
http://eprints.gla.ac.uk/24865/

Deposited on: 08 March 2010
Landholding and landscape in Ottoman Cyprus

Michael Given
Department of Archaeology, University of Glasgow

Marios Hadjianastasis
Centre for Byzantine, Ottoman and Modern Greek Studies, University of Birmingham

In Ottoman Cyprus (1571–1878), social organization was based above all on the ownership and exploitation of agricultural land. The social relations, economic processes and daily practices of landowning elites and peasant farmers alike were structured by their relationship with the land. In this article, historical and archaeological data are integrated in order to investigate the development of social organization by focusing on landholding and landscape. In particular, it examines the role, identity and material culture of the new Cypriot/Ottoman elite, the commercialization of agriculture as expressed in the economy and the landscape, and the daily routine experiences of communities in the landscape.

Introduction

In a predominantly agricultural society such as Ottoman Cyprus, the land was a key structuring factor. Source of the elite’s wealth and the peasant’s subsistence, it was central not just to people’s livelihood but to their daily life and experience. For a historian, investigating systems of land ownership is crucial for understanding the development of social, economic and political relations. An archaeologist examines the traces of human activity across a specific landscape, and tries to reconstruct local experience and social organization. Our aim in this article is to offer a dialogue between these two perspectives, and examine the development of social organization in Ottoman Cyprus by focusing on its landholding and landscape.

The historiography of Ottoman Cyprus is generally told as a story of conflict between the two main ‘communities’ of the island, Greek and Turkish. This projects the current political conflict onto a very different world, and exaggerates the vertical divisions between ethno-religious groups, at the expense of the all-important horizontal divisions.
between economic and political classes.¹ The medieval period often suffers from the same problem, with historians reducing the complexities and blurred boundaries of group relations to a series of stereotypes. This creates a history of simple two-sided conflict, rather than one which can address the ambiguities and complexities of actual practice.²

Central to our argument is the introduction and development of the timar system. Cyprus was relatively unusual in that Ottoman officials who were given land under this system tended to stay in place, rather than being rotated elsewhere. What impact did this have on the organization of the landscape, and on the lifestyle and material culture of these elites? Can we detect such a thing as an Ottoman Cypriot elite identity? Another important factor was the increasing commercialization of agriculture during the eighteenth and nineteenth centuries, stimulated by the need of the European textile industries for silk and cotton. The effects of this stimulus on the landscape are clear in both the archaeological material and historical documentation.

Much of this analysis by necessity examines the role of elite landowners and traders. What about the people who worked the land, whether peasant smallholders or estate wage labourers? How can an examination of archaeological landscapes and detailed documents such as property registers throw light on the social organization of people and communities? We aim to apply some anthropological and archaeological theories of community and landscape, in an attempt to integrate these two very different types of data.

In this article we present an analysis of Ottoman society that aims to be broader than a particular artefact class or historical data set. We hope that this will allow the reader to make more useful comparisons with other parts of the Ottoman world, while suggesting a method and a theoretical framework for integrating archaeological and historical data sets that will be relevant for other similar landscape studies in the Mediterranean.

Methods, theories and sources

Ottoman archaeology in Cyprus is very much in its infancy. Two other survey projects have done substantial research on Ottoman landscapes and pottery: the Sydney Cyprus Survey Project (SCSP);³ and the French programme ‘Potamia-Agios Sozomenos: la constitution des paysages dans l’Orient médiévale’.⁴ There are a few more references to chance finds and brief descriptions by extensive survey projects.⁵

⁴ V. François and L. Vallauri, ‘Production et consommation de céramiques à Potamia (Chypre) de l’époque franque à l’époque ottomane,’ Bulletin de Correspondance Hellénique 125 (2001) 523–46; N. Lécuyer,
As so often, a major challenge is dating the pottery. So far only small amounts have been published, from Kouklia, the Canadian Palaipaphos Survey Project, and SCSP, as well as two studies of coarse wares. Other individual studies include clay tobacco pipes, coins, glass, tombstones, water mills, roads and paths, and landscape and settlement.

Most of the examples in this article come from the Troodos Archaeological and Environmental Survey Project (TAESP), working in the Northern Troodos mountains of...

Continued


central Cyprus (Fig. 1). This survey integrates intensive fieldwalking, geomorphological mapping and other interdisciplinary approaches, in order to investigate the human-landscape dynamic at all periods.

The archaeological data come from fieldwalking and geomorphological mapping, supplemented by the recording of structures such as water mills and other archaeological features. Our fieldwork and analytical methods are explained in preliminary reports, and will be discussed in full in our final publication, currently in preparation. Fieldwalkers 5 m apart counted artefacts and collected a representative sample in ‘survey units’ which are reasonably homogeneous in terms of geomorphology and modern land use, typically 25 m wide and c. 50 m long (e.g., Fig. 6).

A key issue in interpreting the pottery distribution is clearly the extent to which it has been affected by geomorphological and anthropogenic processes. Our geomorphological mapping shows that almost the entire Karkotis Valley has a stable surface owing to the intense terracing across the valley floor. The only exceptions are some alluvial

deposition in the lowest terraces closest to the river, probably as a result of Little Ice Age flooding in the seventeenth century, and some unstable surfaces on the valley sides caused by gully erosion. As far as interpreting the Ottoman pottery distribution is concerned, almost all of it originates in the survey unit in which it was found, so at that level of resolution the distribution patterns are reasonably robust. The Atsas Valley, in the north-east part of Fig. 6, has a more significant problem with erosion in the gullies, but even so over 80% of the survey units have surfaces which are preserved reasonably intact from the Ottoman period and before.

