than in the Nile Valley but it is impossible to draw any conclusions without other samples. The contrast between the Fayyum and the Nile Valley, for which there is the most evidence, is particularly strong. These results demonstrate a correlation between population density and the proportion of public land.

### Qualitative Differences in Land Tenure

The proportion of land classified as public or private in the Roman period is still an insufficient measure of privatization because land rights varied by region even within the same category. In this section, I turn to qualitative differences in tenure on public land in Roman Egypt. Based on the model, I hypothesize that public land would have been more communal in the Fayyum and more private in the Nile Valley. Public land may not have enjoyed the same legal status as private land, at least not until the early fourth century AD, but it is often argued that *de facto* private rights to public land became progressively more secure during the Roman period.<sup>36</sup> As with demographic developments, it is difficult to trace this

<sup>34</sup> There is not space in this article to discuss the terminology and context of these sources, so I report here only the text references: Krokodilon Polis in the Thinite nome (P.Lond. III 604A, 47 AD), Naboo in the Apollonopolite Heptakomias nome (P.Giss. 60, 118 AD); Theadelphia in the Arsinoite nome (P.Berl.Leih. 5, 158/9 AD); Ptolemais Nea and Hiera Nesos in the Arsinoite nome (P.Bour. 42, 167 AD); the Oxyhrynchite nome (SB XVI 12208, Roman period); Phernouphite toparchy in the Mendesian nome (P.Oxy. 3205, c. 297-308 AD); Karanis in the Arsinoite nome (P.Cair.Isid. 11, 308/9 AD); one district in the Hermopolite nome (P.Ryl. IV 655, early 4<sup>th</sup> cen. AD).

<sup>35</sup> The map represents the population density in 1895-1910 from Figure 1 above.

<sup>36</sup> Rowlandson, *Landowners* (n. 33), 97-101.

evolution over time. Once again I reformulate the hypothesis in terms of regional variation in order to make it more falsifiable with the data that are available. The evidence suggests that public land was more communal in the Fayyum and that *de facto* ownership of public land was more advanced in the Nile Valley.

In my previous article, I emphasized that communal rights were strongly present in the early Ptolemaic Fayyum based on a newly discovered land survey from about 240 BC.<sup>37</sup> Its entries for each tenancy indicate that the royal farmers redistributed land annually either privately among each other and corporately through the village. We find similar references to this type of land redistribution in other Fayyum land surveys from the third century BC and from Kerkeosiris in the late second century BC. These sources may help to explain the communal rights that are attested on public land in the Roman Fayyum.

In the Roman period, just like in the Ptolemaic period, cultivators of public land formed village associations led by village elders.<sup>38</sup> Most public land was divided by the village elders among the public farmers, as individuals, as partnerships, or as associations (πιπτάκια) of several families.<sup>39</sup> The village elders found tenants or redistributed land that was no longer being cultivated and they mediated disputes between public farmers. Written leases for public land between tenants and state officials for a specific duration were exceptional. Our examples are mostly limited to cases where the land was only sporadically flooded or was unfit for grain crops. While public farmers were considered tenants and paid rent, they were members of a community with traditional land rights. Their communal tenure of public land differed markedly from private tenancy, which was based on short-term contracts, usually about one to five years.

These public farmers in the Fayyum also seem to have performed periodic redistributions of public land. Much of the older literature insisted that they were subject to centralized state control and that redistributions were a manner of forced lease. The references to this practice are found, for example, in the duration clause of some sub-lease contracts for public land, which date between the late first century AD and the late 2<sup>nd</sup> century AD. All of them are from the Fayyum, including Theadelphia, Karanis, Tebtunis, and Soknopaiou Nesos. Typical clauses are that the lease or division of land is to last “from year x, for as long as the area of the village remains undivided,” which is the formula found in the Theadelphia. In Karanis and Soknopaiou Nesos, the equivalent phrase is: “from year x, for as long as he retains the cultivation rights (γεωργία).” In Tebtunis, there is just one example, which has generated the most debate: “from year x, until the farmers’ communal leasing out (κοινή διαμίσθωσις) takes place.”

