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ACCOMPLISHMENTS OF TRANSPORTATION GEOGRAPHY IN SERBIA AND WORLD

Abstract: Considering that even in the latest two decades old period (1990-2007) an adequate university knowledge on Transportation Geography was not known enough, more in Serbia but less in the surrounding countries, we focused our efforts on its scientific explanation through chronological perception of such scientific discipline from general, special and regional point of view in the areas of Serbia and treated parts of the western Balkans. Through the idea made of a series rarely known treatments of General, Special and Regional Transportation Geography, the demands of set goal were to a certain degree satisfied, so the emptiness was greatly filled up in the cognitive range of such noticeably esteemed university subject from the system of geographic sciences.

Key words: General Transportation Geography, Special Transportation Geography, Regional Transportation Geography, university knowledge from Transportation Geography.

Introduction

It is almost unknown to scientific public of Serbia that the first narrative on Transportation Geography had been presented even before the end of the first half of the 19th century. More precisely, within his own views on former anthropogeography Kolh (1841) presented some contents of Transportation Geography because at that time he discussed on the transportation among human settlements in dependence on (made) forms of Earth's surface. Since then almost two centuries had passed when Götz (1888) spoke about traffic roads in the service of the world trade development. At that time the first chronological survey was made on transportation of that century since Huber (1893) spoke on the historical development of transportation 'networks' to the beginning of the last decade of mentioned century. Ratzel (1897) had given so much significance to Transportation Geography that even in his more voluminous work "Political Geography" he put the subtitle Geography of Transportation, which soon after indicated the same be 'treated' as a special scientific discipline in the area of geographic notion.

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Even then with some obtained elements from the established status of a separate scientific subject, Transportation Geography was expressed fully through public remarks of interested geographers with anthropogeographic specialization almost in the first decades of the 20th century. In that sense, the lectures were noticed (Richthofen, 1908) on the role of Transportation Geography within the interpretation of general population. The acquired knowledge on the basic 'characteristics' of geography of trade and traffic circles, i.e. the main roads and problems of world transportation were presented soon after (Deckert, 1909; Henning, 1913). Inspired by partially conceived plan (Ludwig, 1911) of Transportation Geography contents on the level of former notions about that scientific discipline, Hassert (1915) with certain unsaying made the first united structure of General Transportation Geography research subject. After the First World War the same was at first supplemented (Blum, 1921) by the review of 'accomplished' technical characteristics of various means of transportation, in order that later also followed the historical notion (Hetner, 1927) of its previous knowledge and available research methods. Leaning to a great extent on the official statistical surveys of many countries Sapper (1929) formed General Transportation Geography in such a way that it unavoidably concerned one part of geography of general economy, which later gave many reasons the world trade and world dimensioned transportation be connectively observed (Friedruch, Schmidt, 1930) through the prism of at that time known methodic operations and statistical data of those scales.

By a particular respect of the maritime transportation trends, in a domain of Transportation Geography Poparic (1932) made a survey on 'the history of navigation' in two volumes as the first university reference book (of this scientific discipline) on the area of former Yugoslavia. Out of the Yugoslav regions of that time, and most probably of the whole Balkans, too certain 'segments' of General Transportation Geography were meeting each other over adequate documents made (Hassingier, 1933; Brunhes, 1934) for the realization of university teaching from economic-geographical themes. They were mostly incorporated within the frames of French teaching in the area of "Geography of man", i.e. previously based on separate conception about the relations of environment and man-known at that time as geographic possibilism. Inspired by former knowledge of this kind Dugacki (1936) soon made the first more complete attempt of geographic interpretation of the development and distribution of (road, railroad, river, maritime and air) transportation in world determinations, but also in the former Yugoslav regions. Later the similar conceptual structure of Transportation Geography appeared, since Hacaturrov (1939) distribution of transportation in the capitalistic countries and the Soviet Union pointed not only to the first contents of this scientific discipline but to the

improvement of its corresponding scientific working methods in the past gnoseologic treatments.

Accomplishments of Transportation Geography in Serbia and out of it to the Middle of the 20th Century

On analytical-synthetic findings about transportation as part of mentioned "Geography of man" some reference-textbook works were also published after the Second World War. Among them chronologically excels the report (Sorre, 1948) on those transportation circulations- whereon mentioned geographic explanation rests in the range of generalized communicativeness of human labor. By the last publishing of Bromek's (1951) paper (Geography of transport) Transportation Geography of that time began not only to analyze the social-economic conditions more seriously but also to study the communicativeness of geographic milieu, respecting the same as inevitable factors of transportation positioning. In that postwar period, on North American continent especially, as Dinic (1976) stated – particular attention was concentrated on geographic research of passenger and freight railroad transportation. Practical significance of these researches (Ulman, 1954), among others, could be seen as through the regime improvement in the circulation of goods in some towns so through the inspection of their transportation functions.

