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**Transport Geography and Local Development
in 19th Century Thrace**

1. Introduction

a) In the course of its evolution since the mid-seventies, under the influence of the vigorous criticism of Radical Geography, Historical Geography has broadened its field of study to take in Social and Economic History, Historical Anthropology, Cultural Ecology, etc., making full use at the same time of the contribution made by the "Quantitative Revolution" of the 60's (e.g. matrix analysis). This new beginning, as it has been described by scholars in the field, is attempting to generate a renewed Historical Regional Geography, which in its turn will reveal a new form of humanism¹.

The field covered by this paper* falls within the scope of Historical Geography, being a study of Thrace in the 19th century. However, it has the following special features: In its first part it concentrates on (historical) Regional Geography, mainly insofar as it concerns the analysis of certain selected variables, which are used as a kind of indicators of development and are associated with the natural environment (the earth) from the point of view of new regional science. This method permits us to ascertain the existence of certain geographical areas of Thrace which manifest homogenized features in terms of these variables and consequently can be regarded as belonging to one single category in terms of development. In this way we can establish also the various types and degrees of development achieved by the various areas (e.g. unequal development).

The second part of the paper explores the Transport Geography of

1. E. P. Dimitriadis, "A first evaluation of post-war Historical Geography in Greece in the context of the Angloamerican development of the field", *Anthropologika* 8 (1985) 7 (in Greek).

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Thrace as a comprehensive system, and its development, mainly in the years following the appearance of the railway, i.e. a newly introduced technology (1870).

The unplanned transport (communication) network which evolves is articulated to link the different regions and functions in such a way as to reflect their strengths and weaknesses, presenting us thus with a first picture of the process of development in Thrace towards the end of the century².

b) The process of development provides man with the means to build his own history, in accordance with the local conditions of the region and with his own productivity. In the contemporary world, development employs indicators or variables connected to its own inherent logic, such as economic development (Welfare Geography), modernization, etc. Thus today the degree of development of a society or state in terms of overall global development can be measured and compared using the following phenomena³: (i) the level of material production and consumption, along with the observed changes in these phenomena, (ii) the technology of material production and consumption, together with their observed changes, (iii) associated social, cultural and political changes and (iv) the distribution of the cost and the profits of production, as well as consumption. International organizations monitor (e.g. the World Development Report), classify, control and even direct the indicators of global development (e.g. World Bank).

Development as a spatial change is directly linked with modernization, the latter entailing a spatial process of dissemination for its new products arising from either endogenous or exogenous social causes. For example, development may originate from a small number of isolated centres with internal relations and spread out through the system of communications to become a planned, urban, system with its own hierarchy, or alternatively may arise from the introduction of foreign businesses, and so on.

2. An entry covering the field of Regional Geography is to be found in R. J. Johnston, D. Gregory, P. Haggett, D. Smith, D. R. Stoddart (eds.), *The Dictionary of Human Geography (D.H.G.)*, Southampton 1981, pp. 286-288, and also on the subject of Transport Geography; *ibid.*, pp. 350-352, and E. J. Taaffe and H. L. Gauthier, *Geography of Transportation*, London 1973.

3. R. J. Johnston et al., *op.cit.*, pp. 78-79, 223-224.

At the same time, however, development is also a historically and socially specialized process, one which can be explored within the context of a special form of social relations, such as the capitalism which has dominated world history since the 17th century. The conflict between man and his fellow man, and between man and nature, endemic throughout the period in which capitalism was spreading from the western commercial and industrial states, first to south-eastern Europe (the Balkans) and subsequently to Asia, Africa, etc., led, at least insofar as the relations between capitalist and non-capitalist societies are concerned, to the phenomenon of the under-development of the latter⁴.

There thus arises the phenomenon of a society reacting in different ways to the exogenous or even endogenous processes of change, a phenomenon which is associated with the view of development as a historical process specific to each society. This process is to be interpreted in terms of the local conjunctures of circumstance and conditions which are of decisive significance (e.g. evolutionary change or revolutionary transformation).

c) The nature of development is historical, complex and competitive, involving as it does human conditions and relations; it assumes particular fascination in a historical society such as that which we intend to study here, the Thrace of the 19th century (both eastern and western)⁵, where two modes of production⁶ find themselves in competition: the pre-existing feudal system (Ottoman) and the imported commercial and industrial capitalism of the Europeans.

The Ottoman Empire of the late 19th century operated on the socio-economic level within the contexts of two different systems. On the one hand, in the Empire's relations with the Balkans, the system was feudal, the Sublime Porte monopolizing power from Constantinople by means

4. I. Roxborough, *Theories of Underdevelopment*, London 1979, *passim*.

5. The paper focuses on the vilayets of Adrianoupolis and Constantinople, as they evolved in the years after 1878. See K. Mamoni, "Thrace", in *History of the Greek Nation*, vol. 13, *New Hellenism 1833-1881*, Athens 1977, p. 369 (in Greek). Also K. Vakalopoulos, *History of Northern Hellenism: Thrace*, Thessaloniki 1990, p. 250 (in Greek).

6. The way in which human societies organize their productive, developmental activities and, subsequently, produce new forms of social life. Marxist historical analysis has identified four generally accepted modes of production (primitive communism, slavery, feudalism and capitalism), R. J. Johnston et. al., *op.cit.*, pp. 220-221.

of its network of dependent military and administrative functionaries. This feudalism was of course transferred in various forms and degrees of exploitation to the subject Balkan peoples.

On the other hand, the Empire found itself in an almost semi-colonial relationship with the powerful capitalist states of western Europe (e.g. England, France, Austria), under whose control were the vital sectors of the economy such as imports and exports, loan financing, taxation and, more generally, the "modernization" the western European countries were providing (e.g. railways, etc.)⁷.

These relations create, within the interior of the Empire, the following (historical) paradox: on the one hand the administration of the Empire, consisting in the horizontal administration of the official state, attempts to impose capitalist relations in lieu of the old feudal ties, acting under the pressure of both the factor of foreign involvement and the domestic social class with modernizing aspirations; pulling in the other direction is the powerful Ottoman administrative and religious bureaucracy (with its representatives who share the same interests), functioning in a vertical feudal organization as a system of idiosyncratic and watertight sub-systems.

We must therefore ask ourselves the methodological question: Under these conditions, what do we mean by, and how should we define, development in an area of the Balkans such as Thrace, very close to Constantinople, where there must exist at least in rudimentary form certain necessary conditions for development (for example, there must be on the one hand the wage-earning employee and on the other the capitalist entrepreneur). Detailed research into the Balkans has shown us that the urban population of the cities was increasing during the 19th century, mainly as a result of movement from the countryside to the environs of the cities by the rural population, who constituted an indigent social class providing workers for the various sectors of manufacturing and industry which existed at the time (e.g. textiles). This phenomenon is a

7. On the economic relations between the European part of the Ottoman Empire and the countries of Europe during the 19th century, see V. Paskaleva, "Contribution aux relations commerciales des provinces balkaniques de l'Empire Ottoman avec les États Européens au cours du XVIII^e et la première moitié du XIX^e s.", *Études Historiques* 4 (1968) 281-288 and Oya Koymen, "The advent and consequences of free trade in the ottoman empire (19th century)", *Études Balkaniques* 2 (1971) 47-55.

feature characteristic of the urban economy⁸.

