

**Possible Historical Approaches
to Forests. Science,
commodification, politics and
forests in Hungary, 1860-1975**

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A. Objectives of the doctoral dissertation, the delimitation of the dissertation topic

The goal of the dissertation is to present the Anthropocene epoch as a historical phenomenon. Doing so will reveal aspects that facilitate the critical interpretation of the epoch and, thus, make it possible to change its course. Zoltán Boldizsár Simon convincingly argues that the best way for the various fields of sciences and social sciences to adapt to the Anthropocene is to take up the analysis of events that were key in the emergence of the epoch and that we, thus, may call *epochal events*. According to Simon, these events might have taken place over a longer period. It is the common trait of such events that they are beyond the sensory horizon of individual human beings: they regard the planetary scale.

Those academics that apply the term Anthropocene use it as if it literally meant the “Age of Humans”. This is not entirely true, however: from Greek it would translate as “Recent Human” or “New Human”. The expression appeared in academic debates around 2000. It reflects the realization that human activities have

altered the biophysical and biochemical conditions on Earth to the extent that changes already have left chemical and evolutionary, that is to say, stratigraphic traces. In academic discourse, Anthropocene is the epoch in which humankind as a species lives and that is the outcome of human activities. As a stratigraphic layer, Anthropocene contains traces indicating:

- the rise of the level of carbon-dioxide in the atmosphere
- accelerating rate of extinction of species
- the dominance of domestic animals among terrestrial mammals
- increasing biological homogeneity across continents
- fallout from experiments and production of nuclear weapons
- changes in the global cycle of nitrogen
- plastic

These changes interact or are in causal relationship with each other although these may be more complex than scientists can currently describe. Some of these changes occurred due to activities that emerged in the

last half a century while others, such as global human travels and globalization facilitating the migration of species and consumption of fossil fuels, scaled up in the last two centuries.

In this dissertation, I will point out that in the light of the history of professional forest management the interaction between profit-oriented agriculture, commodification of forests and institutionalisation of expert knowledge form an epochal event. Therefore, the objective is to show how global processes related to changes of forested areas manifested in Hungary, and to highlight those regional specificities that contributed to shaping the epochal event. Within this frame, the dissertation focuses on three aspects: the link between nationalism and professionalization, the impact of the Trianon Peace Treaty on commodification, and the contexts of state socialist knowledge production. Hungary is not the only territory where one may observe constellations. The argument for staying with the Hungarian case is rather that, as we shall see, the archival situation is adequate for studying these questions.

I had two main reasons for choosing research questions about professional forestry as a proxy to understand the Anthropocene. On the one hand, deforestation has significantly contributed to the rise of the level of carbon-dioxide in the atmosphere, which is one of the key drivers of global warming and, thus of the emergence of the Anthropocene. Today, the loss of 13 million hectares of forests each year results in 1.5 billion tons of carbon-dioxide emission that makes up 19% of the yearly total figure. Moreover, while searching for the root causes of the COVID-19 pandemic, it became clear that areas turned from forest into monocultures are prime zones of zoonosis. The second reason for focusing on forestry is that possible effects of large scale reforestation became the subject of a number of research projects during the 2010s. From the perspective of a historian, it looks likely that the history of professional forest management provides relevant information for assessing the possible roles of forests.

The critique that environmental historians practice in their approach to professional forest management informed my research questions in the way I understood

forests: it became obvious that the term forest may have multiple meanings and may refer to various landscapes. Moreover, by the mid-19th century, forests were hybrid spaces: cultural, social, economic and biological sites. Among other things, this means that landscape and social inequalities shaped and mirrored each other. Starting from the second half of the 19th century, spatial and temporal aspects of commodification have been increasingly important elements of this history. From that time, the way forests and timber produced out of them turned into commodities have been a relevant process at the local, regional and global scale. Thus, the historical analysis of professional forest management sheds light on phenomena that triggered human activity that have had an increasing impact on Earth. This approach will keep the specific features of the local and regional scene in the foreground. However, it would be a mistake to reduce the question to the supposed dichotomy between “the interest of forest” and “human greed”. Indeed, human economic activity often facilitated biological diversity: in Hungary this is especially true for the role of silvopastures that are grazed woody areas near human settlements.