At the expiration of three years old period (Kscyzanowski, 1957) the theoretical-economic problems of Transportation Geography were also explained, by which it was gained a lot on the plan of this geographic discipline affirmation. At the same time a more complex analysis of many theoretical-methodological postulations of General Geography of the World Transportation was presented (Otremba, 1957), so this work was particularly significant for enriching the university knowledge on Transportation Geography. Furthermore Transportation Geography was more perceived on the basis of created theoretical views. Nikoloskii (1960) in his monograph (Geography of Transportation in the Soviet Union) synthetically analyzed the crucial postulates of theoretical-methodological foundations of Transportation Geography as adequately respected university scientific discipline.

Recent economic-geographic interpretations of transportation were presented (Berezowski, 1962) as inevitable branch of economy since it was especially pleaded that with Transportation Geography planned in that way not only the improvements and distribution of network and different (other) transportation

objects and centers should be researched but also the positioning of the gravitation regions of transportation in the field of transportation of various merchandise and variable number of passengers. Sarencev (1962) also stated that Transportation Geography should be in legalities of the development and distribution of the transportation network and the regime of their use in dependence on the effect of the natural environment factors and factors of the social-economic complex. Having in mind some previous scientific findings, and fully respecting the historical changeability of causes and effects of established relations among natural, economic, social and transportation phenomena in determined area, Pilic (1963) made the first big steps in Serbia in innovated explanation of Transportation-Economic Geography contents as university scientific discipline, originated as part of subjects of transportation specialization. As part of connecting university subjects of economic character, after three years old period a more voluminous textbook (Economic-Transportation Geography of SFRJ) was published in Serbia (Stevanovic, 1966) giving a survey of the whole European transportation together with a review of 33 most frequent railroad tracks of the former Yugoslav regions.

In the meantime, out of the area of the Balkans, as far as we know three works were published as textbook and reference book from different fields of treated subject matter. The main components of Regional Transportation Geography (ecology and state of equipment of transportation on major communications branches) had been presented (Clozier, 1963) before a solid presentation (Albano et al, 1964) of road itineraries mostly from Mediterranean part of Europe. The crucial methodological-theoretical characteristics of General Transportation Geography were also explained (Obst, 1965) which increased its affirmation among respected geographic disciplines. Efforts in innovating (Adamovic, 1967) the university knowledge in the field of General and Regional Transportation Geography were also made in Serbia. In a domain of Regional Transportation Geography (Strazicic, 1969), the study of Maritime-Economic Geography of World with new data was presented in the former Yugoslav regions. After several years, Regional Transportation Geography was also enriched by presented (Pavicevic, 1972) textbook on many subject matters from the scope of more informatively outlined Transportation-Economic Geography of Yugoslavia.

Studying Geography of Transport Wolkowitsch (1973) fixed the main point of his researches on solving the problems of transportation from the point of view of the means of transportation dependence on the key characteristics of the natural environment in greater dimensions. By argumentation of geographic facts and with logic of linking Malic (1974) wrote the first university reference

book from General Transportation Geography in former Yugoslavia. In the same year (1974) Adamovic presented Transportation-Economic Geography permeated with many economic premises, components and categories. From ethno-sociologic aspect, appreciably serious, original and extremely voluminous study (Sociology of Rural Transportation in Serbia) contributed the enriching of university knowledge in a domain of Special Transportation Geography of Serbia. The study was exclusively presented (Milosevic, 1975) on the basis of many years gathered and scientifically prepared data.

In the former five years long period as far as we know four university textbooks were published. Two works are mostly on General Transportation Geography, while the other two relate to Special Traffic Geography. Actually, mostly from the point of view of the last improved knowledge on the development of transportation branches, Transportation Geography of Europe and the rest world (Malic, 1976) were discussed in the form of textbook. Out of former Yugoslavia and Serbia, two monographs were published (Fochler-Hanke, 1976; Voppel, 1980) as part of Transportation Geography on the level of university knowledge, since they mostly were permeated by scientific postulates and statements necessary for the more complete interpretation of usual transportation-geographic problem. At that time the clear geographic interpretation of theoretical-methodological basis of Transportation Geography was more comprehensively presented (Dinic, 1976) in Serbia for the first time as respected scientific discipline in the system of geographic sciences and their branches. As stated in firmly constructed conceptual composition, with the commentary on transportation classification and elemental concepts as well, this presentation of Transportation Geography was placed right before the author's comprehension of Special Transportation Geography.

Even out of Serbia Transportation Geography had its position and adequate significance as acknowledged university subject, since it was considered in more concise (White, Senior, 1983) and broaden sense (Ihde, 1984), and all that in treatment of acquiring local (foreign) university education. Almost at that time university textbook (Bates, 1983) was formed where transportation as a branch of economy was completely observed from the aspect of economic postulates and parameters. At the same time university reading was also published in Yugoslavia (Strazicic, 1984) wherein, by the scope of maritime geography of the world-Regional Transportation Geography of such spatial characteristics prevailed. At the end of a half decade long period former Yugoslavia was fully included in demonstration of Regional Transportation Geography since Pavicevic (1990), after flexibly applied geographic system, incorporated

reasonable commentaries on former problem of transportation by its branches, limited by the territory of marked regions in the western Balkan Peninsula.

