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The ecological transformation of a resettled area, pig herders to settled farmers in Central Serbia (Sumadija, Yugoslavia) during the 19th and 20th centuries

Joel Halpern

*University of Massachusetts, Amherst, jmhalpern@anthro.umass.edu*

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TRANSHUMANT PASTORALISM IN SOUTHERN EUROPE

Recent Perspectives from Archaeology, History and Ethnology

Edited by
LÁSZLÓ BARTOSIEWICZ and HASKEL J. GREENFIELD

BUDAPEST 1999

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The ecological transformation of a resettled area, pig herders to settled farmers in Central Serbia (Šumadija, Yugoslavia) during the 19th and 20th centuries

JOEL MARTIN HALPERN*

Introduction: a popularized past in the present

A vegetarian has a difficult time finding a suitable restaurant in Serbia—the featured dishes are meat, potatoes with varieties of pork a favorite as in the grilled skewer of meat known as ražnjici, the pork equivalent of šiškebab. Some of the folk restaurants now feature corn bread, proja, formerly a basic of the peasant diet and now a romantic speciality. These dietary patterns represent a cycling of time, a link to past patterns of livestock raising—of the herding of pigs in forests.

A tourist travelling through the countryside can sometimes happen on an old woman, watching a few sheep grazing on the remnants of common land by the roadside and sometimes spinning wool with a distaff as she performs this chore. In recent years there are fewer spinners but this remnant of earlier herding practices still continues. This scene has been a source for countless tourist photos over the post World War II years. Like the food in restaurants it harkens back to a former time but both of these activities serve quite different functions now than formerly.

Folk songs and the historical ecological setting

Popular folk music also represents a time warp. This includes popular "traditional" ballads such as, “Watching Sheep in the Jasenica Glen” (HALPERN 1967, 181-82):

Watching sheep down in the Jasenica Glen
Try, darling to come to me there,
Be careful lest mother see you,

* This paper was written in 1988 and presented in Zagreb at the 12th International Congress of Anthropological and Ethnological Sciences in July, 1988.
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So get up early with the sheep,
If you don’t know where I’m watching them
You will hear the sheep bells ringing
Across the road a brass bell is ringing
And there my sweetheart is moving with his flock.
He’s watching the sheep and playing his flute,
And my heart will not stand still

Of more recent origin and popular in the early post World War II period was, “Sumadija, My Birthplace” (HALPERN 1967, 290):

Šumadija, my birthplace,
You are like paradise,
Wonderful woods and mountains,
And everywhere meadows and valleys.
Through the meadows and on high,
Shepherds’ songs echo back,
My heart is happiest,
When the song is of Šumadija.

Established food habits, a contemporary peasant household economy emphasizing livestock and field crops, with the former including corn fed swine and sheep raised for both their meat and wool, set in a folkloric picture of gently sloping pastures, fields of corn and wheat with fruit orchards interspersed with small patches of black locust woods present a picture of a “traditional” and timeless peasant society. But this “timeless” scene is an outgrowth of drastic ecological changes in a non-repetitive linear time frame. These alterations took place in the 19th century and involved irreversible environmental alterations. These folk songs take as traditional a transformed environment not much more than a century old.

Focus of the paper

The purpose of this paper is to present a microstudy of ecological transformation in central Serbia in the 19th century, an area appropriately named Šumadija or “Woodlands.” The general outlines of the transformation of this area from one of dense oak forests in which pigs were pastured, to a region of rolling hills and meadows supporting an economy of mixed livestock raising and field crops is clear and well known. However, some of the process involved and the detailed implications of this transformation are deserving of further study. These changes do, of course, parallel analogous alterations taking place, at approximately the same time, in other parts of Europe and North America. These developments reflect improved agricultural technology and more intensive land use to accommodate a growing population and increased urban development.

A baseline of early travelers' accounts

A broad perspective on these innovations and a useful baseline is provided by the historian Traian Stoianovich, student of Braudel. Using medieval data, he cites (STOIANOVICH 1967, 28) accounts from the First Crusade when in 1096 the troops of Walter Sans-Avoir and his uncle Walter of Poissy took eight days to travel the densely wooded area between Belgrade and Niš. By 1453, however, another traveler from Western Europe, Bertrandon de la Broquiere, a councillor to the ruler of Burgundy, commented on the central Balkans as a “well inhabited country,” with many villages and good food and wine. This reflected a large colonization that had transformed the Mačva plain, the Morava valley and the right bank of the middle Danube into a densely populated region testifying to the growth of the Serbian state during this period.