The main historical document we use is the ‘Material possessions and percentages of the Muslims and non-Muslims of Cyprus, divided by kaza, according to the Revenue Registers’. This is a collection of fiscal documents in the Prime Ministers’ Archive in Istanbul, and dates to 1833.

The 1831 census, published in 2000 by the Turkish Directorate of State Archives, was carried out as part of a general census in the Ottoman Empire. The results are based on the inclusion in the census of all males (but not women), so it is not in any way conclusive in terms of total numbers. It follows a long tradition of Ottoman survey-making, where only male, tax-paying citizens were included. However, the 1831 register, unlike registers of previous centuries, included all males, regardless of age. Particularly helpful for our purposes is that it also records their material possessions.

The publication of the census is heavily politicized, thus drawing attention to Muslim/non-Muslim divisions. It is unknown, or at least debatable, whether this was the intention of the survey itself: taking into consideration the Greek War of Independence, there may have been an increasing awareness of deeper rifts. The register divides property into ‘Muslim’ and ‘non-Muslim’. The main reason for the distinction between Muslims and non-Muslims was the simple, practical issue of taxation and the increased tax burden upon non-Muslims.

As we have argued, however, the horizontal divisions that divided peasant cultivators from estate owners and urban notables were far more significant than the vertical divisions between Greek and Turkish Cypriots in any one community. For this reason we examine the figures for each village community as a whole. Our area calculations are based on the equivalence of 1 dönüm with 919.3 m², the figure which was standardized in the second half of the nineteenth century. The dönüm was widely used in Cyprus throughout the Ottoman period.

One of our aims in this article is to explore the notion of community using this archaeological and historical data. Our definition of community follows Yaeger and

21 Sarınay, op. cit. XXII–XXVII.
Canuto’s interactionalist perspective: a community continues to reproduce itself by means of a series of activities and relationships that connect people of different households, in association with a particular set of places.23 These activities are the everyday, routine practices by which people maintain, reproduce and transform the structure of their society.24 As archaeologists, we can investigate them through the debris and artefacts that they leave, though it is important to recognise the impact of post-depositional processes and differing methodological techniques.25 As historians, we can discern such activities behind the economic statistics of production registers and censuses.

Places play a particularly important role. The community is not just the abstract equivalent of the settlement, the ‘ghost in the machine’. It operates according to a network of shared activities and meaningful places across the landscape. This landscape becomes the arena for all the activities that people carry out in the course of their daily round: dwelling, cultivating, herding, eating, and travelling.26 It links people in fluid networks with material culture, other places, earth and water, plant and animal.27 The landscape becomes a world view from a specific perspective, rather than a mere economic catchment or administrative territory. These networks of places and meanings are the ‘community territories’ that we discuss in this article.

Historical background

Cyprus was under western/Latin influence since the Third Crusade. After the island was captured by Richard Coeur de Lion in 1191, it eventually passed into the control of the Lusignan King of Jerusalem. In 1489 it was annexed by the Venetian Republic and was eventually conquered by the Ottomans in 1571. As a result of the conquest,
Catholicism was banned on the island until the Ottoman–Venetian treaty of 1573. During this period, the Catholic elite was forced to readjust in order to survive. This created interesting elements of continuity from the Venetian to the Ottoman era. The Ottomans introduced their own system of administration to the island. This included the sharia (Islamic law), a significant number of Ottoman troops, and the division of the land into timars, which were fiefs awarded to sipahi cavalry in return for their participation in campaigns and equipment of retainers, depending on the size of the fief.

The Ottoman period of Cyprus coincided with the decline of the timar system and the end of an era of significant Ottoman territorial expansion. Cyprus served the Ottomans as a place of exile, whereas its revenue productivity is still debatable. The dry climate and the difficult conditions for agriculture, along with the absence of significant mineral resources (apart from copper which was not mined in the Ottoman period), meant that Cyprus was a province of low importance for the Ottomans. Its distance from the theatres of war also meant that the Ottoman garrisons in Cyprus were less likely to be included in campaigns, while it rarely served as a provider of supplies. The avariz, or extraordinary levy exacted for campaigns, was collected in cash.\(^{28}\)

Cyprus remained an Ottoman province until 1878, when under the terms of the Treaty of Berlin it was ‘rented’ to Britain. In 1914 it was officially annexed and in 1925 proclaimed a Crown colony.

The emergence of a Cypriot–Ottoman elite

The Ottoman era of Cypriot history dawned and developed through the evolution of various socioeconomic and political dynamics. The various factors which dominated the social, economic and political life on the island conflicted, cooperated and combined, going through a process of amalgamation and readjustment to produce what was to be the new Ottoman Cypriot elite of the eighteenth and nineteenth centuries.

With the Ottoman conquest of 1571, new realities emerged on the island. The introduction of a significant number of Ottoman troops (generally believed to be in the region of 3000 Janissaries and timar-holding sipahis\(^ {29} \)) brought a new element to Cypriot society. The new military elite came to represent the new era, thus challenging the earlier superiority of the Venetian elite. Along with the military came administrators, judges and imams, all of whom were to be part of this new element of Cypriot society. However, this does not automatically mean that the older elites became obsolete. Evidence suggests that a significant number of the Venetian military and the clergy remained on the island.