The final result was the emergence of a "potential development" which arises from the consolidation of mainly non-Muslim elements of the community (e.g. Greeks, Jews, Armenians) who find it easier to turn themselves into property-owning capitalists, e.g. small factory-owners, merchants, etc.

d) The search for reliable coordinates of the phenomenon of development in Thrace during the 19th century, given the available bibliographical sources and the possible level of analysis, led to the choice of five variables, structurally interlinked through multiple and dialectical influences in an overall system.

The basic variable is the *socio-economic space*, within the framework of the specific modes of production current in 19th century Thrace. This first space generates the two further variables *settlement space* and *transport network*. In the latter emphasis is laid on the introduction of the railway, regarded as a paramount indicator of development. It is observed that the transport network (transport geography) has a twofold character: (i) independently as a fundamental parameter of the study (chap. 2) and (ii) as one of the variables of development (regional geography), particularly with the appearance of railway technology after 1870 (chap. 4).

The axis formed by the one fundamental and two derived variables is framed by the variables *geopolitical space*, which operates in dependence on the main axis, and *geographical space*, which provides cohesion (positive or negative) for the whole configuration.

The two first variables, socio-economic space and settlement space, provide us with the framework for material production and for population, as well as the other changes which emerge in a marginally urbanized environment, by which we mean settlements of over 3,000 inhabitants. We must point out here of course that quantitative relations (e.g. numerical indicators) describing the nature of development are not available due to the nature of the material we are studying. However, qualitative observations of indirect interest can be based on the course

8. N. Todorov, "Aspects of the transition from feudalism to capitalism in the Balkan territories of the Ottoman Empire", in the *Economic Framework of the Balkan Countries (15th-19th Century)* (ed. S. Asdrachas), Athens 1979, p. 277 (in Greek).

of development in its local idiosyncrasies and interrelations. The articulation of the transport geography with the individual geographical unities of Thrace leads to a conclusion regarding the location of nine "development zones", varying as to their degree of development (+ to -). These zones must have been taking shape towards the end of the nineteenth century.

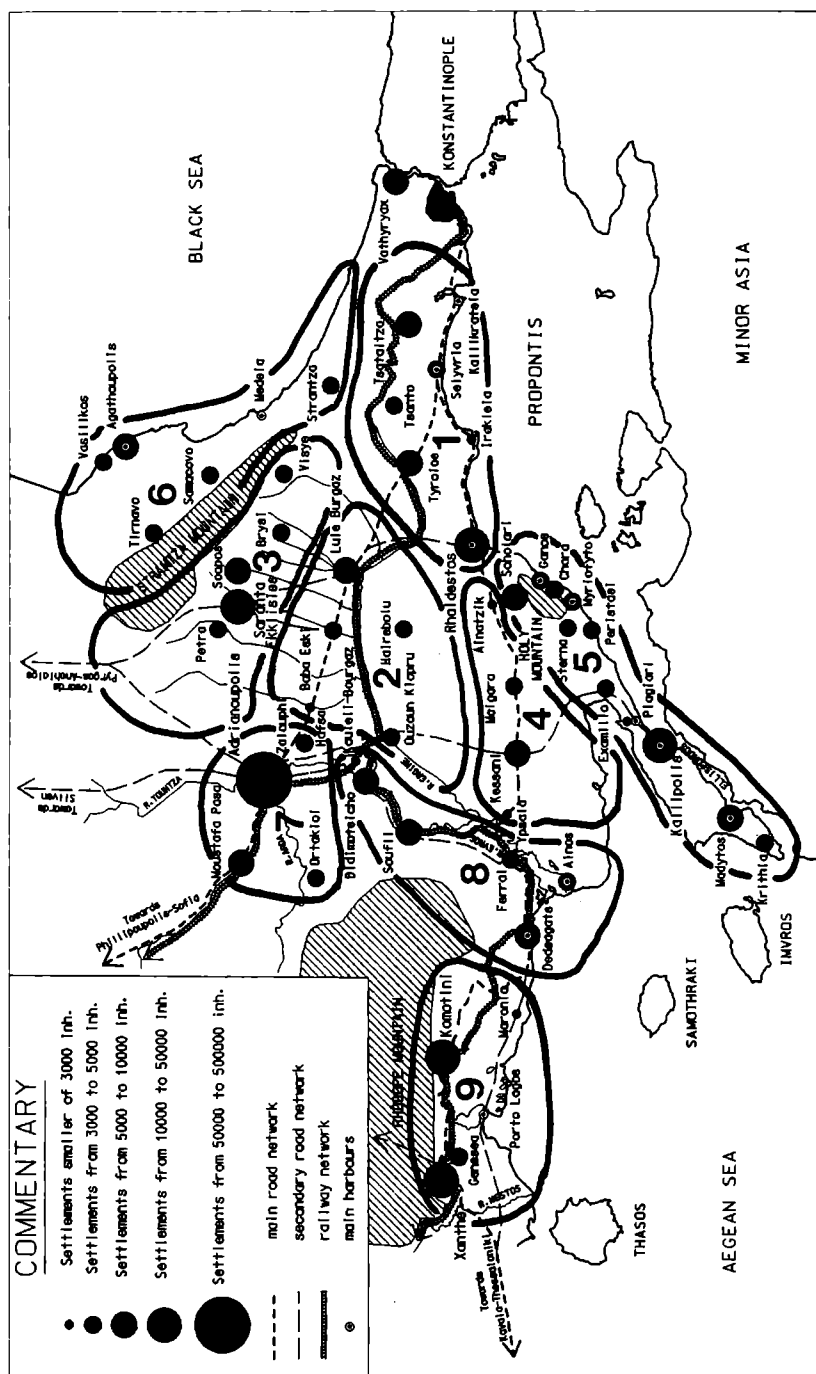
2. The basic transport network. General description of the overall system

Historical conjunctures determine two clearly defined periods in the historical development of the transport network of Thrace during the 19th century: The first from 1800 to 1870 (Phase 1) and the second between 1870 and 1912 (Phase 2). During the first phase (1800-1870) we observe a stable and unchanging situation in the relations between the transport and settlement networks. There are no significant changes in either the transport network or the frontiers in the region of Thrace. Thus the period 1800-1870 can be seen, in general terms, as a continuation of the years preceding 1800 (the 18th century). However, towards the end of the period there begins to emerge a development issuing from the appearance of the steamship as a means of marine transport after 1850⁹. Both travelers and goods can move with greater comfort and safety on the ships than in the old caravans. The settlements sited along the basic road axis from Constantinople to Adrianoupolis go into decline, while growth can be seen in the coastal towns and large villages like Dedeagats, Kallipolis, Irakleia, Selyvria and Kallikrateia¹⁰ (map 1).