But, some three centuries later in 1717 where there had once been settlements there were again forests. Thus, the wife of the English ambassador to the Porte, Lady Mary Wortley Montagu, spent some seven days in heavy woods while making the trip from Belgrade to Niš, recalling a situation some 700 years earlier.

By 1830 Serbian forests were being heavily cut as a direct result of the recolonization which took place after 1830. An English major, George Keppel, recounts a letter received from a friend traveling in the area. The traveler noted how the forest became denser as he moved northward from Niš and mentioned how “immense oak forests” dominated the landscape between Jagodina (Svetozarevo) and Belgrade. At the same time he was upset to observe, “the vast quantity of timber which lay felled on the side of this road to rot.” He notes regretfully: “If we had but all these useless trees in England!” The land was being cleared for agriculture by fire. “We repeatedly saw the finest oak trees in blaze; a hole is cut near the bottom and a fire lighted in it. This is the easiest way of clearing the ground” (STOIANOVICH 1967, 29).

The French poet and politician Alphonse Marie Louis de Lamartine, who in 1833 traveled through this area for six days, remarked on an “ocean” of “virgin forests” with “magnificent and perpetual umbrages with no other spectacle than the endless colonnades of enormous and lofty trunks of beech, the waves of
flanna, the avenues of hills and mountains in the uniform garb of their secular oaks.” He noted a parallel with the New World, the cutting of roads through the forest gave him a sense of being as “in the midst of the forest of North America, at the moment of the birth of a people or the founding of a new colony.” This was, of course, the time of the beginning of the emergence of the modern Serbian state from Ottoman domination, marked historically by the First Revolt against the Turks in 1804. This revolt was led by the Šumadijan pig breeder, Karadorde Petrović, who founded one of the competing dynasties that was to rule Serbia until World War II (Serbia became part of the new nation of Yugoslavia established as a result of World War I).

The founder of the Serbian State and the pig trade

The linkages between raising swine, the forests and the political dynamics of the emerging state are apparent in the career of Karadorde and his successor Miloš who came from a similar background. An epic poem describes how Karadorde, the merchant and local peasant leader, prepared to meet the Turkish foe in 1804 (HALPERN 1986, 13):

... And Đorde watched and listened
When he had counted the Turks,
He drained his glass and prepared his rifle,
Took enough powder and lead,
And went to his pig-pen,
Among his twelve herdsmen,
And there aroused the herdsmen,
And spoke to them in this manner:
My brothers, my twelve herdsmen,
Get up, and open the enclosure,
Drive all the pigs out of the pens,
Let them go where they will.
And now you, brothers, listen to me:
Put powder in your gleaming rifles...

A Serbian source (PETROVIĆ-ŠANE 1972) describes the setting in which Karadorde lived at this time. His house is depicted as a log hut and “Under its roof of shingles there was only one large room.”

His house differed from that of other inhabitants in that there were more loopholes for defense in case of attack. “The thick forest reached right up to the eastern side of the house where, owing to a back door, the inhabitants could find security.” As with the other better-off peasants he sold his livestock, mainly pigs, to “Austria” across the Danube. This was then the frontier with the Ottoman Empire (PETROVIĆ-ŠANE 1972, 6-7).

“Both old inhabitants and new settlers were free to take possession of the land abandoned by the Turkish masters. The greatest problem was how to clear it. In order to obtain as much pasture and arable land as possible, Karadorde once mobilized 3,000 men to clear the woods around Topola in spring 1808” (PETROVIĆ-ŠANE 1972, 11).

A clear case of using the resources of the state to expand his personal domain. This was a practice followed by his successor Miloš.

Phases of population movements

Because Šumadija was a frontier and subject to almost constant warfare, the population had fluctuated greatly. According to Drobnjaković (cited in HALPERN 1967, 9-10), a Serbian ethnographer and authority on population movements in Šumadija, the development of the region’s population in historic times can be divided into three phases. The first phase was after the defeat of the Serbs at Kosovo Polje in 1389 by the expanding Ottoman Empire. People then migrated north to Šumadija and presumably mingled with earlier inhabitants. Those sources which exist for this period indicate that this region was relatively well populated at the beginning of the fifteenth century, as noted by the 1453 French traveler previously cited.