The interpretation of these texts is controversial. Rostovtzeff points to the use of the same term, διαμίσθωσις, for leasing out rights to imperial estates in Roman Egypt. There the central state auctioned the rights and sought to maximize its revenue. Rostovtzeff concludes that Egyptian peasants’ land rights were always precarious because they depended on the demands of state officials.<sup>40</sup> However, it is highly doubtful that the leasing of rights to imperial estates to elite bidders was in any way equivalent to the local procedure of land redistribution. Hagedorn accepts the traditional interpretation that these texts refer to

---

<sup>37</sup> Monson, “Royal Land” (n. 1); A. Monson, “An Early Ptolemaic Land Survey in Demotic,” Version 2.0 January, *Princeton/Stanford Working Papers in Classics* (2007), <http://www.princeton.edu/~pswpc>.

<sup>38</sup> For the equivalence of the terms public and royal, A. Tomsin, “βασιλική et δημοσία γῆ dans l’Égypte romaine,” *Mélanges de linguistique, de philologie, et de méthodologie de l’enseignement des langues anciennes offert à M. René Fohalle*, Gembloux (1969), 271-280.

<sup>39</sup> J. Rowlandson, “The Organization of Public Land in Roman Egypt,” in J.C.M. García (ed.), *L’agriculture institutionnelle en Égypte ancienne: État de la question et perspectives interdisciplinaires*, Villeneuve d’Ascq (2007), 173-96.

<sup>40</sup> M. Rostowzew, *Studien zur Geschichte des römischen Kolonates*, Leipzig (1910); cf. Rowlandson, *Landowners* (n. 33), 80-1.

intervention by the state to reorganize local land tenure. However, he emphasizes how costly and unnecessary it would have been to do so on a regular basis.<sup>41</sup>

The most convincing interpretation of these institutions is that of Rowlandson, who likens them to the communal land rights evident in other peasant societies.<sup>42</sup> She suggests that redistribution was carried out primarily by the villagers themselves in response to the variation of the flood. The flood sometimes gives capable farmers not enough land and gives other farmers more land than they can cultivate. As I stressed earlier, redistribution carried out by village elders is a solution that was adopted in Egypt during the eighteenth and nineteenth centuries. Rowlandson's interpretation also fits better with my interpretation of the Ptolemaic evidence for royal land tenure in the Fayyum. It is certainly more plausible than Rostovtzeff's model of despotic state intervention.

Two texts describe the redistribution of land with the verb κληρώμαι, which is thought to suggest some kind of lottery. This clause comes at the end of a contract in which Demas sub-leases to Horos his cultivation rights to one aroura of public land for one year. "If the area of the village happens to be divided, Horos will choose his one aroura from whatever Demas receives by lot (κληρώται) in Theadelphia or Polydeukeia since the choice is his."<sup>43</sup> In this case, the point is that Demas has the right to get new land in the next allocation if it happens to be necessary to redistribute the land. The fact that he was able to profit from sub-leasing the land undermines the idea that he was forced to cultivate it against his will. The same verb is used in a letter to the governor of the Arsinoite nome from two public farmers of the village of Euhemeria who complained that someone had violated their cultivation rights to some public land, which they claim: "we received by lot for cultivation."<sup>44</sup> Wilcken interpreted the use of the passive voice as evidence that it was an involuntary lease. Hagedorn and Kruse interpret it as the middle voice to argue that it does not imply any coercion.<sup>45</sup> However, it requires imagination to get the idea of forced lease out of either form, whether it means "we were given by lot" or "we received by lot." That the public farmers were upset because someone had usurped their rights suggests that this allotment was voluntary rather than compulsory.

I have so far discussed only public land in the Fayyum. I will now compare public land in the Nile Valley. Rowlandson's recent article reviews the evidence for the organization of public land and arrives at a conclusion that is consistent with my hypothesis. In the Nile Valley private landowners play a larger role in the cultivation of public land while the communal organization observable in the Fayyum is almost completely absent. She highlights several major differences in public land tenure in these regions. First, public farmers in the Fayyum generally did not own private estates but often supplemented their incomes by leasing land on others' estates. By contrast, in the Nile Valley owners of private estates voluntarily undertook the cultivation of large areas of public land. Second, the cultivators of public land in the Fayyum belonged to village associations and called themselves public farmers. In the Nile Valley the title of public farmer almost never appears as a status designation. Third, women never belonged to associations of public farmers in the Fayyum and thus rarely appear as tenants of public land except when tiny parcels are compulsorily assigned to their private estates. By contrast, it is clear that women in the Nile Valley frequently inherited larger areas of public land together with private estates. Rowlandson's comparison is primarily between the Fayyum and Oxyrhynchite nome, which she has studied

---

<sup>41</sup> D. Hagedorn, "Flurbereinigung in Theadelphia?," *Zeitschrift für Papyrologie und Epigraphik* 65 (1986), 93-100.