The turning point in the evolution of the transport network of Thrace was the decade of the 1870's. It was during this period that construction of the railway network began, a development which had a decisive effect on the evolution of certain settlements, such as Rhaidestos (negative) and Dedeagats (positive). The arrival of the railway strengthened the economy of certain inland settlements which happened to find

9. D. Quataert, "The age of reforms, 1812-1914: Transportation", in *Economic and Social History of the Ottoman Empire*, vol. 2 (ed. H. Inalcik - D. Quataert), Cambridge 1994, pp. 799-804.

10. Zotos Molottos, "Itinerary of the Greek Peninsula", vol. 5, *Thrace and Moesia*, Athens 1904, p. 553 (in Greek) and K. Vakalopoulos, *op.cit.*, p. 500.



themselves on the route of the railway line (e.g. Tsanto, Tyrolae (Corlu), Lule Burgaz). However, the continuing advance at the same time of steamship transport, which continued to absorb a major share of freight traffic, did not permit these settlements to recover the economic and commercial importance they had enjoyed before the middle of the 19th century¹¹. In the years after 1870, the period of gradual introduction of railway transport, in combination with the growth of transport by steamship, marked the end of the age of the caravans, although it did not reduce the importance of road transport at the local level¹². These changes were accompanied by another consequence: the gradual disappearance of the old commercial fairs (bazaar economy)¹³.

Road network

The two main traditional road axes in Thrace were: (a) the route: Constantinople - Lule Burgaz - Adrianoupolis - Philippoupolis - Sofia¹⁴ (which led by way of Nis and Belgrade to western Europe) and (b) the route: Constantinople - Rhaidestos - Malgara - Kessani - Dedeagats - Komotini - Xanthe (which advanced in the direction of Thessaloniki). These were the two road axes serving as the commercial routes by which the capital Constantinople communicated with the hinterland of the Balkan peninsula¹⁵. These two formed the backbone of the remaining road network, which included those important routes serving the export trade and running from the plains of the Thracian interior down to the main harbours. These were the routes Adrianoupolis - Dedeagats, Adrianoupolis - Ainos, Lule Burgaz - Rhaidestos, and the two roads linking eastern to northern Thrace and then running on to the harbours of the Black Sea

11. Zotos Molottos, *op.cit.*, p. 553.

12. Arno Mehlan, "Trade routes in the Balkans during the Turkish Domination", in *The Economic Framework of the Balkan Countries (15th-19th Century)* (ed. S. Asdrachas, Athens 1979, p. 385 (in Greek).

13. R. J. Johnston et. al., *op.cit.*, pp. 18-19.

14. Known in the 19th century as the "Royal Highway". See Zotos Molottos, *op.cit.*, p. 553.

15. See also B. G. Spiridonakis, *Essays on the Historical Geography of the Greek World in the Balkans during the Turkokratia*, Thessaloniki 1977, p. 61. For a detailed description of the transport network of Thrace in the 19th century see E. P. Dimitriadis - G. P. Tsotsos, "Transport network and geographical space in nineteenth century Thrace", in *3rd International Symposium of Thracian Studies: Post-Byzantine Thrace*, Komotini 25-30/5/1998 (in Greek).

and the plains of the Danube: Adrianoupolis - Sliven (Selymnos) and Baba Eski - Saranta Ekklesies - Anchialos. The central point of Adrianoupolis was of strategic importance for the whole road network (map 1).

From our historical analysis it is clear that the course of the two major road arteries of Thrace (Constantinople - Sofia and Constantinople - Thessaloniki), as well as that of the rail network, was dictated by more general national or European needs to establish links between the capital and the western Balkans and Europe. This was a more important consideration than the distribution of populations and settlements in the region. The creation of this transport network had the potential to lead to the development of communities along its main routes, but this potential was not realized during the 19th century.

The interest of the Ottoman state in maintaining the major transport routes, so keen during the first centuries (15th-16th) of the Empire, had lost much of its force over the course of the 19th century, interest now being confined mainly to the two key road axes (a) and (b), mentioned above, serving Constantinople herself¹⁶.

The passage of these two major road axes of the European part of the Empire across the land of Thrace not only served the capital and the official business of the Empire, as was natural, but also facilitated to some extent local communication within the region. The Sultans' endeavours to improve and maintain the great highways, e.g. by constructing large, monumental bridges across the Thracian rivers, secured better conditions of communication for the towns of Thrace at a local level. From this point of view, the proximity of the capital Constantinople was of considerable benefit to the Thracian transport network.

Water network

The river Evros was navigable, to towed rafts and small craft¹⁷, from its mouth upstream as far as Adrianoupolis and beyond, constituting a central artery for exports from the Thracian interior¹⁸. However, river

16. Even the roads leading to the harbours of Thrace were neglected (Arno Mehlan, *op.cit.*, p. 406, note 310).

17. Arno Mehlan, *op.cit.*, p. 381 and K. Papathanassi-Mousiopolou, "Economic and Social life in Thrace during the Turkish Domination", *Thrakika* 47 (1974) 174 (in Greek).

18. K. Vakalopoulos, *Economic Activity in the Macedonian and Thracian Regions in the Mid-19th Century and Their Role in International Trade*, Thessaloniki 1980, pp. 144 (in Greek).

communication by means of the Evros could not withstand the competition of the railway and was in steep decline by the end of the 19th century.

The coast of Thrace was not well endowed with natural harbours¹⁹, the shores of the Black Sea and the Propontis offering very few points of anchorage. The main harbours were Rhaidestos, Kallipolis, Ainos (until the period 1860-1870) and Dedeagats (after 1870). There were a number of harbours of local importance: the market towns of Madytos, Plagiari, Myrifyto, Ganos-Chora, Selyvria, Medeia and Agathoupolis²⁰, but these were of more importance as shipping, shipbuilding and fishing centres than as conduits for the passage of freight from and to the Thracian interior²¹. Of particular economic importance was the harbour of Porto-Lagos, which served the plain of western Thrace²².

The mid-nineteenth century saw the beginnings of sea transport by steamship²³. The sea routes were now shown even greater preference over the land roads for the transport of goods, especially in cases where the harbour boasted a rail link with the interior. Important Thracian harbours such as Kallipolis, Rhaidestos and Porto-Lagos enjoyed commercial links with the great ports of the Aegean (Thessaloniki, Smyrna) and the Mediterranean.

Railway network

The last three decades of the 19th century saw the modernization of the Thracian transport network with the construction of railway lines by a French company²⁴. Yet the introduction of the railway as a basic means of land transport was a process which was by no means rapidly achieved. For example, the extension of the railway network through the Ottoman Empire to complete the link between Constantinople and Thessaloniki required no fewer than 25 years. Nevertheless, the laying of

19. K. Mitsopoulos, *Physical Geography of Thrace*, Athens 1897, pp. 15-19 (in Greek).

20. Arno Mehlan, *op.cit.*, p. 377; I. Vafeides, "The economic importance of Eastern Thrace", *Thrakika* 4 (1982-1984) 211 (in Greek) and A. Vasilopoulos, *The Ottoman Thrace*, Constantinople 1914, p. 70 (in Greek).

