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The long and winding road: land routes in Aetolia (Greece) since Byzantine times

In one or two years from now, the last village of the southern Pindos mountains will be accessible by road. Until some decades ago, most settlements in this backward region were only connected by footpaths and mule tracks. In the literature it is generally assumed that the mountain population of Central Greece lived in isolation. In fact, a dense network of tracks and paths connected all settlements with each other, and a number of main routes linked the area with the outside world.

The main arteries were well constructed: they were paved with cobbles and buttressed by sustaining walls. At many river crossings elegant stone bridges witness the importance of the routes. Traditional country inns indicate the places where the traveller could rest and feed himself and his animals. Today, the old paths are rapidly falling into decay as they are being replaced by bulldozed roads. A score of ancient bridges has been destroyed by the construction of artificial lakes, or is falling into disrepair by neglect. Most of the old inns only survive in the memories of the local shepherds. Some of them have adjusted to modern needs and now serve as gas stations and self-service restaurants.

In this paper we will document the communication system of 'Aetolia' as it existed in the early modern period, where possible tracing it back to the Byzantine period. The material was collected within the compass of the Aetolian Studies Project, in which a multidisciplinary research team is working on the settlement history of this region from prehistoric to modern times. We will classify the routes according to function (trade, transhumance, social/religious contacts) and importance. The reconstruction is based on field work and a variety of written sources. Field observation and oral history support the cartographic evidence, travel literature and military guide books. An inventory of river crossings (arched packhorse bridges, fords, kareli's, rafts and ferries) and former inns (khan's) is presented to indicate the main routes.

1 Introduction

A few years ago Pávlos Bakogiánnis, then member of parliament for the Pindos province of Evrytanía, was assassinated in a terrorist attack. Evrytanía, where he was born, is the northern part of the research area of the Aetolian Studies Project. In 1960 Bakogiánnis had described how his native village of Khelidón was only connected to the outside world by what are called *karélia* (Bakogiánnis 1960: 71). A *karéli* consists of a cable spanning a river from which hangs a case or a rack with a pulley. The traveller either pulls himself and his goods to the other side or is pulled by a helper. When we visited the village in 1988, it could still only be reached on foot. The nearest road was an hour's walk away. Although the village was without electricity, a shuttle service by donkey supplied the local *kafeneíon* with beer and cola.

Since then, the bulldozer has moved on and connected Khelidón to the emerging road system of Evrytanía. There is now only one village left that cannot be reached by car, Stavrokhóri, but according to the president of the community its splendid isolation will soon be lost.

Until well into this century feet and mule back were the only means of transport in the mountains of Central Greece. Of the dozen or more villages in the district of Agrafa in Northern Evrytanía, only one could be reached by road by the mid 1960s (Tsitsá 1967: 18-19). The network of paths and tracks survived until quite recently, but as the bulldozer moves on to lay the foundations of a modern infrastructure, the old land routes are falling into decay. Yet, they live on in the memory of the older inhabitants of the region, who all have walked the old 'high roads' for hours, sometimes for days, to do their shopping in market towns, to take their flocks for hibernation on the plain, to attend religious festivals, to visit annual trade fairs, or to visit relatives in other villages.

For inhabitants of the 'Low Countries', and indeed for plain dwellers in Greece as well, it is very tempting to think of mountain areas as being by nature extremely isolated. This is true only to some extent. The barriers posed by high mountain peaks and (equally important) deep river gorges are often hardly surmountable, but if one inspects the path network in the mountains on a large-scale map, it becomes apparent that all settlements are interconnected by a cobweb of tracks. There are often even several alternative routes from one village to another.

This paper will outline the communication system in the area of the Southern Pindos mountains and its offshoots before the advance of modern traffic. We will concentrate on sources and methods for the analysis of pre-modern surface communication. We will then present results of different approaches, combining considerations of the landscape with literary and physical evidence on *khans* (inns) and bridges.

In order to reconstruct the network of historical routes and paths, we distinguish different motives for travel: trade, transhumance, socio-cultural exchange, and military purposes. The first and main motive for travel was trade. The identification of the main trade centres, their *hinterland* and mutual links determine the principal structure of the communication network. Transhumance forms the second motive for long-distance travel in Aetolia. The seasonal journey from the summer pastures in the mountains to the winter pastures in the plains is an important factor in the transportation network. The third reason for travelling over considerable distances is to attend religious festivals (*panigíria*), which often also have a socio-cultural and economic significance. These annual festivals were often combined with bazars and even served as marriage markets. The fourth function of the network of paths and tracks is military. In different periods of Aetolian history, either liberating or plundering armies traversed the region.