Transportation Geography contained seriously divided (Maier, Atzkern, 1992), very instructive and still much respected university 'teaching aid', which certainly was not of marginal influence for its study. It is for certain that even such knowledge on Transportation Geography was correlated with gnoseologic (cause-effect) constellations, so it was not at all unexpected that this scientific discipline was also explicated from the reading point of view of connecting branches from some of the scientific systems. Proceeding from a premise that transportation is exactly the meeting point of great and significant and above all dynamic changes Kostadinovic (1996) clearly, concisely and in scientifically based way worked out transportation law (subjects, obligations, securities, insurance and other legal-spatial regulations) and development strategy of transportation policy in all branches of communication system of former Yugoslavia by which he enriched meager domestic and foreign textbook literature on legal-spatial aspect of General Transportation Geography.

Malic (1998) gave a geographic-historical retrospect of transportation and afterwards he systematically explained general and concrete geographic-transportation factors (natural predispositions and social factors). With the last findings on the geographic-communicative characteristics of the condition and perspective of transportation trends of modern world the same textbook is imbued as with analyses of transportation and area so with strengthen reports on the development of transportation branches. On basis of a long interest, demonstrated through partial (terrain) notes and articles, but also with parallel usage of adequate literature statements especially those of encyclopedic character, the university reference book (Encyclopedic guide for auto tourists in Bulgaria) was carefully composed and widely accepted (Nikolov, 2001) in a domain of Special Transportation Geography. The same instructive work is divided into ten interesting explanations of so many road directions - tourist itineraries (Kalotina-Sofia-Haskovo-Andreevo; Dospat-Smoljan-Zlatograd-Ivailovgrad; Sofia-Dupnica-Blagoevgrad-Kulata; Sofia-Karlovo-Burgas; Sofia-Godec-Belogradcik-Vidin; Sofia-Mezdra-Pleven-Ruse; Sofia-Botevgrad-Veliko Trnovo-Varna; Vidin-Ruse-Silistra; Ruse-Kubrat-Dulovo-Tosevo and Durankulak-Sozopol-Nesebr-Rezovo), by which, from the aspect of 'tourist' transportation, considerable clarities were included in the university reports of such kind.

The most recent Transportation Geography study was testified in direct encirclement of Serbia and it is concerned the contents in two university

textbooks, mostly written for the purposes of university instruction of geographic and transportation-spatial specializations. Material of the *Soobracajna Geografija (Transportation Geography)* textbook is conceptually written in such a way that four chapters are united (Panov, Temjanovski, 2004), the first of which relates to General Transportation Geography, the second one to Special and the third chapter relates to Regional Transportation Geography of the World, while the fourth chapter interprets the whole development, basic characteristics and perspective of this geographic discipline in the Republic of Macedonia. Considering that modern Transportation Geography is inevitably testified in General and Special Transportation Geography the same was also mentioned in the (university) textbook (Pecelj et al, 2007), while in the statements that followed more attention was paid to rates in transportation through explications of global distribution systems of transportation services on the world market. Dealing with the area of former Bosnia and Herzegovina and by itself with the area of today's Republic of Serpska the textbook mentioned the forms of land (road and railed), maritime, air, postal and telecommunication transportation, what was necessary for understanding the supported forms of economy. Incorporation of both transportation and geographic information systems and corresponding knowledge on transportation trends on international conventions, declarations, agreements and protocols in the transportation trends and related communications brought to demonstration of certain gnoseologic innovations in the recent reports of the same type textbook materials.

Conclusion

Recent knowledge from various university textbooks, reference books and related works on Transportation Geography points to its ranges in foreign literature since this scientific discipline consolidated even in the last years of the 19th century. With some obtained elements from the established status of a separate scientific subject Transportation Geography almost in the first decades of the 20th century partially became known through public notes mostly of interested European geographers of anthropogeographic specialization. In the years after the Second World War, out of Serbia, Transportation Geography had been divided into Special and General Transportation Geography in dependence on whether it interpreted geographic branches geographically or treated, sometimes even different, theoretical-methodological postulates of transportation trends research of unequal scales and forms of demonstration. Considering that adequate university knowledge on Transportation Geography was not enough, more in Serbia, less in its surroundings, even in the previous (almost) two decades old period (1990-2007), we also put an effort on its scientific realization through chronological explanation of this scientific

discipline from general, special and regional aspect on the indicated areas of the western Balkans. By presenting a series of essays from General, Special and Regional Transportation Geography the emptiness in cognitive treatment of this quite respected university subject in the field of geographic sciences was to a certain degree filled up.

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