21. K. Papathanassi-Mousiopolou, *op.cit.*, p. 158 and K. Mamoni, *op.cit.*, p. 374.

22. K. Vakalopoulos, *op.cit.* (see note 18), pp. 24, 122.

23. D. Quataert, *op.cit.*, p. 800.

24. K. Papathanassi-Mousiopolou, *op.cit.*, p. 168.

the railway line did constitute a positive exogenous cause of local endogenous development, even if its effect was less than had been expected.

Most of the railway network was established during the years 1870 to 1890, the objective being to serve Constantinople's communication with Europe and Thessaloniki. Thus the railway line partly followed the route of the two main road axes, setting out from Constantinople to Adrianoupolis, and there branching off in two directions: towards Philipoupolis and Sofia, and towards Dedeagats, Komotini, Xanthe and Thessaloniki. However, the railway never did more than complement the road network, it did not replace it²⁵, while important harbours (Rhaidestos, Kallipolis) were not linked to the rail network at all.

3. Primary and secondary variables in the evolution of local development

Geopolitical space

Historical developments in the Thrace of the 19th century were influenced by the more general, advancing decline of the Ottoman Empire, and more particularly by the Russo-Turkish wars which, among other things, played a part in increasing Bulgarian influence in the region of northern Thrace²⁶.

In 1878 the Bulgarian hegemony broke away from the Ottoman Empire and the region north of the Aimos began gradually to look towards Sofia in administrative matters and towards the port of Varna in matters of trade. The territory of the Ottoman Empire, and of Constantinople, contracted still further after 1885, when Eastern Rumelia (northern Thrace) was annexed by Bulgaria. Thus the second phase (1870-1912), which commenced with the Ottoman state's endeavour to modernize the transport network and ended with the Balkan wars of 1912-1913, was a period of unsettled political conditions in the region. National frontiers were subjected to changes (resulting in a contraction of the territory of Ottoman Thrace) and the Ottoman state made unsuc-

25. Armo Mehlan, *op.cit.*, p. 382.

26. For the spread of Bulgarian influence in Thrace, see A. Karathanassis, *About Thrace*, Thessaloniki 1996, pp. 43-80, 86-89 (in Greek).

cessful attempts at widespread modernization. These two factors led to frequent changes in the sphere of economic influence of the population centres (hinterland) and in their orientation towards particular harbours or transport networks. A particularly interesting aspect of this period is the question of how well the major towns and cities were able to adapt their character in response to the benefits or obstacles created by the modernization of space, principally as it manifested itself in the new and more rational organization of transport systems.

There were more specific geopolitical factors which affected local development and the evolution of the transport network in Thrace during the 19th century, namely:

(a) The failure of the Ottoman Empire to match the pace of socio-economic development achieved in the countries of Europe during the 19th century (the century of the industrial revolution) affected the evolution of the transport sector²⁷.

(b) The capital of the Empire, Constantinople, never appears to have functioned as the local capital of the geographic unit of Thrace, nor even of the area of eastern Thrace. This role was played mainly by Adrianoupolis, to whose vilayet the major portion of eastern Thrace belonged. The vilayet of Constantinople was very small in extent, reaching only as far as Selyvria and Tsaltatza (Metrai). Although the influence of Constantinople extended far and wide across the territory of the Empire, in practical terms it barely affected the social and economic life of the region of the Empire geographically so close to it²⁸.

Geographical space

The most salient geophysical feature of Thrace is the great plain of eastern Thrace, occupying the interior of the Thracian peninsula, between the Black Sea and the Propontis. It is crossed by a dense network of rivers: the Evros and its major tributaries the Ergine, Tountza, Arda

27. D. Quataert, *op.cit.*, p. 798 ff.

28. Constantinople's imports were mainly brought in by sea. Not even grain was imported overland from the Thracian hinterland, despite its proximity, but carried by ship from other ports around the Empire, see T. Ihlan, "Legislation governing the external relations of the cities of the Ottoman Empire: An examination of settlement models", in *The Economic Framework of the Balkan Countries (15th-19th Century)* (ed. S. Asdrachas), Athens 1979, p. 481 (in Greek).

and Erythropotamos, as well as a host of smaller tributaries. This network of waterways provides ample resources for irrigation of the fertile, agricultural land of the region, although the available technological means of the 19th century do not appear to have been adequate to the task of harnessing these resources.

At the end of the century the appearance of the Thracian plain had much in common with the Asian steppes²⁹ and was not equipped to foster the development of a dense settlement network. Great tracts south of Ergine remained sparsely populated, without any notable urban centre.

To the north-east the plain was bounded by the long, regular, wooded range of hills known as the Strantza, an obstacle to communication with the shore of the Black Sea. The Holy Mountain to the south-east likewise made communication difficult with the Propontis. However, the most important reason for the isolation of eastern Thrace from the Black Sea was the fact that the coast from the Bosphorus as far as Pyrgos in eastern Rumelia (Burgas) offered no suitable berth for ships to moor in. The coast of the Bosphorus consisted of steep cliffs, its only safe anchorage the harbour at Constantinople itself. Just as inhospitable were the shores of the Propontis, with the exception of the peninsula of Kallipolis. To the north and north-west, however, the Thracian plain enjoyed unimpeded communication with the valley of the Upper Evros and with the plains of north-eastern Bulgaria.

The isolation of the flat interior of eastern Thrace from the sea, a result of the lack of natural harbours and the obstacle presented by the coastal ranges of hills, combined with the favorable climate to encourage the growth of settlements whose labours were directed more to agriculture than to trade.

The picture of the ecological environment is quite different in western Thrace, where two distinct geographical unities can be discerned: the fertile coastal plain running down to the Aegean coast, and to the north the Rhodope mountain range, a thickly wooded, sparsely populated region, its terrain starkly contoured and almost devoid of land fit for culti-

29. It was "a treeless plain resembling the steppes of Asia Minor, consisting for the most part of rocks and sand", yet there were "here and there fertile parts of rich-colored earth" (K. Mitsopoulos, *op.cit.*, p. 36).

vation. For western Thrace communication was easiest with eastern Macedonia to the west and with eastern Thrace and Constantinople to the east.

Socio-economic space

Throughout the whole 19th century the geographical region of Thrace formed a battleground for clashes in the Russo-Turkish wars and the various nationalist conflicts between Turks, Greeks and Bulgarians. Apart from the political problems, the geopolitical instability had in its turn an adverse effect on socio-economic development³⁰.

The primary sector was the arena for competition between the Turkish, mainly feudal system of land tenure and the newly emerging urban and rural capitalism³¹, while alongside them there continued to exist the traditional rural smallholdings. In the secondary sector, industry remained at the level of small-scale crafts and manufacturing of purely local significance³². In the tertiary sector the market was regulated largely by the penetration of European capital: industrial and colonial products were imported into Thrace, while the local agricultural produce was exported. European trading houses had established themselves at the ports and large towns and cities of the region, but commercial capitalism was unable to penetrate systematically into the agricultural hinterland and the rural centres of Thrace. The difficulties encountered by attempts to penetrate the interior, and the poor development of social and productive forces, both played a crucial role in delaying the modernization and urbanization of the settlement network of Thrace in the 19th century. These factors were to a significant extent due to the absence of a satisfactory transport network. Thus the settlements of the region did not enjoy the industrial development³³ which was occurring across the rest of

30. N. Todorov, "La révolution industrielle en Europe Occidentale et les provinces balkaniques de l'Empire Ottoman; Le cas bulgare", in *La Révolution Industrielle dans le Sud-Est Européen-XIXs*, Rapports présentés en Colloque International de la Commission de l'AIESEE sur l'Histoire Sociale et Économique, Hamburg 23-26 Mars 1976, p. 153.