<sup>42</sup> Rowlandson, "Organization" (n. 39); Rowlandson, *Landowners* (n. 33), 82.

<sup>43</sup> P.Flor. 20 = Chr.W. 359; A.C. Johnson, *Roman Egypt to the Reign of Diocletian*, Baltimore (1936), text 36.

<sup>44</sup> P.Iand. III 27.

<sup>45</sup> U. Wilcken, "Papyrus-Urkunden," *Archiv für Papyrusforschung* 6 (1920), 268-301, esp. 296; Hagedorn, "Flurbereinigung" (n. 41), 99 n. 10; T. Kruse, *Der königliche Schreiber und die Gauverwaltung*, Leipzig (2002), 600-1.

carefully. She argues that forced lease cannot explain why private landowners and women held so much public land. Certainly public land with its higher taxes and less secure property rights was not always desirable but private landowners in the Oxyrhynchite nome sometimes actively colluded with state officials to remove peasant farmers and to have public land transferred into their own names.<sup>46</sup>

There is one important text that has so far been overlooked in virtually all discussions of the tenure and distribution of public and private land. It is a land survey written in Greek in 47 AD that comes from the village of Krokodilon Polis in the Thinite nome of southern Egypt.<sup>47</sup> It lists the landholdings of about 168 people, which amount to over 5,000 arouras, and thus provides a representative sample of the whole village. Only 22% was public and continued to be called royal land in this text. The remainder fell under the general heading of private and sacred land but was identified in each entry only by its tax rate: 56% at one artaba per aroura, 21% at  $\frac{3}{4}$  artaba, and 1% at other rates, all of which rates are typical of the fiscal regime on private rather than public land.<sup>48</sup> The text is relevant because it provides another confirmation of the differences in land tenure between the Fayyum and the Nile Valley. The most striking feature is that owners of private land cultivated 81% of the royal land in this village. Moreover, richer landowners tended to have more royal land than poorer landowners. The largest 10% of landowners held 21% of the royal land in the village. Women held 13% of the royal land, which is roughly proportional to the share of private land that women typically came to own in Egyptian villages.<sup>49</sup> The size of the parcels of public land that were integrated into private estates is too large for them to be compulsory additions of public land to private estates, which were generally much smaller. It suggests that many landowners voluntarily infringed on public land in the expansion of their private estates. The phenomenon is typical of agrarian societies in which land has become relatively scarce.

## Conclusion

My hypothesis was that there should be a correlation between the population density and the level of privatization. Both ancient and modern data point to the conclusion that the Fayyum and the Delta were the least densely populated regions in Egypt. The papyrological evidence shows that there was a higher proportion of public land in the Fayyum than in the Nile Valley. Moreover, public land was qualitatively *more communal* in the Fayyum than public land in the Nile Valley. A correlation does not automatically indicate causation and comparative studies of other well-documented periods suggest that privatization is driven by more complex factors than population growth alone. The paper aims to sketch a coherent framework that deserves to be nuanced and exposed in more detail. It is presented in the spirit of pushing the discussion about the peculiarity of the Fayyum from the level of description to the level of explanation. I welcome the prospect that unpublished texts may conceivably falsify the correlations postulated in this paper and lend support to an alternative model. Any explanation that cannot be falsified, either because it is so theoretical that no conceivable data are relevant or because it is too contextually specific to be tested on independent cases, ought to be treated as suspect. What we need are competing models informed by diverse theoretical and comparative perspectives to invigorate research and to bring the papyrological evidence to bear on broader intellectual debates.

---

<sup>46</sup> Rowlandson, "Organization" (n. 39).

<sup>47</sup> P.Lond. III 604a; S.L. Wallace, *Taxation in Roman Egypt*, Princeton (1938), 16-7.

<sup>48</sup> Monson, "Rule and Revenue" (n. 30).

<sup>49</sup> L.E. Tacoma, *Fragile Hierarchies: The Urban Elites of Third-Century Roman Egypt*, Leiden (2006), 107-11.