28 Nicosia No. 5 Sicil Defteri 1086–89/1676–79: 76, 89.
and became involved in the new administration.\textsuperscript{30} In particular, there were cases of Venetian administrators who became \textit{timar} holders under the new system, while the cases of Orthodox higher clergymen who were ‘Venice-oriented’ and pro-Catholic are well documented.\textsuperscript{31}

These developments undoubtedly rendered the pre-existing feudal system obsolete. However, it is worth pointing out that some feudal structures possibly persevered well into the Ottoman period as a result of a degree of continuity in the landholding elite. In addition, despite the fact that the \textit{timar} system is now believed to be much closer to a feudal structure than previously thought, the new system undoubtedly released the peasantry from complete dependence and forced labour obligations which had existed previously.

In the Ottoman period the land was distributed among the \textit{sipahi} cavalry in exchange for their participation in campaigns and the supply of a certain number of equipped retainers, based on the size of the \textit{timar} itself.\textsuperscript{32} The principle of rotating \textit{timar} holders, based on the participation, excellence or death of \textit{sipabis} during campaigns, ensured that continuity in \textit{timar} holding was not the norm. However, with Cyprus being far from the theatres of seventeenth- and eighteenth-century Ottoman wars, be they in Poland, Hungary or the Middle East, Cypriot \textit{timar} holders were probably not often called upon to participate in these campaigns. This potentially led to a situation where the right to the land and the administration of the villages included in it became hereditary. Thus landholding \textit{timar} holders became settled, connected to the land, and ultimately evolved into regional landholding elites with a certain degree of continuity. The Ottoman \textit{timar} holders of Cyprus became Cypriot landowners, with all the deeply rooted connection to the land the term suggests. This process, combined with the presence on the island of a Janissary garrison equally inclined to become involved in the local economy and trade, produced a Cypriot military class which had vested interests in the administration of the island and its economic life.

By the mid–late seventeenth century this process started producing local administrators powerful enough either to take over the island’s administration or, more often, to become embroiled in local power struggles, which caused enough upheaval to call for the intervention of Ottoman troops from Anatolia. This is demonstrated by a tendency for Janissary revolts, one of which resulted in the deaths of the governor and his dragoman in 1648.\textsuperscript{33} It can be argued that Janissary revolts were far from rare or unexpected. However, the late seventeenth century came to display an unprecedented degree of military involvement in the island’s political and economic life.


\textsuperscript{33} C. P. Kyrris, ‘Symbiotic elements in the history of the two communities of Cyprus,’ \textit{Kypriakos Logos} 46–47 (1976) 265.
This development of a local Cypriot elite derived from the Ottoman *sipahis* but with some continuity from the Venetian period is clear enough from the historical documentation. What light does archaeological data throw on it? Can we see evidence for a Cypriot identity in the material culture, or the impression of local landowners deeply rooted in their landscape?

One possible arena for the expression of elite identity was the architecture of their town residences. Clearly, these cannot be assigned to particular ethnic identities on the basis of their architectural style alone. Stylistic variations tend to be regional rather than ethnic, and ‘Ottoman identity’ even under the narrowest definition could embrace a broad range of artistic styles. In particular contexts, however, such as the *konaks* or town houses of Nicosia, stylistic elements may well have been used to express belonging, personhood, or attachments to particular social groups, classes or ideologies.

The Derviş Paşa Konak in the Arabahmet quarter of Nicosia is a characteristic example of an Ottoman-period Nicosia townhouse. It is built round three sides of a rectangle with a private courtyard in the middle, an upper storey projecting over the street, and separate kitchen, hamam and toilet at the back. An inscription over the door proclaims its construction by newspaper editor Tüccarbaşı Hacı Derviş in 1807.

A clear parallel to this is the konak of the landowner and dragoman Hadjigeorgakis Kornesios in the Ayios Antonios quarter of Nicosia, completed in 1793. Again, this is built round three sides of a rectangle, with a private courtyard and separate hamam. The dragoman was Greek Cypriot, and expressions of his Orthodox faith are ubiquitous in the interior. On the outside, however, the building proclaims his identity as a member of the Ottoman elite, especially the grandiose projecting window with its broad eaves and shuttered windows over the formal entrance (Fig. 2). This exactly matches the official reception room, an Ottoman *selamlık*, and the portraits of Hadjigeorgakis, in formal Ottoman court dress and prominently displaying his firman from the Sultan.

Hadjigeorgakis is clearly exploiting a double identity, that of Orthodox Christian and that of a member of the Ottoman elite. This complex expression is further nuanced by a plaque in the most prominent position in the building, above the exterior doorway. This reused marble slab shows the Venetian winged lion of Saint Mark holding a bible with the inscription in Latin, ‘Peace to you, Mark my evangelist’. The origins of this slab are unclear, and are anyway irrelevant. What matters is that Hadjigeorgakis is exploiting the historical depth and Latin associations of Cyprus’ Venetian past to proclaim a complex elite identity which combines Orthodox, Ottoman and Latin elements.

37 Rizopoulou-Egoumenidou, *op. cit.*
Hadjigeorgakis’ wealth, and that of almost all the elites of the seventeenth to nineteenth centuries, was based primarily on land. So what evidence can we see for the development of a Cypriot–Ottoman elite identity in the landscape? The obvious place to start is with the manor houses and associated structures of the çiftliks. Unfortunately, the archaeology of çiftliks is very much in its infancy, and not just in Cyprus. There are a few descriptions of nineteenth and early twentieth-century çiftliks in the Balkans, and some have been identified in the archaeological record in Greece.