31. N. Todorov, *op.cit.* (see note 8), pp. 275-281 and H. Inalcik, "Formation of Capital in the Ottoman Empire", in *The Economic Framework of the Balkan Countries (15th-19th Century)* (ed. S. Asdrachas), Athens 1979, p. 522 (in Greek).

32. The importing of agricultural tools and machinery from Europe began towards the end of the 19th century (K. Papathanassi-Mousiopolou, *op.cit.*, p. 240).

33. The insecurity of the region was one of the reasons preventing the middle classes of

Europe, but remained engaged mainly in primary and, to a lesser extent, in secondary production³⁴.

Sea communication made a crucial contribution to the commercial and industrial development of the coastal cities and towns of the Propontis and the Aegean. Farther inland, with the exception of Adrianoupolis, which is a classic example of a large town owing its development to its privileged position in relation to the transport network, the large settlements of the Thracian interior seem to have evolved rather as centres of local primary and secondary production, and to have created their own focal points of endogenous development, but with no broader sphere of influence.

Apart from the large towns of the interior (Adrianoupolis, Saranta Ekklesies, Komotini, Xanthe, Didimoteicho) and the important harbours (Rhaidestos, Kallipolis, Ainos, Dedeagats) other centres of attraction for economic activity were the great annual commercial fairs held mainly in small towns and large villages³⁵: Ouzountzova, Lule Burgaz, Tsataltza, Medeia, Makrochori, Selyvria, Peristasi, Malgara and Soufli. The seasonal pattern of fairs combined with the network of the main caravan routes to form a comprehensive economic circuit which made a vital contribution to local development³⁶.

In the years following 1872 the laying of the railway lines and the establishment of European commercial agencies at the rail stations led to the decline and eventual disappearance of both the fairs and the caravans³⁷, the disappearance in other words of an economic structure which had endured for many generations, and which was not replaced by any alternative means of feeding wealth back into the local economy.

From around the middle of the 19th century it is possible to identify,

the Balkans from investing in industry. See N. Todorov, *The Balkan City 15th-19th Century*, vol. B, Athens 1986, p. 644 (in Greek).

34. E. P. Dimitriadis - G. P. Tsotsos, "A study of the settlement network of Thrace during the second half of the 19th century", *Scientific Year-Book of the Department of Architecture*, Polytechnical School, Aristotle University of Thessaloniki, 1999 (in Greek).

35. Zotos Molottos, *op.cit.* (see note 10), pp. 522, 543, 617; K. Mamoni, *op.cit.* (see note 5), p. 375 and K. Vakalopoulos, *op.cit.* (see note 5), p. 461.

36. S. Asdrachas, "Hellenism's situation in the period 1669-1821: Economy", in *History of the Greek Nation*, vol. 11, *Hellenism under Foreign Domination (Period 1669-1821): Turkish Domination-Latin Domination*, Athens 1975, pp. 172-173 (in Greek).

37. K. Mamoni, *op.cit.*, p. 375.

using as our criteria the concentration of productive activity, the existence of specialized economic activity and the possibility of sea transport, three economic-geographical zones manifesting early signs of positive development³⁸. This zoning enables us to make a first, basic division of the territory in terms of local development —a development which was to evolve and mature in quality towards the end of the century, especially after the technological integration of the railway network.

Settlement space

The following communities had a population greater than 10,000 during the second half of the 19th century³⁹: Adrianoupolis (100,000), Rhaidestos (30,000), Saranta Ekklesies (20,000), Komotini (15,000), Kallipolis (14,000), Xanthe (10,000) and Didimoteicho (10,000).

Of the seven large Thracian towns mentioned above only one (Adrianoupolis) is sited on the international, diagonal road artery leading to Sofia, and three are sited on the secondary road from Thessaloniki to Constantinople (Rhaidestos, Komotini, Xanthe). The remaining three large population centres (Saranta Ekklesies, Kallipolis, Didimoteicho) are some distance removed from these two transport axes.

The settlement network in eastern Thrace does not appear to have developed under the influence of the two major road arteries, since we can observe no particular concentration of large settlements along the course of the two axes. Nor is there any greater degree of urbanization to be observed in those settlements which are sited on the two axes. What we see in fact are a series of medium-sized settlements, their population ranging from 3,000 to 7,000, engaged mainly in farming and not

38. E. P. Dimitriadis - G. P. Tsotsos, *op.cit.* (see note 34). The first of these zones covers the Kallipolis peninsula and the coast of the western Propontis, where Greeks dominated the population and development could be seen in all three sectors (primary, secondary, tertiary) of the economy. The second occupies the coast of western Thrace and the lower part of the Evros, showing development in the primary and secondary sectors, as well as important harbours (Dedeagats, Ainos). The third reaches into the interior of the Thracian plain and, centred on Adrianoupolis, includes population centres displaying vigorous development, mainly in the primary and secondary sectors.

39. E. P. Dimitriadis - G. P. Tsotsos, *op.cit.* (see note 34). The figures given are an approximate average of the various estimates of population. In many cases the changes in population were the result of the historical development of the transport network.

displaying any signs of particular commercial or manufacturing development. These settlements are, along the Constantinople - Adrianoupolis axis: Tyroloe (Corlu), Lule Burgaz, Baba Eski, Moustafa Pasa (Svilengrad), and on the Constantinople - Thessaloniki axis: Aïnatzik (Inetzik), Malgara, Kessani, Ypsala and Ferrai.

In fact, significant growth in population and economic development, as well as a greater degree of urbanization, is to be seen in the regions to the side of the two axes: to the north (the area around Saranta Ekklisies) and to the south (the area of the Kallipolis peninsula and the coast south of the Holy Mountain), rather than in the settlements along the route of the two axes.

The network of rivers, where activity seems to have been confined to transport along the Evros, does not appear to have had any serious influence on the distribution of population, certainly not as much as the network of transport by sea. This would appear to confirm the observation made by Tekeli Ihlan⁴⁰, that the cities of the Ottoman Empire dependent on sea transport reached a much higher level of development than those dependent on transport by land.

A special case is presented by certain mountain communities of the Holy Mountain, their population almost exclusively Greek, such as Scholari, Avdimi and Intzekioi⁴¹. These communities evolved into market towns with a considerable level of commercial and manufacturing development, despite the fact that they never became large population centres and were far removed from the transport networks.