This northward migration to Šumadija continued until 1459, when Turkish armies conquered Smederevo on the Danube, the last Serbian feudal stronghold. At this time, as conditions became increasingly difficult, the peasantry migrated to other areas beginning the second phase. They went further north to Hungary and west to Bosnia and the mountainous Dinaric regions. It is estimated that less than ten percent of the population remained behind. Thus by the sixteenth century a traveler reported the area as deserted while a century earlier the region was reported to have many populated villages, paralleling the 1453 description. During the later seventeenth and early eighteenth centuries, Serbia was the scene of almost continuous warfare between the Austrian and Turkish empires. Judging by later accounts, this fighting does not appear to have had any significant impact on the forest cover.

This was also the time of significant population movements. The greatest took place in 1690 when some 30,000 Serbs crossed the Danube into Hungary. The Habsburg Empire welcomed these migrants and used them to settle their border region and fight against the Turks. After defeating Turkey in 1718,
Austria occupied Šumadija until 1739 and it was then that large-scale repopulation occurred. Despite the return of the region to Turkish control, the mid-eighteenth century seems to have witnessed a substantial increase in the Šumadijan population by immigration. This was, no doubt, brought about by pressures in the overpopulated Dinaric mountain areas, from which most of these migrants came, as well as by the return of many inhabitants who had fled during the previous war.

Mass depopulation occurred again in the period of the Austro-Turkish War of 1788-91. Before this war there were approximately 80,000 households in Serbia; after the war the number dropped to 20,000. In the tradition of the Great Migration, many emigrants crossed the Danube and went north to the Vojvodina plains, some of them remaining there permanently, to form the basis of the present Serb population.

Immediately after the war a temporary period of stability set in. Once more repopulation of Šumadija took place. This is what Drobjaković refers to as the third phase. Many returned from the Vojvodina, and larger numbers of new settlers came from the mountain region to the south and west. This constant returning of settlers to Šumadija would appear to be an eloquent tribute to the attractiveness of the area. Despite the constant wars, it seems to have been more habitable than the relatively barren mountains to the south or even the Vojvodina which was, at that time, still full of swamps and marshland and not amenable to easy and productive cultivation with the then existing agricultural technology which at that time lacked an effective iron plow to cut through the sod covering the plains. Once settled in their new homes, the pioneers encouraged relatives, who had remained behind in the Dinaric mountains, to join them.

**Serbian villages in the early 19th century**

In the early nineteenth century an outstanding Serbian scholar, Vuk Karadžić, pioneered writing about Serbian history, ethnography, and linguistics. Based in part on Karadžić’s writings, a German historian of the period described Serbian villages as they existed at the time of the First Revolt:

“The villages of Servia extend far up into the gorges of the mountains, into the depths of forest, and sometimes when consisting of forty or fifty houses, they spread over a space as extensive as that occupied by Vienna and its suburbs, the dwellings being isolated and at a distance one from another. Each habitation contains within itself an entire community” (VON RANKE 1853, 35-36 cited in HALPERN – KEREWSKY-HALPERN 1986, 11).

The settlement patterns are referred to in the village folk histories which draw on local oral traditions. In 1953-54, at the time of my initial fieldwork in the Šumadijan village of Orasac (in the vicinity of Karađorđe’s home at Topola), I encouraged older villagers, then in their seventies and eighties, to write their autobiographies. One villager discussed the process of settlement:

“My father, who was born in 1843, told me about the situation after 1850. At that time, life and social structure underwent great changes. The zadrugas [extended family households] divided and dissolved. The population increased, there were less woods and forest...” (HALPERN 1967, 220).

“According to the tradition preserved by the elders, present-day Orasac is not a very old settlement. It began to be settled perhaps at most 20 to 30 years before the First Serbian Revolt in 1804. At that time everything was overgrown with beautiful, dense forest. They say the name ‘Orasac’ comes from a certain place in the middle of the village, located along the western side of the road near the graveyard, which was overgrown with walnut trees. Many years ago, judging by the remains of a burial ground and remains of a trail, it seems that the area was once thickly settled, but when and what kind of population, and in what numbers and how that settlement disappeared, no one left any records, and no one knows anything about it.