The two best-surviving and most well-known çiftliks in Cyprus are those of Kouklia and Potamia. Kouklia was originally the thirteenth-century headquarters of the royal estate of Couvoucle, and the manor house controlled the large-scale sugar plantations and

refining operation. The imposing Gothic hall in the east wing and part of the west wing survive, but the rest of the substantial structure dates to the Ottoman period. The most substantial element of the irregular 55-m square is the Gothic hall, but what really stands out visually is the tall and narrow two-storey entrance which gives monumentality to the entrance arch (Fig. 3). Above the entrance on the exterior designs made of sherds stuck into the plaster show a schematic mosque flanked by two palm trees, with a vase of flowers below.

The Ottoman manor house at Potamia, in a rich and well-watered river plain between Nicosia and Larnaca, has a similar medieval heritage. The complex is based round four courtyards, of which the largest has a monumental two-storey building range along the south which may have been the medieval royal apartments and ensuing Ottoman elite residence and reception rooms. An adjacent courtyard was apparently for agricultural operations and perhaps craft activity, but it is clear that display through height and monumentality, often appropriated from Frankish predecessors, was as important to these rural elites as the control of the pragmatic functions of agricultural production.

Figure 3 Courtyard of reconstructed manor house of Kouklia, with two-storey entrance tower

There is no evidence for çiftlik in the TAESP area, though the well-watered alluvial soils of the Karkotis Valley were clearly very suitable for large-scale agricultural production. The historical and archaeological data in the maps discussed in the next section show very clearly a concentration of production in the central section of the valley, and a striking contrast with the drier areas to the east (Fig. 4 and 5). The two clearest clusters are Linou/Phlasou and Evrykhou/Korakou. Because of continuing development of these villages, particularly from the 1920s onwards, nothing survives that might be identified as the remains of a çiftlik manor house.

Changing styles and functions of pottery can also provide useful information about the lifestyle and expressions of identity by elites and those who emulate them. One very clear change which perhaps started just before the Ottoman conquest in 1571 but only took root in the early Ottoman period was a surge in popularity of jugs with long necks and spouts on the shoulder, and sometimes a strainer at the base of the neck. Many of these were imported, though from a variety of places, including North Africa and perhaps Syria/Palestine. Others were local imitations of these, based on local jugs but with the innovative shoulder spout. Gabrieli suggests that these reflect changes in consumption habits, perhaps being used for serving diluted yoghurt and fruit juices on the Ottoman pattern. Similar Ottoman influences on consumption habits can be seen in the spread of coffee drinking and tobacco smoking from the seventeenth century.

It is clear that the elites of Ottoman Cyprus cannot be simply divided into those of ‘Ottoman identity’ versus those of ‘Greek identity’. By the eighteenth century there was clearly a shared elite culture, which selected elements of Ottoman and Cypriot lifestyle, material culture and artistic style. What is particularly interesting is that this hybrid identity was often further elaborated by the incorporation of European elements. The strong European influence had an economic basis, but its impact on landscape, lifestyle and material culture was much more wide-ranging than that.

European influence and the commercialization of agriculture

The developments in the European textile industry in the 18th century increased the demand for raw materials such as cotton and silk. European merchants, especially English, French and Dutch, flocked to ports in the eastern Mediterranean in search for these raw materials. Cyprus, a stepping stone on the routes to Tripoli/Aleppo and Alexandria,

42 Gabrieli, ‘Under the surface’.
43 Gabrieli, op. cit.
became a part of this increasing trend. The presence of European merchants in Larnaca meant that production of cash crops such as cotton and silk intensified and was directly connected to the European market. European merchants functioned as money lenders, lending money to members of the local elite, including clergymen, who then repaid their debts in kind, usually in cotton or silk.46

The state archives of Venice, and in particular the collection of the Venetian consulate in Cyprus, provide ample evidence of the interaction between European merchants and the Cypriot elite (Archivio di Stato di Venezia, Archivio del Consolato Veneto a Cipro).47 The implication is that a Cypriot elite which was both aware and oriented towards selling its cash crops to the Europeans was more likely to bring changes to the way their land was managed. The planting of cash crops clearly intensified during the eighteenth and nineteenth centuries. Did this mean that more money was invested in the development of a countryside which had hitherto produced significantly less raw material and cash crops and was mainly geared towards subsistence farming? Were more irrigation works, mills, and dams constructed, in an attempt to intensify production?

The archaeological evidence supports this picture of increased intensification under European influence at a number of levels. European imported pottery shows a marked increase in the sixteenth and seventeenth centuries, for example, as does the importation of European forms. This is clearly the case with the TAESP material, though it is still being analysed and published. At Potamia, imported fine wares make up 1% of the medieval glazed material, as opposed to 34% in the Ottoman period.48 Some of these come from the standard large-production workshops of the Ottoman Empire, such as Didymoteichon from the seventeenth century onwards, and Çanakkale from the eighteenth century. The bulk, however, is from northern Italy and eastern Provence.49

This European influence in the pottery should not be seen as slavishness to imported styles and methods. Although there were some major innovations in coarse wares, such as the long-necked jugs discussed in the previous section, many other shapes in coarse fabrics persisted for some six centuries, straddling the Frankish and Ottoman periods.50 This shows a tendency to select different elements of material culture for expressing different influences, fashions and identities.