Another parameter to be taken into account in establishing the degree of urbanization and the form of development is the existence of powerful Hebrew and Armenian minorities, since it was these two ethnic groups who engaged almost exclusively in commerce and banking. Apart from the commercial centre of Adrianoupolis, the largest (in both percentage and absolute terms) Armenian and Hebrew communities were to be found in those harbour settlements with the largest population: in Rhaidestos and Kallipolis⁴², but not at the major transport nodes

40. T. Ihlan, *op.cit.* (see note 28), p. 487.

41. M. Maravelakis - A. Vakalopoulos, *The Refuge Installations in the Area of Thessaloniki*, Thessaloniki 1955, pp. 140-141, 378-386 and 449-454 (in Greek).

42. E. P. Dimitriadis - G. P. Tsotsos, *op.cit.* (see note 34), with relevant bibliographical references.

of the Thracian interior, such as Lule Burgaz and Kessani.

Generally speaking, the Thracian settlements did show some development of manufacturing production, but many important centres of population continued to function as centres for gathering the fruits of primary (agriculture and livestock breeding) production, and manifested no signs of industrial development. In this sense they did not deviate, throughout the 19th century, from the classic model of the Balkan town⁴³.

The growth of the Thracian population centres was influenced by the historical development of the transport network: certain settlements benefited from their geographical proximity to the railway, while others went into decline on losing the advantages of the transport node or busy harbour to which they had owed their growth. There were also settlements whose growth took place without reference to their position on the transport network, as well as others who never advanced beyond the level of an agricultural market town, even though they enjoyed a privileged position on the network⁴⁴.

As a rule the large settlements which made up an urban system with smaller, loosely dependent agricultural communities formed on the basis of local geographical and other conditions, functioned within the framework of each of the development zones we have identified, usually with positive, but not spectacular, results.

4. Location of development zones

Criteria for evaluation

We can use the main parameters of evolution in local development towards the end of the 19th century to discern nine geographical unities

43. E. P. Dimitriadis - G. P. Tsotsos, *op.cit.* (see note 34), especially on the typological model known as the "Ottoman market town", see E. P. Dimitriadis, *Yannina: From the "Ottoman Market-Town" to the "Agency-Town". The Vilayet of Yannina in the 19th Century*, Thessaloniki 1993, p. 89 (in Greek).

44. These communities benefited from their geographical position as staging posts for the caravan traffic (hotels, inns, imaret) and later, as railway stations and locations for the European commercial agencies. As the second half of the 19th century advanced their importance declined, mainly as a result of the spread of steamship transport. Thus, for example, the steamship route from Rhaidestos-Irakleia-Selyvria, introduced in the middle of the century, led to the abandonment of the old station of Kioutsouk Tsekmetze, see K. Vakalopoulos, *op.cit.* (note 5), p. 500.

or zones (Table 1), which will incorporate those Thracian settlements with a population greater than 3,000, but not include the metropolitan population centre of Constantinople. The defining criteria for the purposes of establishing the zones⁴⁵ are the four variables of local development (geopolitical, geographical, socio-economic and settlement space) which have already been examined, in the specific form they take —positive, negative, or neutral— in each zone. At the same time we examine the fifth variable (transport network), which concerns the geographical proximity of each zone to the overall transport system, i.e. the two main road arteries, the rail network and the possibility of transport by sea.

The evaluation of the geographical zones of development which we have identified can be set out on a matrix (Table 1) offering a vertical grading of the five interdependent variables (I-V) identified and described in our approach. The horizontal grading of these variables for each zone reflects the cumulative weight of the various evaluation factors, thus demonstrating the differentiation between the zones (more or less developed). The basic criterion determining prospects for development seems to come from the variable in column (V), showing the relationship in terms of proximity of each zone to the transport network prior to 1870, and, especially, to the rail network after 1870.

The grade assigned to the variables in the vertical columns is determined empirically for each case as follows:

Geopolitical space (I): Mainly from the point of view of the political stability of the zone (influence of frontier changes in the border areas)

- + stability
- 0 intermediate situation
- instability

Geographical space (II): From the point of view of positive or negative natural and geographical local conditions

- + favorable conditions for communication and development potential
- 0 intermediate situation
- unfavorable conditions

45. R. J. Johnston et al., *op.cit.*, pp. 373-374.

Socio-economic space (III): From the point of view of the performance of the economic sectors of production (primary, secondary, tertiary)

- + significant development of all three production sectors
- 0 intermediate situation
- development in mainly the primary (only) sector of production

Settlement space (IV): From the point of view of the density and significance of the local urban network

- + local network, with own hierarchy, including major towns
- 0 intermediate situation
- ruralized network of small settlements

Transport network (V): From the point of view of access to the transport network

- + positive accessibility
- 0 intermediate situation
- isolation

Table 1. Zone evaluation table

	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>	<i>V</i>	
<i>Zones</i>	<i>Geopolitical space</i>	<i>Geographical space</i>	<i>Socio-economic space</i>	<i>Settlement space</i>	<i>Transport network before 1870</i>	<i>Transport network after 1870</i>
I	+	+	0	0	+	+
2	+	+	-	-	+	+
3	0	+	+	+	0	-
4	+	+	-	-	+	-
5	+	0	+	+	0	0
6	0	-	-	-	-	-
7	-	+	+	+	+	+
8	+	+	+	+	+	+
9	+	+	+	+	+	+

Definition and description of development zones

Zone 1. Includes the northern coast of the Propontis from Constantinople as far as Rhaideustos, as well as the strip of the interior as far

as the line of the watershed between the Propontis and the Black Sea. It is of all the regions the one most greatly favored by the transport network, crossed as it is by both the main Thracian road arteries. It includes a series of minor harbours such as Irakleia, Selyvria, Kallikrateia, and a number of small towns in the interior (Tyrolae (Corlu), Tsanto, Tsaltza), which never advanced beyond the level of a local agricultural centre. The construction of the railway had no effect on the development of these communities, with the exception of the special case of the transport node of Rhaidestos, on the northern shore of the Propontis.

Rhaidestos enjoyed particularly rapid development during the 19th century (becoming the second city after Adrianoupolis) because of its strategic geographical position⁴⁶. However, it began to lose its economic importance in the years after 1872, when the railway line passed by to the north of the town⁴⁷.

Zone 2. Includes the central part of the plain of eastern Thrace. North of the river Ergine, the network of tributaries is more dense and the plain more densely populated, while south of the Ergine the region is more sparsely populated. The population centres along the road axis Constantinople - Adrianoupolis, such as Lule Burgaz, Baba Eski, Hafsa, as well as in the southern section (Chairempolou, Ouzoun Kioprou) remained insignificant agricultural market towns, still engaged in primary production. Ouzoun Kioprou, for example, despite its fertile land⁴⁸ and strategic geographical position, with the bridge of the same name over the river Ergine ensuring that all traffic wishing to cross the river had to come through the town, had only some 4,000 inhabitants, many fewer than the nearby towns of Soufli and Didimoteicho. Zone 2 is one of the least urbanized zones, a characteristic example of a region which remained untouched by whatever modernizing trends were at work in the Thrace of the 19th century.