According to the account passed on from generation to generation, the village got its name, and the settlement is of refugees mostly from Montenegro, with a small number from other places. They arrived bringing their customs from their native regions. This migration resulted from great need and from Turkish oppression, hounding and tyranny. It was made in order to hold onto life itself. Because the first settlers to this pleasant and wooded place, far from the main roads, found such refuge and personal and material security, they built houses and necessary outbuildings of wood. They took as much land as was needed, and for the livestock they used the vast woods which didn’t belong to anyone. They began to make a livelihood, and a few of their near and distant relatives settled here, so that before the First Serbian Revolt there was already a village with as many houses as there are now lineages...

After the failure of the First Revolt, in 1813, all the people fled to Austria that is, across the Danube. The Turks burned the whole village and all the buildings, livestock and all that remained. Whatever they found, they seized and carried off, so that later, when the villagers returned they began to es-
tablish homesteads anew.... All the houses and buildings were of wood, which was available in abundance. They warmed themselves around a fire... Food was bread, mostly of corn, more rarely of wheat, which was black, because there were no means of making white flour... They had plenty of livestock since there was room to herd and feed them." (KEREWSKY-HALPERN—FOLEY 1977, 195-197).

Karadorde, who started his career as a peasant-trader, did not long survive the start of the Revolt which he led. Like Orašac, Topola was also destroyed at the time of the Turkish reconquest in 1813. Four years later Karadorde was killed during a second revolt led by Miloš Obrenović, who also began his career as a pig merchant and went on to found a rival dynasty.

Once the land was reoccupied by the returning Serbian peasantry, the process of ecological change continued.

Report of a British diplomat

Parallel to the aforementioned observations of the British traveler George Keppel in 1829-1830, noted at the beginning of this article, a British diplomat reported in 1837 (HALPERN 1986, 14):

"... The Commerce in Swine is by far the Most Considerable and important in Servia and it is the chief object of domestic economy. The poorest peasant is the owner of some of these animals, upon which he devotes much of his time and attention, to the great detriment of all other agricultural pursuits, the sheep and Oxen are even deprived of all nourishment during the winter months, all herbage or other food being appropriated to the vast herds of swine that overspread the Country. The Servian Government in Consequence endeavored to establish a law limiting each family to the possession of only a Certain number of pigs, but it was not Carried into effect, so great is the prejudice in favor of the Superior profits to be derived in this trade, and such good tallow for export abroad? How should the wool of the numerous herds of sheep produce an export commodity? Pig-feeding is extensive, owing to the prevalence of oak forest. Wild beasts from the forests provide skins, furs, rugs and other articles, and bees produce wax and honey, not only for local consumption, but also for export." (WARRINER 1965, 372).

A later source, toward the middle of the nineteenth century, the English writer Andrew A. Paton, comments in detail on the forests and the pig trade:

"The gloom of the oak forest was relieved and broken by a hundred plantations of every variety of tree that the climate would bear, and every hue, from the sombre evergreen to the early suspicions of the yellow leaves of autumn. Even the tops of the mountains were free from sterility, for they were capped with green as bright, with trees as lofty, and with pastures as rich, as that of the valleys below" (Paton 1845, 141).
But by then matters had begun to change. Not only was there mention of pasture but he notes subsequently (PATON 1845, 142) on approaching a town which was “in the middle of a little plain surrounded by gardens; but the neighbouring hills were here and there bare of vegetation”.

Plentiful woodlands and abundant land

The prevailing pattern, however, was still one of plentiful woodlands and abundant land, “the interior of Servia being so thickly wooded, every Servian is allowed to cut as much timber as he likes (PATON 1845, 319).” He continues:

“Upon the whole, it must be admitted, that the peasantry of Servia have drawn a high prize in the lottery of existence. Abject want and pauperism is nearly unknown. In fact, from the great abundance of excellent land, every man with ordinary industry can support his wife and family and have a large surplus. The peasant has no landlord but the Sultan, who receives a fixed tribute from the Servian government [then operating as an Ottoman protectorate but with independent internal administration], and does not interface with the internal administration. ... A very small portion of the whole soil of Servia is cultivated. Some say only one sixth, others only one eighth; and even the present mode of cultivation scarcely differs from that which prevails in other parts of Turkey. The reason is obvious: if the present production of Servia became insufficient for the subsistence of the population, they have only to take in waste lands; and improved processes of agriculture will remain unheeded, until the population begins to press on the limits of the means of subsistence; a consummation not likely to be brought about for many generations to come” (PATON 1845, 321).