2 Sources and methods for analysis of communication

One of the main objectives of the Aetolian Studies Project is to investigate the changing socio-economic structure of the region from the time of the War of Independence until the Second World War. The development of the infrastructure of roads and tracks is one of the elements of the study. A variety of sources is available for the analysis of the network of land routes in Aetolia: literary sources and maps, oral sources, and physical evidence.

2.1 Written sources: travel literature and maps

The most important written sources on historical land routes in Aetolia consist of the accounts by travellers between the late 18th and early 20th centuries and the maps that were drawn on the basis of their journeys. Among others we mention: Bazin (1864), Dodwell (1819), Leake (1835), Pouqueville (1820-1821), and William Woodhouse (1897).

Moreover, after Greek Independence, the state of affairs in the new Kingdom was registered in various descriptions of and statistical reports on the country (Mansola 1867; Noukhaki 1901; Rankavi 1853; Strong 1842; Thiersch 1833). At the same time, (foreign) cartographers were assigned to survey the land. It was only in 1852 that the first more or less reliable map of our study area was published by the French at a scale of 1:200,000 (McGrew 1985: 130-135). This is the earliest map on which the communication network is represented fairly accurately. Earlier maps, such as those published by Leake and Pouqueville, do not give information on roads, whereas the topography of the Austrian map of European Turkey from 1829 is too distorted to be of any use in this respect.

2.2 Oral sources: interviews

Interviews conducted in about 300 villages in Aetolia over the last ten years form a second source of information on travelling and routes in the research area before the advance of modern traffic, i.e. before World War II. At that time, almost all transport went on foot or by mule. The structured questionnaire used in the Aetolian Studies Project contains questions on various aspects of economic life in the pre-war period (Bommeljé *et al*. 1987).

At several instances of the interview, attention was paid to travelling. In relation to stockbreeding we inquired after the occurrence of transhumance, the location of summer and winter pastures, and the routes of the journey between these areas. With regard to agricultural production, we asked about shortages and surpluses of different products, which products were sold or bought, where and how often. The routes to market places for basic consumption goods were registered. We also investigated the other (non-commercial) functions of central places. Religious festivals and bazars that were attended were noted down.

The answers to these questions offer several indicators which are useful in the reconstruction of the location and function of the most important routes: the nodes in the transportation network (origin and destination), the motives for travelling (trade, transhumance, socio-cultural), the importance, function and frequency of the routes taken. In order to mark the routes taken, we asked our informants to mention the places they passed and the exact location of river crossings and other noteworthy natural features, such as for instance mountain passes.

2.3 Physical evidence

During the fieldwork campaigns of the project, we collected additional information on the physical condition of the paths, bridges, and *khans* in Aetolia. We walked a number of paths, which appear to be falling into rapid decay now that they are no longer used. Bulldozed roads replace and sometimes destroy the traditional tracks, which usually were well-constructed, roughly paved with stones and supported by foundation walls.

Most bridges have now disappeared. Only a few stone packhorse bridges survive. Several of these have been