46. Ilber Ortayli, "Rodosto (Extension en Marmara de la Via Egnatia) au XVI^e Siècle", in *The Via Egnatia under Ottoman Rule 1380-1699* (ed. E. Zachariadou), Rethymnon 1996, p. 194 and A. Polyzoides, *Geographical Studies Past and Present: A Comparative Study, Largely in Association with the History of the Nations*, Athens 1859, p. 131 (in Greek). See also A. Karathanassis, *op.cit.* (see note 26), p. 123, notes 1, 2, 3.

47. K. Vakalopoulos, *op.cit.* (see note 5), pp. 491-492 and A. Samothrakis, *Geographical and Historical Dictionary of Thrace from the Early Ancient Times to the Conquest of Constantinople (1453)*, Athens 1963, p. 446 (in Greek).

48. I. Michailides, "Makra Gephyra", *Thrakika* 27 (1958) 79 (in Greek).

Zone 3. To the north of the previous zone, on much less regular terrain, in the foothills of the low Strantzha range at some distance from the basic transport network (road and rail) we can identify a group of settlements with a predominantly Greek population. This is a region characterized by significant development of the primary and secondary sectors, evolving independently of the basic transport network and containing the third largest population centre in Thrace, the town of Saranta Ekklisies.

Zone 4. Extends in a line along the route of the road artery Constantinople - Thessaloniki, second in importance in Thrace, and contains communities whose population is predominantly Muslim and where there is no evidence of any other than primary production, except in the case of the transport node of Kessani, which is characterized as a commercial transit centre⁴⁹, and where there is some limited activity in tertiary production. The settlements in this zone owe their limited development to the transport network and are, together with the corresponding settlements in zone 2, the least urbanized of the whole region.

Zone 5. Includes the peninsula of Kallipolis and the mountain area of the Holy Mountain. The ecological characteristics of the area are quite different from those of the previous zones 2, 3 and 4: a long stretch of coastline, irregular terrain, fertile in places and with lush vegetation. This zone manifests notable development in primary, secondary and tertiary production (mainly in trade and shipping), even though it is geographically isolated and remote from the main road routes of Thrace⁵⁰. It had the advantage, however, of safe harbours, and also the fact that the harbour of Kallipolis (the best natural harbour in Thrace) lies closer to the Asia Minor coast than any other. Zone 5 appears to be the most intensely urbanized of all the zones, having a large number of small towns which develop without outside assistance, their only advantage being their access to communication by sea.

Zone 6. This is geographically the most isolated area of all, far re-

49. Traian Stoianovich, "The conquering orthodox balkan merchant", in *The Economic Framework of the Balkan Countries (15th-19th Century)* (ed. S. Asdrachas), Athens 1979, p. 211 (in Greek).

50. Kallipolis enjoyed excellent harbour facilities (M. Maravelakis - A. Vakalopoulos, *op.cit.*, pp. 414-415) but the road network was in poor repair (K. Vakalopoulos, *op.cit.* (see note 18), pp. 134, 137).

moved from the transport network, its coastline bare of harbours, its terrain irregular, its ecological context strongly reminiscent of the Black Sea region. The Strantzha mountain range isolates it from the Thracian plain and hampers communication. Small local centres of development in primary production, such as the iron mines in Samakovo, and in tertiary production, such as the commercial shipping activity in Agathoupolis, do not affect the overall picture of the zone, conspicuous by the absence of any noteworthy settlement network.

Zone 7. This zone owes its considerable development to its excellent geographical position. It includes the town of Adrianoupolis, whose development can be attributed to its exceptional geographical characteristics as a transport node and its relatively great distance from Constantinople, which allowed the town to develop with relative independence in its own hinterland region. The frontier changes of 1885 turned Adrianoupolis into a border town⁵¹. Thus during the second phase of transport development political reasons reduced the importance of the transport lines crossing zone 7. This condemned Adrianoupolis to decline⁵², even though up until that time the city had temporarily benefited from the railway link (1872)⁵³.

Zone 8. Stretches along the lower reaches of the river Evros and includes communities showing development in the primary and secondary sectors (Didimoteicho, Soufli, Ferai), and in one case (Ainos) in the tertiary sector. The settlements are laid out along the road artery Adrianoupolis - Ainos, a main distribution conduit for merchandise during the first transport phase of the 19th century (1800-1870). Ainos, Thrace's major export harbour during the first transport phase⁵⁴, went into decli-

51. With the change of borders Adrianoupolis lost about a half of its sphere of influence as a settlement centre. The large plain to the north of the city was annexed by the Bulgarian state, and the produce of the Evros valley now carried on down to the harbours of Pyrgos and Varna on the Black Sea (see also A. Karathanassis, *op.cit.*, p. 89).

52. A. S. Anastasiades, *Geography of the Balkan War: Epirus-Thrace-Macedonia* (without place), 1912, p. 39 (in Greek).

53. K. Vakalopoulos, *op.cit.* (see note 5), p. 441. On the development of Adrianoupolis in the 19th century see also A. Yerolympos, "A contribution to the topography of 19th century Adrianople", *Balkan Studies* 34 (1993) 50.

54. From the late 18th century trade and shipping activity at Ainos had been growing in a way comparable to that of the Aegean islands (Hydra, Spetses, Psara, etc.). See also V. Sphyroeras, "Review of Hellenism per regions. In the traditional space: Thrace", in *History*

ne during the second phase when its anchorage was transformed into a lagoon by alluvial deposits from the Evros⁵⁵. The demise of the harbour of Ainos, in combination with the laying of the new railway line from the opposite bank of the Evros, encouraged the development of a new population centre in the zone, Dedeagats, which became the new seaport for Adrianoupolis, not only absorbing the commercial traffic diverted from Ainos, but even taking part of its trade from Rhaidestos⁵⁶. After the frontier changes of 1878 and 1885 in the Thracian interior, the decline of Adrianoupolis also affected the commercial traffic passing through Dedeagats, which now lost some of its influence in the hinterland⁵⁷.

Zone 9. Includes the *kazades* or Ottoman administrative districts of Xanthe and Komotini, both of which boasted development in the primary and secondary sectors. The zone was served by the road artery Constantinople - Thessaloniki and by the rail network, while also enjoying access to communication by sea (Porto Lagos). Zone 9 is unusual in that it falls into two distinct and specific eco-geographical areas, of which the two centres of population (Xanthe and Komotini) make up respectively the centres of economic activity. The change in rank of Xanthe as a population centre (until 1850 it had taken second place to Genesea, achieving first rank in the years after that date) appears to be a matter of the internal balance of the zone, influenced to a small extent by the transport network of Thrace. The passing through zone 9 of two almost parallel transport axes (road and rail), contributed to a quantitative but not qualitative change in the economic development⁵⁸ of Xan-

of the Greek Nation, vol. 11, *Hellenism under Foreign Domination (Period 1669-1821): Turkish Domination - Latin Domination*, Athens 1975, p. 194 (in Greek).