In actuality it was only a few generations, a relatively brief period. The pig trade was still prime even though it is clear that he was describing an economy then very much in transition from a primary reliance on herding to one in which agriculture was soon to occupy the dominant position:

“The innumerable swine which are reared in the vast forests of the interior, at no expense to the inhabitants, are the great staples of Servian product and export. In districts where acorns abound, they fatten to an inconceivable size. They are first pushed swimming across the Save [Sava River], as a substitute for quarantine, and then driven to Pesth [Budapest] and Vienna by easy stages; latterly large quantities have been sent up the Danube in boats towed by steam” (PATON 1845, 322-23).

But the cultivation of plums was even then mentioned as a principal product of Serbia:

“The fruit-tree which seems to be the most common in Servia is the plum, from which the ordinary brandy of the country is made. Almost every village has a plantation of this tree in its vicinity” (PATON 1845, 322).

Mention is also made of labor exchange for grain cultivation:

“All Servian peasants assist each other in getting in the grain as soon as it is ready, without fee or reward; the cultivator providing entertainment for his laborious guests” (PATON 1845, 322).

Population increase

The large population increase in Serbia in the course of a century is critical. Thus growth from approximately 600,000 in 1804 to over 2.9 million in 1905 represents a five fold increase in population density. Urban growth was relatively small in this period, the population of the largest city Belgrade, increased from 4,500 in 1820 to 80,700 in 1905; it remained relatively small in proportion to the overall population. Most of the population growth was on the land (HALPERN 1977, Tables 2 and 3; 66-67).

Growth and consumption of wood

Dušan S. Simeunović, a Serbian forestry specialist, investigates this growing density of population on the land in another way. Thus there were initially 21,651 households at the beginning of the 19th century and 416,000 a century later, the overwhelming majority still being rural. Associated with this growth was, of course, greater pressure on the forests by all. Wood continued to be used as the major source for heating and cooking by both the urban as well as rural populations, a practice that continued until well into the 20th century. It is calculated by Simeunović that each household used about 100 cubic meters of wood for heating each year. From this data he estimates an increase in consumption to some 400,000 cubic meters by 1905. There are, of course, great difficulties in assessing these estimates, e. g. at what point did lignite become important as a source for domestic heating? There is also the matter of the growth of government and industry, each sector exerting pressure on the fuel supplies to fulfill its needs. The change in wood use is also reflected in the transformation of rural housing styles, from a rural log cabin type at the
beginning of the 19th century, to wattle and daub and stone construction later on in the century (for a diagram reflecting the transformation in rural house types see Halpern 1967, Figure 9; 102). It was then by the end of the century that the major transformation had taken place (Simeunović 1957, 113).

Conflicts among early settlers and the role of the state

While woods were free to cut, as early as 1820, the Serbian ruler Duke Miloš intervened to prevent the harassment of new settlers by those who had already established themselves in the newly cut over woods (Simeunović 1957, 90). Miloš and his officials were concerned at the waste of woodlands for no positive economic effect. Instructions were sent to local district headmen and village leaders to protect the woods. But this directive was evidently not followed up by detailed regulations until several generations later. Connected with the cutting of woods, conflicts arose over village and individual property boundaries as land was enclosed for the pasturing of livestock and for cultivation. These conflicts were also brought to the attention of the ruling prince and he tried to settle them. It is important to make clear that although free exploitation of the woods continued, essentially till they largely disappeared from the more densely settled agricultural areas, it was not a case of the state remaining inert in its attempt to control the peasantry. The primary concerns of the rulers focused on maintenance of political order, the collecting of taxes and developing the economy. Any sort of planned ecological policy was not part of the 19th century picture in this developing state.