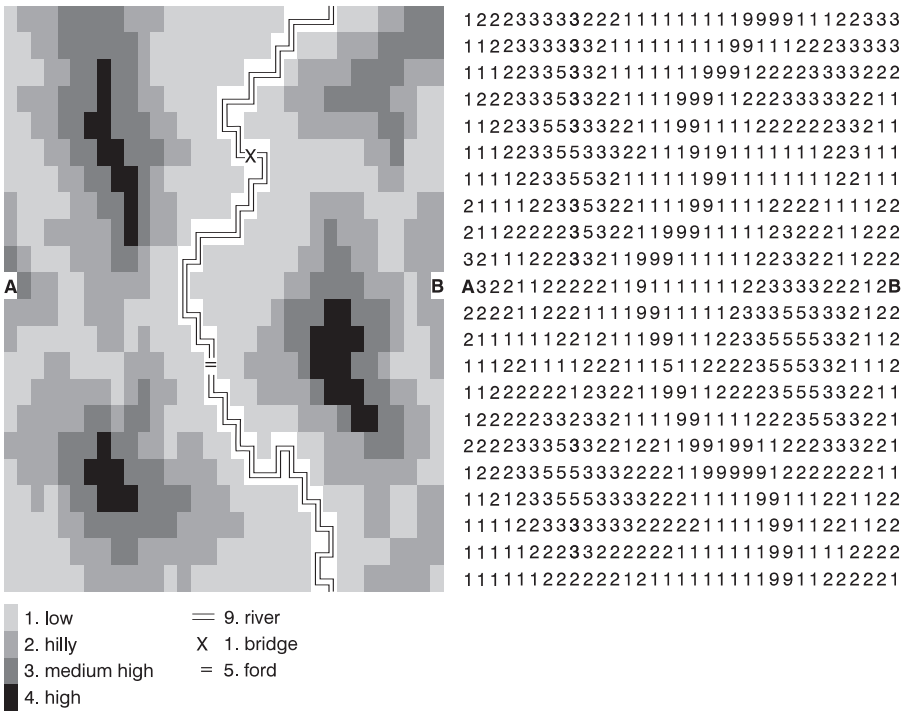

Figure 1. Difficulty of travelling in hypothetical landscape.

destroyed in the Civil War, when the mountains of the Southern Pindos formed a natural fortress for the guerillas. Some other bridges are submerged in artificial lakes that have since been created in the rivers Akhelóös and Mórnos.

The function of the traditional country *khans*, so important in the time of non-mechanized traffic, has now been taken over by the roadside cafe and petrol station. Only a few of the original buildings are still standing today. In the following section we will give a more detailed account of these elements of infrastructure.

2.4 Methods and models of analysis

There are various methods and models for analysing surface communication. In this paper, we restrict ourselves to a mainly descriptive approach. In an earlier study we have attempted to reconstruct the main flows of communication in eastern Aetolia (the eparchy of Doris) by applying gravity and potential models (Doorn 1985).

Although the gravity and potential models give an interesting image of the flows of communication and aggregate accessibility, the method is too rough for the reconstruction of actual routes. We therefore borrowed another model from natural science, namely the law of the conservation of energy, to substantiate the most likely course of historical land routes, once certain communicative centres and concentrations of population are given. The basic assumption is that man tends to minimize his efforts in order to achieve his goals. With regard to communication this means that he will spend as little energy as possible to reach a certain point in space. In an isotropic plain, he would travel in a straight line if he wanted to go from point A to point B. In Greece, and particularly in Aetolia, plains are uncommon. High mountains and deep river valleys form natural barriers to communication. Routes tend to be defined by the shortest, quickest or easiest way of surmounting the distance and barriers between points A and B.

Imagine a hypothetical landscape as in figure 1. The shortest route from point A to point B would be a straight line, but this would not be the easiest course: the traveller would have to climb two ridges and cross a river at a place where there is no bridge or ford. We could quantify the difficulty of different landscape elements and then calculate the amount of energy needed as the product sum of difficulty times distance. By calculating the energy needed for alternative routes, we could simulate the trial and error process by which in the real world the easiest route is found. Clearly, the route costing minimum energy is the one that in reality would most likely be chosen.

In figure 2 and table 1 this method is used to evaluate the difficulty of several alternative routes from the Gulf of Corinth to the communicative node at the defile ‘Stenón’, near ancient Kallípolis and modern Lidoríki (eparchy of Doris). The graph and table show that alternative A is the shortest route (22.5 km), but not the easiest one; alternative C is five kilometres longer, but it is quicker because fewer vertical metres have to be surmounted.

Table 1. Quantitative evaluation of three alternative routes Gulf of Corinth - Stenón.

A. Erateini-Stenon via Amygdalea

Km	Height	Slope	Km/H	Hours	Place
0.0	0			0.0	Erateini
1.0	20	2.0	4.7	0.2	Foot of Koutsouros
5.0	800	19.5	1.8	2.5	Kokkinovrakhos (saddle of Koutsouros)
7.0	600	10.0	3.3	3.1	Amygdalea
9.0	475	6.3	4.0	3.6	Agia Trias (begin of Belesitsa valley)
12.0	450	0.8	4.9	4.2	Crossroad Vraila-Malandrino
16.0	425	0.6	4.9	5.0	Crossroad Levka-Pendapolis
20.0	375	1.3	4.8	5.9	Below Lidoriki
22.5	375	0.0	5.0	6.4	Stenon