Another way of addressing the issue of European influence on the organization of agricultural production is to look for signs of intensification in the landscape. Large landowners producing cash crops for export will make more use of large-scale processing facilities. One clear example of this is a small çiftlik at Kouklia Kapsalia in south-west Cyprus, which has a threshing floor measuring $28 \times 32$ m, as opposed to the standard family-sized threshing floor of some 10 or 15 m in diameter.51 The çiftliks at Potamia and

47 G. M. O’Riordan, Archivio del Consolato Veneto a Cipro (Venice 1993).
48 François and Vallauri, ‘Production et consommation de céramiques à Potamia’, 537, 541.
49 François and Vallauri, op. cit. 545.
50 Gabrieli, ‘Under the surface’.
51 Given, ‘Agriculture, settlement and landscape in Ottoman Cyprus’ 219.
Kouklia already discussed clearly had large-scale facilities for storage and food processing, while their height, position and monumentality were effective for the visual control of large numbers of workers.

Water mills are good evidence for agricultural intensification, and for the ability of agents such as landowners, the church or cooperative groups to put together the capital to construct them. They are a very evident feature of the Ottoman-period landscape, with 27 mills from the TAESP survey alone. Dating is a problem, though occasional examples are dated by inscriptions: a mill at Phlasou was built (or rebuilt) in 1690, and another at Kalochorio in 1757. While these clearly imply cereals production at a level far above that of subsistence, they were presumably mostly grinding for local consumption. It has recently been suggested, however, that concentrations of mills in areas with good communications, such as those in the Karkotis Valley, could actually have ground flour for supplying military campaigns or relieving acute shortages elsewhere (Charlotte Schriwer, personal communication).

In a semi-arid climate such as that of Cyprus, water mills need an abundant set of springs or a particularly powerful river, as well as an elaborate system of water channels. The River Karkotis is the most powerful river in Cyprus, being fed by a large and steep catchment on the northern side of the 1952-metre high Mount Olympus. The mills are fed by an intricate network of irrigation channels which draw water from the Karkotis and distribute it to fields and a series of mills. The origins of this system lie in the medieval period, though owing to later development this phase is not as well preserved as that of the Potamia royal estate. From at least the middle Ottoman period and even until today, this system was organized by an elaborate timetable of water distribution, dividing it among different users according to their carefully regulated and documented water rights. Detailed water-sharing arrangements between villages were a common theme throughout the Ottoman period, something which is well documented in the Ottoman archives. This was a phenomenon clearly introduced and maintained by the communities themselves and which gradually assumed the role of customary law.

The scale of agricultural production in the Karkotis Valley is very clear in the 1833 property register. In Fig. 4 we have plotted the numbers of houses and extent of arable land by village across the TAESP survey area, while Fig. 5 shows the number of houses and numbers of crop trees. The actual figures for both maps can be seen in Table 1. The ‘arable land’ circles represent the actual cultivated area on the same scale as the map. The area figures from the register seem to be a generalisation of cultivated land (i.e. ploughed and harvested, as opposed to orchards and groves), and is glossed as field (tarla), land (arsa), threshing floors (barman?), some kind of fence (frahti), estate (çiftlik), courtyards (havli), tobacco fields (duhan), and fodder crops (basillik). It is clear from the 1832 tax records that much of this arable land was for the production of wheat and barley.

---

52 Given, op. cit. 226.
54 Nicosia No 5 Sicil Defteri, 1086–89/1676–79, 25.
The relative sizes of the circles showing the arable area and the number of houses in the villages also show some clear patterns. Evrykhou is clearly the biggest village in the survey area with the most land. It also had the only shop in the area in 1833.57 Katydhata, Linou, Evrykhou, Korakou and Tembria all have a large ratio of arable land to houses. Up in the steeper and narrower part of the valley, by contrast, Kalliana, Galata and Kakopetria clearly have much less arable land in relation to the number of houses. Interestingly, this also applies to Phlasou in the middle of the valley, in great contrast to its neighbours.

The ratio of arable land to household can be seen in general terms in Fig. 4, and with more precision in the ‘Fields/house’ column of Table 1. These figures are strikingly low. Forbes’ analysis of a range of documents from c. 1700 to the 1960s for southern Greece suggests that an area of c. 5 ha can be comfortably cultivated by a single ox, allowing for half of it lying fallow at any time. Given the expense of keeping plough oxen, not every family would have one, and so would share their use; seventeenth-century figures are as low as 0.5 oxen per household.58

56 Sarınay, Osmanlı İdaresinde Kıbrıs 155, 161, 182, 192.
57 Sarınay, op. cit. 182.
Table 1: Houses, fields, and crop trees in the TAESP survey area in 1833