55. V. A. Mystakides, *Geographical Handbook*, Constantinople 1894, p. 124 (in Greek).

56. K. Mitsopoulos, *op.cit.*, p. 20.

57. E. Vourazeli-Marinakou, *The Greek Guilds in Thrace during the Turkish Domination*, Thessaloniki 1950, p. 72 (in Greek); A. Samothrakis, *op.cit.*, p. 51 and K. Vakalopoulos, *op.cit.* (see note 5), p. 494.

58. The coming of the rail link gave the already developing towns of Xanthe and Komotini the opportunity to extend distribution of their tobacco crop to both Thessaloniki and Constantinople, which provided significant impetus to further development. See J. Kizis, "Thrace", in *Greek Traditional Architecture*, vol. 8, Macedonia B' - Thrace, Athens 1991, p. 184 (in Greek) and A. Karadimou-Yerolymou, *Between East and West: Cities of Northern Greece in the Period of the Ottoman Reforms*, Athens 1997, p. 244 (in Greek).

the and Komotini, without affecting their position as the main settlement centres of the area.

5. Conclusions

Our research has indicated that the Thrace of the late 19th century manifested a "potential development" which was generated by the opposition in economic relations between the feudal and the capitalist mode of production. The main agents of this development appear to have been the "bourgeois" commercial and industrial classes with links to sea or land transport businesses or professions.

Certain individual conclusions which emerge from the zoning of the region according to development are the following:

a) From evaluation of the data in Table 1 it appears that zones 7, 8 and 9 constitute a category which is making a positive beginning on the road to development, while zones 2, 4 and 6 are trapped in an area of no development at all. Of the other zones, 3 and 5 are moving in the direction of what will probably be slow-paced development, despite the problems caused for them by the railway network. Zone 1 is actually witnessing the disappearance of the advances it had made before the coming of the railway.

b) From a study of the number of settlements with more than 3,000 inhabitants, and the total population of these settlements in zones 2, 3, 4 and 5, the following figures emerge⁵⁹:

Zone	Number of population centres	Total number of inhabitants of pop. centres	Position in regard to basic land transport network
2	4	18,000	Central
4	2	14,000-17,000	»
3	5	24,000-33,000	Non-central
5	10	56,000-63,000	»

In zones 2 and 4, which occupy the interior plain of eastern Thrace and enjoy a privileged position in respect of the basic land transport ar-

59. E. P. Dimitriadis - G. P. Tsotsos, *op.cit.* (see note 34).

teries, no large settlements develop and the economy fails to advance beyond primary production. The opposite is the case in zones 3 and 5, which do not enjoy easy access to the basic land transport network but manifest relative economic and demographic growth. In other words we observe that in the area covered by the central zones 2 and 4 (which are among the non-developed zones), there are in all 6 population centres with a total population of 32,000-35,000, while in the area covered by the remoter zones 3 and 5 (among those zones undergoing development), there are 15 population centres with a total population of 80,000-96,000.

c) From an ethnic and social perspective it can be observed that in zones 3, 5 and 8, with their predominantly Greek population, there is relative development of the secondary and tertiary sectors of production (modernization), while in zones 2 and 4, where the Muslims are in the majority, primary production remains predominant (tradition)⁶⁰. The phenomenon is more pronounced at the key harbours (Ainos, Dedeagats, Rhaïdestos, Madytos, Myrifiyto, etc.)⁶¹, and at the settlements where there was development in commercial shipping activity (Agathoupolis, Ainos, Madytos, Ganos, etc.). In these the population was predominantly Greek⁶².

60. Generally speaking the export trade of Thrace in the 19th century was in the hands of Greeks, while imports were controlled by both Greeks and Jews (K. Mamoni, *op.cit.*, p. 375). From as early as the 18th century 70% of all trade (import and export) had been in Greek hands (A. Antoniadis, *La Puissance de l' Hellénisme et le Rôle Économique des Grecs en Thrace*, Paris 1919, pp. 15ff, and N. Svoronos, *Le Commerce de Salonique au XVIII Siècle*, Paris 1956, p. 354). As to the form of transport used to convey the merchandise, the sources maintain that the sea trade was exclusively controlled by Greeks, while of the distribution of goods by land in the Thracian interior, whether by road (caravans) or rail, 60% was controlled by the Turks, 30% by the Greeks, and 10% by other groups (Jews, Armenians, etc.) (K. Papathanassi-Mousiopolou, *op.cit.*, p. 242). Furthermore, from the 18th century onwards, of all manufactured products in Thrace 70% were produced by Greeks, 20% by Turks and 10% by other ethnic groups (K. Papathanassi-Mousiopolou, *op.cit.*, p. 142). For differences between the ethnic groups of Thrace in regard to economic activities, see K. Vakalopoulos, *op.cit.* (see note 18), pp. 32-34, 144 and K. Vakalopoulos, *op.cit.* (see note 5), p. 131. For the ethnological composition of certain areas of eastern Thrace in the 19th century, see A. Karathanassis, *op.cit.* (see note 26), pp. 21-31 and 104-105.

61. An exception to the rule was Kallipolis, an important harbour, but one where the population was predominantly Muslim.

62. According to the Frenchman N. Biancone, *Ethnographie et Statistique de la Turquie*

d) The presence of the great metropolis and capital, Constantinople, does not permit the area in its immediate hinterland to develop major poles of economic activity, however much these may benefit from the transport network. The closest large town (with a population of over 10,000) to Constantinople is Rhaidestos, a harbour with excellent access to both the sea and (before 1872) the land transport networks.

e) There is evidence of a phenomenon similar, on a relative scale, to that seen on the Greek mainland peninsula⁶³ in the 18th and 19th centuries: Prosperity is to be seen in local commercial and manufacturing centres located in semi-mountainous regions remote from the basic transport axes and from the capital. Similar communities in zone 5 are the commercial and manufacturing centres of the Holy Mountain: Scholari, Avdimi, Intzekioï, while in zone 3 there are the market towns in the western foothills of the Strantzia range: Skopos (Uskup), Skopelos (Eski Polos), Petra, etc. These local centres make a positive contribution to the development of the zone to which they belong.

f) Large communities such as the harbours (Rhaidestos, Ainos, Dedeagats) or transport nodes (Adrianoupolis), dependent on communications, are affected decisively (whether positively or negatively) by changes caused by geopolitical events in the broader Balkan hinterland or Europe as a whole, and in turn affect the development of their own environs. The endeavour by the Ottoman state to modernize transport systems in Thrace (exogenous cause) towards the end of the 19th century, did not yield the anticipated results in terms of the modernization of the population centres, owing to endogenous reasons, in so far as such results are measurable by the development variables we have examined. A crucial role is played here by the overall geopolitical context, e.g. the change in borders and the removal of northern Thrace from the Ottoman Empire. This political event had an adverse influence on the harbours and population centres located at key transport nodes in Ottoman Thrace, as well as on the overall development of the region.

d' Europe et de la Grèce, Paris 1876, p. 40, along the Thracian coast only Greeks were involved in the grain trade and the Greeks were also the exclusive importers and exporters of consumer goods (K. Papathanassi-Mousiopolou, *op.cit.*, p. 178, from which the above bibliographical reference is taken).

63. E.g. Siatista, Ambelakia, etc.