Total vertical meters: 1225
Vertical meters per km: 54.4

B. Paralia Tolofonos-Stenon via Milea and Avoros

Km	Height	Slope	Km/H	Hours	Place
0.0	0			0.0	Paralia Tolofonos
2.5	40	1.6	4.7	0.5	Below Tolofon
3.0	100	12.0	3.0	0.7	Tolofon
5.5	100	0.0	5.0	1.2	Crossing Xerias
8.0	350	10.0	3.3	1.9	Metokhi
10.5	350	0.0	5.0	2.4	Xerias gorge
13.0	525	7.0	3.8	3.1	Crossroads Makrini-Sotaina
15.0	700	8.8	3.5	3.7	Milea
17.5	1150	18.0	2.0	4.9	Agioi Pandes (Boukhouri)
20	975	7.0	3.8	5.6	Top Avororakhi
21.5	800	11.7	3.1	6.1	Avoros
24.5	400	13.3	2.8	7.1	Mornos
27.5	375	0.8	4.9	7.8	Stenon

Total vertical meters: 1925
Vertical meters per km: 70.0

C. Paralia Tolofonos-Stenon via Sotaina and Vraila

Km	Height	Slope	Km/H	Hours	Place
0.0	0			0.0	Paralia Tolofonos
2.5	40	1.6	4.7	0.5	Below Tolofon
3.0	100	12.0	3.0	0.7	Tolofon
5.5	100	0.0	5.0	1.2	Crossing Xerias
8.0	350	10.0	3.3	1.9	Metokhi
10.5	350	0.0	5.0	2.4	Xerias gorge
13.0	600	10.0	3.3	3.2	Below Sotaina
17.0	550	1.3	4.8	4.0	Vraila
21.0	425	3.1	4.5	4.9	Crossroad Levka-Pendapolis
25.0	375	1.3	4.8	5.8	Below Lidoriki
27.5	375	0.0	5.0	6.3	Stenon