<table>
<thead>
<tr>
<th>Village</th>
<th>Houses</th>
<th>Fields</th>
<th>Fields/ha</th>
<th>Walnut</th>
<th>Mulberry</th>
<th>Carob</th>
<th>Olive</th>
<th>Fig</th>
<th>Almond</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Musl.</td>
<td>Non-</td>
<td>Total ha</td>
<td>ha</td>
<td>Number</td>
<td>Number</td>
<td>Number</td>
<td>Number</td>
<td>Number</td>
</tr>
<tr>
<td></td>
<td>Musl.</td>
<td>ha</td>
<td>ha</td>
<td>ha</td>
<td>of trees</td>
<td>of trees</td>
<td>of trees</td>
<td>of trees</td>
<td>of trees</td>
</tr>
<tr>
<td>Kakopetria</td>
<td>0</td>
<td>53</td>
<td>53</td>
<td>16.1</td>
<td>0.30</td>
<td>30</td>
<td>18</td>
<td>0</td>
<td>75</td>
</tr>
<tr>
<td>Galata</td>
<td>0</td>
<td>42</td>
<td>42</td>
<td>17.6</td>
<td>0.42</td>
<td>7</td>
<td>49</td>
<td>0</td>
<td>48</td>
</tr>
<tr>
<td>Kalliana</td>
<td>0</td>
<td>22</td>
<td>22</td>
<td>3.4</td>
<td>0.16</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>45</td>
</tr>
<tr>
<td>Sina Oros</td>
<td>0</td>
<td>19</td>
<td>19</td>
<td>19.3</td>
<td>1.02</td>
<td>1</td>
<td>61</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td>Korakou</td>
<td>8</td>
<td>63</td>
<td>71</td>
<td>56.8</td>
<td>0.80</td>
<td>15</td>
<td>112</td>
<td>0</td>
<td>305</td>
</tr>
<tr>
<td>Tembria</td>
<td>11</td>
<td>39</td>
<td>50</td>
<td>34.2</td>
<td>0.68</td>
<td>7</td>
<td>42</td>
<td>4</td>
<td>111</td>
</tr>
<tr>
<td>Evrykhou</td>
<td>13</td>
<td>102</td>
<td>115</td>
<td>142.1</td>
<td>1.24</td>
<td>5</td>
<td>180</td>
<td>0</td>
<td>327</td>
</tr>
<tr>
<td>Agroladhoun</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>4.6</td>
<td>0.77</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Phlasou</td>
<td>20</td>
<td>20</td>
<td>40</td>
<td>16.1</td>
<td>0.40</td>
<td>3</td>
<td>33</td>
<td>2</td>
<td>208</td>
</tr>
<tr>
<td>Ayios</td>
<td>19</td>
<td>10</td>
<td>29</td>
<td>18.6</td>
<td>0.64</td>
<td>0</td>
<td>165</td>
<td>25</td>
<td>150</td>
</tr>
<tr>
<td>Epaphianios</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linou</td>
<td>7</td>
<td>35</td>
<td>42</td>
<td>42.4</td>
<td>1.01</td>
<td>0</td>
<td>55</td>
<td>0</td>
<td>182</td>
</tr>
<tr>
<td>Kattydhata</td>
<td>4</td>
<td>20</td>
<td>24</td>
<td>31.6</td>
<td>1.32</td>
<td>0</td>
<td>72</td>
<td>0</td>
<td>101</td>
</tr>
<tr>
<td>Ayios</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>8.0</td>
<td>0.89</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td>Nikolaos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ayios</td>
<td>9</td>
<td>4</td>
<td>13</td>
<td>7.6</td>
<td>0.59</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>Georgios</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ayios</td>
<td>14</td>
<td>0</td>
<td>14</td>
<td>21.0</td>
<td>1.50</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>126</td>
</tr>
<tr>
<td>Theodoros</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Ktoutraphas</td>
<td>22</td>
<td>0</td>
<td>22</td>
<td>30.0</td>
<td>1.36</td>
<td>0</td>
<td>61</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Nikitari</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>4.2</td>
<td>0.85</td>
<td>1</td>
<td>18</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Vyzakia</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>10.8</td>
<td>1.36</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Potami</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>7.3</td>
<td>0.91</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Xyliatos</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0.9</td>
<td>0.45</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Ayia Marina</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>6.7</td>
<td>2.24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
</tbody>
</table>

Typical figures for cultivated land per household include 6.7 ha per household in southern Greece in 1716 and 9.4 ha per household in mid-20th century Cyprus. Assuming a typical fallow–cultivation cycle running over two years, only half of this would be cultivated at any one time (as was recorded by the 1833 property register), and eroded or arid land in much of Cyprus would reduce the productivity of this land. Even so, the 1833 figures ranging from 0.16 to 2.24 ha of cultivated arable land per household are extremely low.

The other main agricultural product of the area consists of crop trees: mainly olives and mulberries (for silk, including European markets), but also walnuts, almonds, figs and
carobs (Fig. 5; Table 1). Some of the distribution patterns are clearly the result of environmental conditions. Figs, for example, need a plentiful supply of water, and so are grown in the villages higher up in the valleys (Kakopetria and Ayios Theodoros), or up on the valley sides (Korakou). Comparing Fig. 4 and 5, villages such as Phlasou, Ayios Epiphanios and Kalliana clearly make up for their lack of arable land by their olive production.

This is presumably the explanation for the very low ratio of cultivated arable land to household. Much of the agricultural labour in the Karkotis Valley was spent not on subsistence but on producing cash crops, presumably for large landowners or middlemen. Olives are subsistence crops only to a small extent; mulberries and silkworms are not for subsistence at all. It is clear that some villages such as Kakopetria, Galata and Kalliana did not have enough land for growing cereals for subsistence. In the nineteenth and early twentieth century they compensated for this by growing cereals in summer settlements on the plains: Galata and Ayios Theodoros, for example, grew much of their grain at Kato Koutraphas Mandres. But even with this extra production, villages may have been importing grain for food, to compensate for their intensive production of cash crops for the European and other markets.

62 Given, ‘Agriculture, settlement and landscape in Ottoman Cyprus,’ 217–18; Given, Corley, and Sollars, ‘Joining the dots’.
Agricultural communities and community territories

It is clear that agricultural production was a key activity at the heart of communities and their territories in Ottoman Cyprus. Subsistence, cash-crop estates and state taxation all depended on the daily labour of agricultural communities in the fields and pastures of their villages. These community labour patterns are accessible to us through both historical and archaeological sources. As well as documents such as the 1833 property register, and installations such as oil presses and water mills, terraces and irrigation ditches, another way of assessing the intensity of cultivation and interpreting broader human activities is by means of the judicious interpretation of pottery densities and associated archaeological landscape data. Our aim is to integrate and interpret these various types of evidence in the light of the theories of community and landscape outlined in our ‘Methods, sources and theories’ section above.