Situation in the early 19th century

At the beginning of the 19th century, in addition to pigs as the main livestock herded in the woods and so not requiring any field crops for their diet, there were also sheep and goats and, in last place in terms of importance, cattle and horses. Field crops and garden produce were not greatly emphasized and then only on a subsistence basis, for example, even potatoes were not common (Simeunović 1957, 112). As early as 1821, according to archival documents, the government tried to encourage the greater cultivation of this crop both as a food for humans and for livestock (Simeunović 1957, 112). Significant growth of wheat was only along the Sava and Danube rivers while corn was the main crop. Actually, corn bread continued to be a main item in the peasant diet until well into the 20th century. Thus corn, peas and onions were the main cultivated crops. The emphasis, however, was on livestock raising. It was also at this time that woods were held in common where all could pasture their pigs. Sometimes pigs were herded far from their villages if there were not good oak stands in the vicinity. This type of livestock raising reached its zenith in the first half of the 19th century. But even then woodlands were being cut to be turned into pasture (Simeunović 1957, 119). But as private pasture lands increased, the amount of common woods decreased and it was this linked relationship that had overall consequences for the developing economy and for the formation of the culture in general (Simeunović 1957, 121). As evidence of the ecological transformation, Simeunović quotes a local agricultural magazine (Tezak, Simeunović 1957, 123) which in 1872 recommended a particular type of implement for extracting wood stumps from pastures. The author comments that it was rare to find pastures where there were no tree stumps. This Serbian forestry specialist emphasizes in his monograph that since there were no forestry laws until 1891, there was free access to the cutting of woodlands (Simeunović 1957, 105).

Definitive change at the end of the century

By the end of the century definitive change was evident. In an article published in 1906, a Serbian agricultural specialist commented that from 1866 to 1895 all kinds of livestock, except cattle, declined due to “the continuous clearing of the forest to gain new arable land, which reduces the area for pasture.” He also noted the then new forest regulation that restricted grazing in the state forests which were formerly considered to be open to all. There was also a decline in overall household size which meant that less specialization of labor was possible within the household economy, also restricting the division of labor so that it was no longer easily possible to assign household members full time to herding tasks. Cause and effect is not easily separated here.

A change in the international economic situation also occurred. The Hungarian part of the Dual Monarchy had restricted Serbian livestock imports. This action consequently reduced prices in Serbia. But still swine were the most important export and the key food. “In winter the peasants eat pork almost exclusively. The pig is the mainstay of the small farm because it grazes in the oak forests, consumes scraps, and multiples fast.” (Warriner 1965, 311 from an article published in 1906).

But it was just at this time that the forests were disappearing.
A personal account of ecological transformation

In 1953-54 there were still old men alive in Orasac who remembered the transformation. The biography of an 88 year old recollects some of these changes (HALPERN 1967, 205-206).

"I was born in 1866. We used to eat less than we do today. Our clothes were not good. There was no doctor, no railway, and there were dense forests all around. We used to cultivate with wooden plows. It wasn't until the reign of King Peter I (1903-1918) that we had iron plows and wagons, better houses, and all the rest. ... In the old days, when I was twenty, I used to plow with six oxen. At that time we had a wooden plow, while today we use a steel one with two cows. We did not have brick houses, nor did we know how to build them."

Relative declines in livestock

It was in 1866 that there are the first comprehensive figures for Serbia for livestock holding. Taking this year as a base and assigning it a figure of 100 and comparing it with 1890 there are marked declines in Serbia as a whole, 46 and 63 for pigs and sheep respectively. Put another way and using a slightly different data base, the number of swine per capita in Serbia declined from 1.64 in 1859 to 0.42 in 1890, thereafter remaining relatively steady into the middle of the twentieth century.

Sheep and cattle declined in the same period as well, although not so drastically, going from 2.20 to 1.37 and .74 to .38. While it is true that in this period there was a marked increase in the population of Serbia from 1.6 to 2.4 million, the changes in livestock holdings and crop patterns begin to help fill out the picture of ecological transformation.