Total vertical meters: 825
Vertical meters per km: 30.0

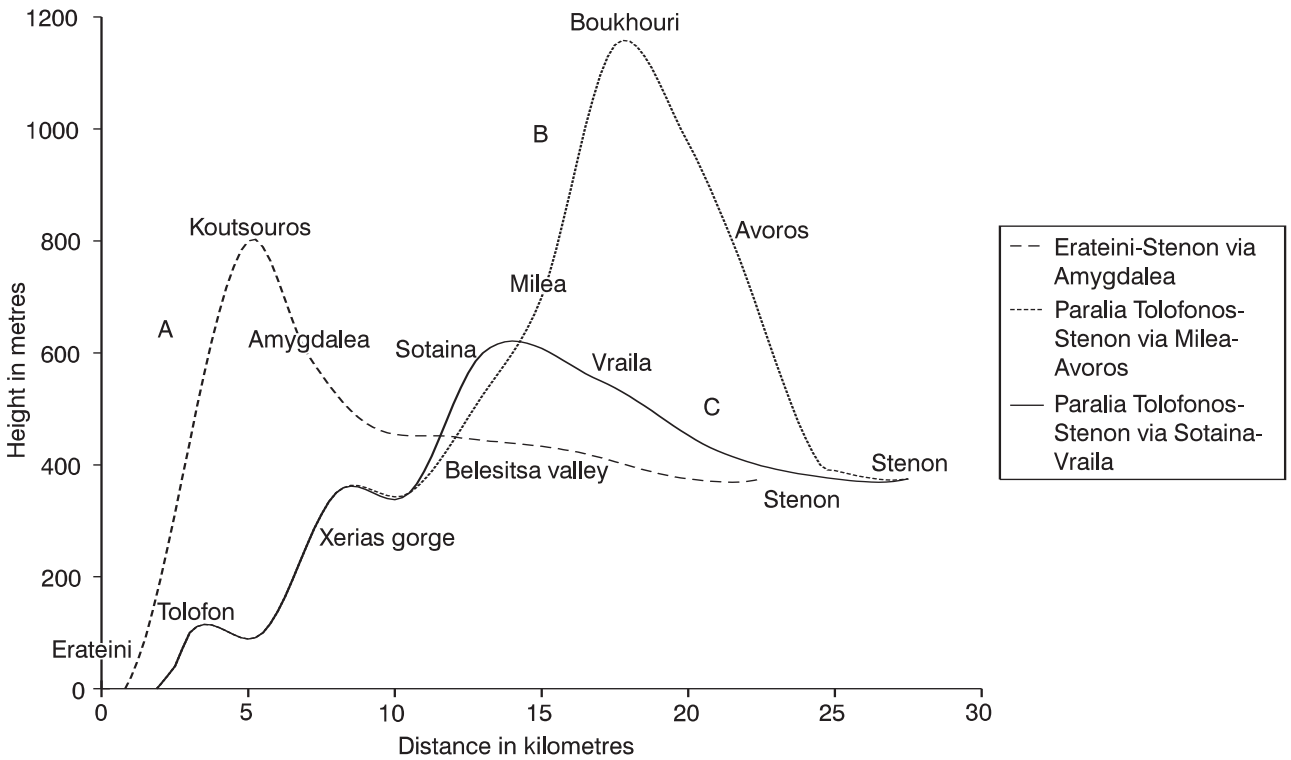

Figure 2. Evaluation of difficulty of three alternative routes Gulf of Corinth - Stenon, Eastern Aetolia (province of Doris).

3 Khans

What the petrol station and motel is for the motorist of today, was the *kháni* for the muledriver or traveller on foot of pre-modern Aetolia. A *kháni* is a modest inn, where the traveller could rest, have a drink, take a simple meal, feed his animals and where he could spend the night. More than this, '*khans*' were important landmarks that indicated the historic land routes and nodes of communication. In combination with the method described above, the presence of inns can be used as an indicator of the importance of routes.

The *kháni* were mostly called on by merchants. All customers shared the same room and slept on the floor. Shepherds on their way to the winter or summer pastures sold cheese and bought food and fodder at the *khan*, but slept outside near their animals. Nowadays, nearly all inns have crumbled into ruin without leaving traces in the stony landscape. However, some of the buildings survived and now function as *kafeneíon*.

On the basis of the literature, maps and interviews, we have documented about 150 inns in Aetolia dating to between 1800 and 1940. The distribution of these *khans* is represented in figure 3. It is apparent from the map that the *khans* are not evenly distributed over the landscape, but form a number of clusters, in particular (but not exclusively) along the main routes of communication, which have been copied from the French military topographical map of 1852.

Many inns were not located within a village, but somewhere at a distant spot in the countryside. Although at first sight the location of many *khans* has nothing special to offer, they tend to prefer sites such as crossroads, mountain passes, and river crossings.

The most striking concentration of *khans* is found in the mountain district of Krávari in central and northern Navpaktía. This is remarkable, because this area was notorious as the 'labyrinth of Greece' (Naval Intelligence Division, vol. III, 1945: 20). Until after the Second World War, there were virtually no roads in this area, and there were hardly any long-distance tracks. The area was avoided by most travellers. Only Woodhouse (*c.* 1890) describes a route from Thérmon to Lidoríki over Plátanos through this poor and sparsely populated district (Murray 1896: 642-646). The section on Aetolia and Acarnania was written by Woodhouse, although his name is not