According to the 1833 property register, the TAESP area shows two very different landscapes (Fig. 4 and 5). There is a dramatic contrast between the well-watered and fertile Karkotis Valley and the drier mountainous and foothills area to the east, in terms of density of settlement and cultivation across the landscape, and the size of the villages and their territories. The experience of being part of the Linou community, for example, was clearly very different from that of Vyzakia. In the map the arable areas are schematized as circles, but clearly would be irregular and discontinuous on the ground, depending on the vagaries of soil conditions and land ownership. This suggests a broader extent of cultivated land stretching at least from Tembria to Katydhata. This is very different from the isolated villages in the east.

The relationship between landscape, material culture and community is more easily interpreted at the scale of Fig. 6, which shows the central section of the Karkotis Valley. The survey transects cross the valley at 500-m intervals, but are irregular because of difficulties of access and ground visibility, and also because we surveyed some much broader areas of particular importance. The survey units are shaded according to the density of pottery dating to our Ottoman–Modern I period, which runs from the beginning of the Ottoman period to the early 20th century. The village of Phlasou was split into Upper (Pano) and Lower (Kato) Phlasou in 1891 or just before. The 1833 property register only records a single ‘Phlasou’, which we have placed on the map between the two churches. On the basis of the architectural and pottery data, this seems the most likely place for the core of the Ottoman-period village. This area is also shown in Fig. 7, with the two churches in the middle ground and a water mill above the Karkotis River in the foreground.

Michael Given and Marios Hadjianastasis

The very low area of arable land per family and the need for intensive production, together with the integration of plough oxen, sheep and goats into the rural economy, make manuring a relevant strategy for maximizing production. This is well established for the Ottoman and British colonial periods.\textsuperscript{64} This would lead us to expect an area of dense artefacts on the settlement itself, with a halo of less dense material round it, representing the broken pots that get thrown onto the manure heap in the courtyard and carried out to the fields.\textsuperscript{65} The continuous development of these settlements into modern villages, however, makes this hard to detect in this area. The clearest example is Phlasou, where the highest density is round the two churches, the southernmost one of which dates to the seventeenth or eighteenth century. This most likely represents dumping in and around


the settlement, and is in the same area as the medieval estate which was the settlement’s predecessor. The occasional light density survey units to the southeast suggest cultivation intensive enough to require manuring.

The 1833 data for arable land is represented schematically in Fig. 6 as coherent circles. Clearly, it was much more split up than that, and the village territory also included fallow and uncultivable land. Taking that into account, Phlasou’s land would certainly have stretched 500 m to the south-east, and the same distance to the three mills in the south-west. Exploiting the ideas expressed in the ‘Methods, sources and theories’ section above, this area represents a ‘community territory’. It is defined not so much by administrator outsiders but by the inhabitants themselves, in the course of their daily working in the field, travelling to and fro, by their intimate knowledge of routes and landmarks, and their ongoing cooperation and social tensions.

This experiential approach makes the territory much more than an abstract polygon on a cartesian map. It is one that is felt bodily: leading the oxen to the field, feeling the vibration of plough or the rhythm of the sickle, jumping over irrigation ditches, climbing the terrace risers, seeing the village from the fields, and the fields from the village. In many of the Ottoman villages of the Troodos foothills, the village territories correspond to the relief, with each one lying in its own bowl or section of river valley. This is particularly clear from viewshed analysis of the Medieval–Modern settlements of the Sydney Cyprus Survey Project, where no one community is visible from another, and the territory of each is visually self-contained.66

The experience of a community territory is very much an auditory one. A settlement carries all the noises of family life and agricultural production, which form an auditory backdrop while working in the nearer fields. The water mills generate huge amounts of noise, as anyone who has visited a working mill knows: the rushing of the water in the channels, the rhythm of the jet against the horizontal wheel, the grinding of the stones, and the clapping of the shaker which jiggles the hopper so the grain runs freely.

66 Given and Gregory, ‘Medieval to Modern Landscapes’ 292; http://www.sscp.arts.gla.ac.uk/Pages/Fieldwork/viewsheds.html
These sounds carry all the associations of food supply and normality, but also of the mill-owner’s authority and the need to pay mill dues.

There are two particular social institutions which emphasise the importance of sound in a village community during the Ottoman period. One of these is the definition of ‘arazi-i mevat’ land, according to the Mejelle, the codification of Muslim common law applied after the Tanzimat reforms of the mid-nineteenth century. Arazi-mevat is waste land, and the Mejelle carefully lays down that it excludes private property and the area immediately round the village reserved for threshing floors, collecting firewood and grazing animals.67 The outer boundaries of this last area are defined as being where ‘the sound of a person who has a loud voice cannot be heard from the houses which are at the extreme limit of the town or village’. The human voice normally carries some 150 m.68 In Ottoman Cyprus, this constituted a very clear auditory zone round the settlement for a specific range of activities.

The other striking role of sound in the communities of Ottoman Cyprus was the call to religious worship. Church bells in particularly can be absolutely essential for the auditory definition of a community territory or parish.69 It is well known that the Ottomans banned the use of church bells in 1570, though this was more because of the urgent need for bronze for cannons than any religious persecution.70 This ban lasted until 1856, and the church of Saint Lazarus in Larnaca was the first to build a belfry in the following year. What is less well-known is that the alternative, the metal or wooden bar called a tsimandro, was specifically preferred by the Orthodox church. It was in use in Cypriot monasteries as early as the twelfth century.71 Its cultural associations and capacity for more intricate rhythms more than made up for its lesser carrying power, until European influences in the second half of the nineteenth century stimulated the construction of neo-classical bell towers.