International trade and livestock production

In their recent Balkan Economic History, 1550-1950, J. Lampe and M. Jackson assert that corn has been the principal hog feed in Serbia since the 1830s (LAMPE – JACKSON 1982, 169). At the same time they note that there was a relatively slower Serbian transition to grain cultivation in general and wheat in particular (LAMPE – JACKSON 1982, 170). This is compared to the neighboring Balkan states. Due to the demands of the Habsburg market for livestock, and the increasing German demand for plums, these two were the main agricultural export of Serbia. Land devoted to corn cultivation appeared to exceed that devoted to wheat and other cereals by several times (LAMPE – JACKSON 1982, 115). They also relate the growth of field cultivation to increased security and the end of warfare and civil disorder so that peasants were now willing to cultivate exposed areas in the lowlands.

In the period from 1834-1874, the population of Serbia approximately doubled from 678,192 to 1,353,890 (the detail in these figures gives an impression about the preciseness of the statistics which does not appear to have been the case) cited by LAMPE– JACKSON (1982, 117). Another factor related to these transformations is noted by the authors. The export trade of lean, acorn raised hogs from Serbia to Habsburg markets was extinguished. The "Hungarian Agricultural Revolution over the last third of the nineteenth century doomed this initial Serbian trade to extinction." That is, the enhanced feeding and then breeding of lean hogs on the large Hungarian estates forced the Serbian traders to change to fattening their swine for a bacon and lard market. At the same time the Hungarian pig supply almost doubled from 1870 to 1895 (LAMPE – JACKSON 1982, 175). It is, of course, true that the pork products served in Serbian restaurants today are from corn and not acorn fed hogs so that lard has an importance which it did not have in the earlier diet. This evolution in dietary patterns also has health consequences for contemporary populations.

Technology, ecology and changes in draft animals

Another dimension is the use of livestock and its relationship to technological innovation which, in turn, impacts on land use. Thus employing six oxen with a wooden plow, recollected by the old villager in the autobiographical account cited above, does represent an improvement over earlier techniques of cultivation with a so-called scratch plow or ard which only lightly breaks up the surface of the soil without turning it. The wood plough does turn a furrow and goes deeper. However, it does require twice as much draft power as the iron plow which, as the old man noted, can plow much deeper using the much reduced draft strength of only two cows. But what is also represented here is the multiple purpose cow which gives milk for cheese, produces calves and requires less forage. This change clearly represents an adaptation to diminished pasturage. This is certainly the kind of adaptation that helped a Serbian agriculture, focusing on intensive land use with small scale family plots resulting from fragmentation through inheritance, to survive.

SIMEUNOVIĆ (1957, 133) sums up the overall transformation in the recent past when he observes that, in the period from 1889 (when accurate state level
statistics first appear) to 1950 (the time at which he wrote), land in agricultural use within Serbia increased by about a million hectares. Although the matter is complex and there is not a simple statistical relationship there was, of course, a related decrease in forest cover.

Simeunović’s doctoral dissertation was our principal source on this topic. It is pertinent that at the time of the Austrian occupation of Serbia in 1721 the main exports were then noted as wax and honey. At this time, according to the Austrian data, there were “48,243” beehives in occupied Serbia, “about the same amount as the number of inhabitants” (SIMEUNOVIC 1957, 33). One factor that links up with present times is that as land goes out of cultivation at the end of this century, one of the easiest types of rural economy to maintain are the beehives because they require the least constant attention and are compatible with people living in town and returning only occasionally to their now underutilized lands in the villages.

Conclusions

Surveying the scene today in much of Šumadija there are few links with the forested past (only patches of woods provide firewood) yet the song, Šumadija My Birthplace, cited at the beginning of this article sings of woods. There are no romantic songs about herding pigs in the woods but rather songs about watching sheep that set a romantic scene of idyllic rural life. The real tribute to the pig remains in the firmly rooted diet of meat, especially pork, and the use of lard in cooking. These practices are gradually modifying but meat remains clearly linked to male prowess and is always considered the proper festive food without which no formal meal is complete.

It is interesting to observe that in the village of Orasac, which we have studied all these years, there are now a significant number of homesteads occupied only on occasional holidays by town based descendants. Here, in addition to the remaining bee hives, there appears to be an increase in certain kinds of wild game, less land is plowed and more is left to pasture which can be easily hayed. It is possible that another ecological change may be in the offing, certainly not an abandonment of agriculture but a shifting to a newer, more highly mechanized and possibly, more extensive land use.

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