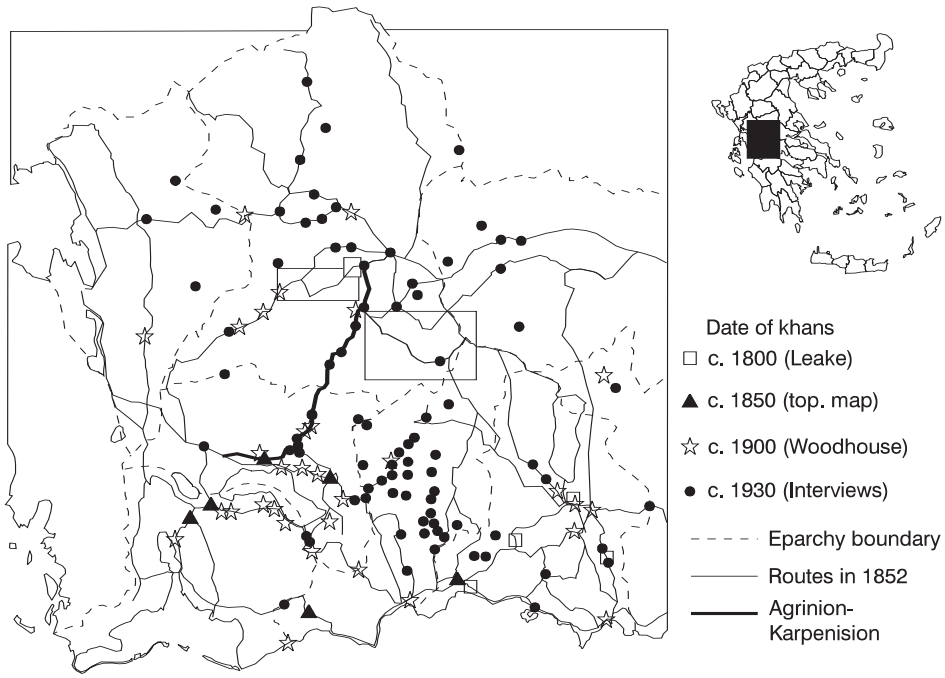

Figure 3. Land routes 1852 and khans 1800-1940, Aetolia.

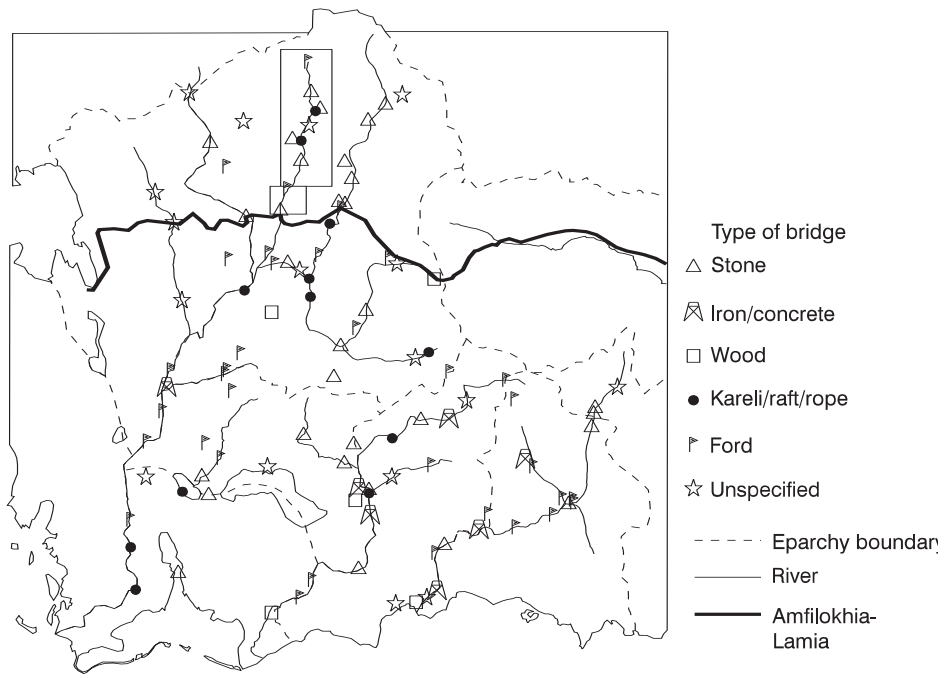

Figure 4. River crossings in Aetolia before WW II.

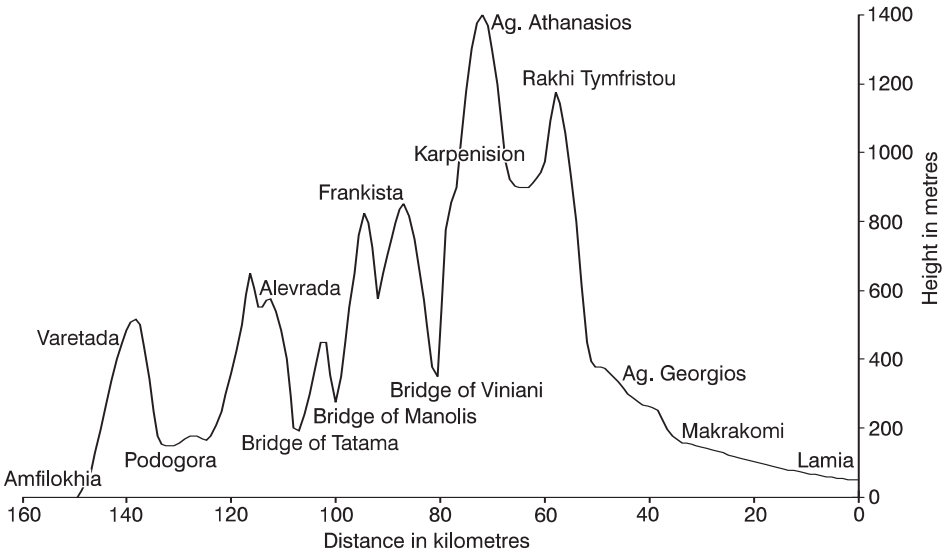

Figure 5. The E-W route connecting the Amvrakian and the Mallian Gulfs.

mentioned). We suggest that it is exactly the inhospitable character of this region which demanded the presence of so many inns.