The combination of height and skilled projection makes a muezzin’s call to prayer carry much further than 150 m. Ayios Epiphanios was a Turkish Cypriot village by the nineteenth century, though no mosque is recorded in the cadastral map from the 1920s. Phlasou was a mixed village in the nineteenth and early twentieth centuries, and a mosque is marked on the cadastral plan in Kato Phlasou. Both the muezzin and the tsimandro contributed to the aural definition of the community of Phlasou. This double sound produces not the antagonism of contemporary journalistic stereotypes, but one more syncopation in the audible rhythm of community life.

68 Roberts, Landscapes of Settlement, 24.
Conclusion

This article has been intentionally wide-ranging. This has been partly to give a broader-based understanding of the development of social organization during the period, and partly because of our goal of integrating two very different types of data, historical and archaeological.

It is clear that ‘the land’ is central to Cypriot society in the Ottoman period, whether understood historically as ‘landholding’ or archaeologically as ‘landscape’. Cyprus is distinctive for its *timar*-holders staying in place rather than being rotated round different provinces, and so putting down roots in what became their own landscape. This led to a hybrid but characteristic elite identity, formed variously of Cypriot, metropolitan Ottoman, Islamic, Orthodox and, in particular, western European elements. This can be seen clearly in their architecture and material culture.

In the eighteenth century this rootedness was further strengthened and developed by the commercialization of agriculture. Although initially stimulated by the European need for raw materials such as silk and cotton, this was proactively carried forward by these Cypriot–Ottoman elites to increase their local standing, wealth and belonging. Their imprint can be seen in the landscape in the large-scale systems and facilities such as irrigation networks, water mills and large cash crop operations. This even went so far as the best land, such as in the Karkotis Valley, being dedicated to cash crops, requiring the importation of cereals for subsistence. This further accelerated the development of the exchange system and a far-reaching communications network.

For the people doing the actual cultivation, irrigation and crop processing, living in a community with strong roots in the land was crucial. These communities showed great variety, in both their environmental and their cultural aspects. Living in an isolated mountain hamlet, for example, was very different from living in one of the major cash crop producers of the Karkotis Valley. There are clear patterns in the structure of this experience. Activity zones that were particularly important included the area immediately round the settlement and the broader village territory where cultivation took place. People’s lives were structured by the daily movements and agricultural practices, and by the characteristic sounds and other sensory experiences which made up community life.

Ottoman archaeology is in its infancy in Cyprus, and even Ottoman history has been sorely disadvantaged because of the projection of contemporary political conditions onto the past. The archaeology needs more work on dating the pottery, more large-scale landscape projects such as the Troodos Archaeological and Environmental Survey Project and ‘Potamia-Agios Sozomenos: la constitution des paysages dans l’Orient médiéval’, and more collaboration with scholars in other disciplines. The history needs more research on specific sources. One of the most important, the 1572 Detailed Register compiled by the Ottomans, should give an early indication as to the orientation, productivity and revenue expectation of the Cypriot countryside. The study of western consular material from Venice, Marseilles and London should help us understand the roles (and expectations) of European merchants better.
Most importantly, we need more collaboration between historians and archaeologists. As we have found during the writing of this article, this is not always easy. Vaguely-dated pottery scatters sit uneasily beside property registers dated to a particular year, and historical generalizations are hard to address using material culture from a particular site. Concepts such as ‘elite culture’ and ‘community identity’ can mean very different things to historians and to archaeologists. These differences, however, actually constitute one of the main strengths of interdisciplinary research. The people of Ottoman Cyprus did not divide their lives into ‘historical’ and ‘archaeological’. We can only understand the people and their land if we look at landholding and landscapes together.

Acknowledgements

TAESP is directed by Dr Michael Given and Professor A. Bernard Knapp (University of Glasgow), Dr Vasiliki Kassianidou (University of Cyprus) and Professor Jay Noller (Oregon State University). We are very grateful to Dr Sophocles Hadjisavvas and Dr Pavlos Flourentzos, the successive directors of the Department of Antiquities of the Republic of Cyprus, for permission to carry out the survey and for their help and support. The project is supported by major funding from the UK Arts and Humanities Research Council, and by additional funding from the British Academy, Council for British Research in the Levant, Institute for Aegean Prehistory, Carnegie Foundation, Mediterranean Archaeological Trust, Society for the Promotion of Roman Studies, and American Schools for Oriental Research.

We are very grateful to those friends and colleagues in Cyprus who have supported us, especially Robert Merrillees (previous director), Tom Davis (current director), Vathoulla Moustoukki and Diana Constantinides of the Cyprus American Archaeological Research Institute; Giorgos Georgiou of the Department of Antiquities; and Eleni Papapetrou. We have been given enormous help and hospitality by the people of the survey area, and we especially wish to express our gratitude to the people, village councils and presidents of the villages of Katydha, Phlasou and Tembria.

We are grateful to Hamish Forbes, Smadar Gabrieli and Erin Gibson for the help, suggestions and information that they have given us in the writing of this article. All illustrations are by Michael Given. Thanks to the Department of Archaeology, University of Glasgow, for paying the costs of the colour illustrations in this article.