A second concentration of inns is located around Lake Trikhónis. Under the presidency of Tríkoupis, a carriage road had been constructed around the lake by the end of the 19th century (Woodhouse 1897). On the northern shore of the lake, these *khans* served the connections from Agrinion to Thermon and from Agrinion to Karpenísi by Prousos. This last connection of the lake area with Evrytanía was also lined with *khans*, which indicates the importance of the connection.

4 River crossings

Rivers pose the most important barrier to communication. In a study of land routes it is therefore important to pay attention to the river system in the area of research and to study how and where they could be crossed. After *khans*, river crossings and bridges are important elements designating land routes in early modern Aetolia.

There are three main river systems in Aetolia. From west to east these are the Akhelóös, the Evinos and the Mórnos, each with its tributary streams. The Akhelóös or Aspropotamos is the largest of these (and indeed of Central Greece). In Antiquity it formed the border between Aetolia and Akarnania.

In the early-modern period, we encounter a great variety of types of river crossings in Aetolia. We distinguish fords, *karélia*, rafts or ferries, and bridges of various types. Over a hundred river crossings are recorded, and there are about 20 existing and former stone bridges dating from before 1900 (Manda 1984, 1987). Bridges in Aetolia vary from extremely crude (and feeble) constructions of wood and rope to elegantly curved packhorse bridges which have stood for centuries (fig. 4).

Little is known about the history of the bridges in Aetolia. The most interesting bridges form — or rather formed — a sequence which marks the route from the west coast to the east coast of Greece at the point where the mainland is at its narrowest. These are, respectively from west to east: the bridge of Tatarna (near a monastery of the same name), now submerged in the artificial lake of Kremasta on the river Akhelóös. Secondly, on the Agrafiotis, the bridge of Manolis, constructed in 1659 (Manda 1984: 40-1). Although it still stands, it can only be seen in summer, as in winter it is also submerged in the artificial lake. So far, attempts to save this monument have been unsuccessful. The third and most easterly, on a straight line with the former two, is the bridge of Viniani over the Megdova or Tavropos.

The W-E route, from Amfilokhia on the Amvrakian Gulf over Karpenisi to Lamia on the Mallian Gulf, can be reconstructed with the help of these bridges and the travel literature. A cross section of the route is presented in figure 5. The graph illustrates very well the difficulty of the terrain: there are two passes over 1000 m to be taken (the highest at 1400 m), whereas the valley bottoms are between 200 and 400 metres.

The total length of this route is 152 km. It is remarkable that 19th century travellers estimated it at 150 km. In time the travelling distance is calculated at 42 hours which means four to five days walking; the travellers of the last

century recorded 38.5 hours for this journey (Route 48 in Murray's *Handbook of Greece*)

5 Conclusions

In conclusion, we have seen that our analysis of land routes in early-modern Aetolia, based on an approach of the minimization of distance, travel time and/or energy loss can offer an insight into alternative courses. Especially when combined with the literature and physical evidence in the form of *khans* and bridges we can say more on the importance of some routes than on others.

In principle, this method of landscape analysis can be applied to other periods as well, in order to evaluate the viability of alternative routes, provided that additional archaeological or source evidence is available.

Although it might be suggested that the 19th century routes outline the potential connectivity of earlier periods as well, we prefer to be cautious here, since the additional evidence is rather meagre. For instance, the research of the Ottoman archival material has only just begun, and the work on Byzantine routes through Aetolia is rather speculative (Koder/Hild 1976). The reconstruction of the 19th century communication system that has now almost totally disappeared, has a value in its own right. The few stone packhorse bridges in Aetolia that remain deserve preservation, just as some traditional country inns. It is probably a good thing that even the remotest villages in the Pindos can now be reached by car, but at least some aspects of the ways of travelling over the past centuries should be preserved.

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