First, I will show that the history of the professional language of forestry may be linked to the rise of profit-oriented agriculture, to commodification of forests as well as to processes of nationalism and nation- and statebuilding in the late 19th and early 20th centuries. The way these interactions impacted the landscape was not uniform, moreover, many implications only revealed themselves at the local level. This is why I will examine the issue through case studies of areas that were contact zones between agriculture and forests.

The second part of the dissertation will focus attention on the relationship between post-World War I reconstruction and professional forest management. The idea of reconstruction may be linked to anthropogenic landscape change through state intervention and transformations in scientific knowledge production. On the other hand, commodification of forests and timber also entered into a new framework. The latter involved a new compromise between state presence and private interest. In this transformation the non-governmental organization that came into being in order to represent the interests of all those involved in forest management, the National

Forestry Association, played an important role. At the same time, many groups that were stakeholders in the history of commodification remained silent on the road to the new compromise.

Regarding the second half of the 20th century, the main question will be how Hungary, as one of the state socialist countries, took part in the formation of the ideas about global economy and science during the so-called Great Acceleration phase of the Anthropocene epoch in the light of forestry and forestry research.

B. Overview of the Methods Applied

As, among many others, Yuval Noah Harari argues, the human mind functions based on stories. Without stories, we cannot have a coherent conscience and we would be unable to carry out actions. Hence, the dissertation chiefly relies on narrative sources to show the frames of the story about the epochal importance of the way professionalization of forestry, the institutional framework of commodification of forests and scientific ideas during state socialist times impacted anthropogenic landscape change. While selecting methods of analysis, I had to consider several aspects of the history of forest management. First, I needed to problematize knowledge and inquire about the relationship between scientific and traditional (non-scientific) knowledge at the local level, how state and knowledge related to each other (governmentality), and what the global circulation of knowledge entailed. Within this framework, empirical data collection and theorization went hand in hand.

Incessant movement across scales is one of the most important elements of the historical approach to the Anthropocene. When we address the epoch, the question is if anthropogenic phenomena observed at the local level are unique and specific or how far they resemble phenomena observed elsewhere, and if they may be added up at the global scale. Moreover, one needs to consider the crises of the Anthropocene and the potential ways out with different scales in mind.

The process of commodification as well as inequalities in terms of access to commodified goods and resources make it obvious that the formation of the Anthropocene and the history of inequalities intertwine. Thus, studying the epoch opens the road for a social history that is critical and environmental at the same time.

It followed from the emphasis on knowledge, scales and inequalities that all three major sections include case studies. In the first chapter, these have the role of making the compromises visible without which the impact of professionalization on landscape change would not be intelligible. Forest management in the microregion around Debrecen is worthy of attention because the city controlled

an exceptionally large territory until the end of World War II and land use practices and social history of the city were closely knit together. The way this economy and milieu came into interaction with professional forest management is a telling example of the negotiations that were behind the transformation of land use patterns around the turn of the 19th and 20th centuries. The other case study related to this process is about the relatively little studied eastern region of contemporary Szatmár County. It is a relevant case since the lack of pasture was an issue there, too. Moreover, this was the area where one of the innovators of the administrative category of silvopasture carried out his day-to-day tasks as one of the forestry officials. These case studies are mostly based on archival documents that county and municipal level administration produced. In the case of Szatmár, I also juxtapose contemporary statistical data with administrative decisions.

In the second part of the dissertation, I shed light on the topic of inequality through two shorter case studies that talk of microregions. The so-called *vákáncsos* as a way of life and category referred to people engaged in tree planting in the vicinity of Debrecen. Looking at their

situation is a feasible way to shed light on the meaning and importance of cheap labour in the context of the emergence of the Anthropocene and point out what was specific about it considering the particularities of the society of contemporary Hungary. The second related case study regards one of the microregions of what became Covasna County in post-World War I Romania. Fortunately for research, István Imreh, a historian and sociologist carried out data collection on his hometown in the 1940s that allows us to assess the impact of ethnic discrimination on land use patterns.

In the third part of the dissertation, case studies concern scientific research activities related to species and varieties of trees in order to show the importance of non-human factors.

Aside from case studies, balancing out the state-centered nature of archives was also an important methodological requirement. To be sure, in some cases, information about the point of view within ministries was just what I needed. For example, I discussed the relationship between biopolitics and forest management during World War I in the light of the reports that reached

the Ministry of Agriculture. It was important to talk of the biopolitical practices of the state in order to emphasize the salience of the fact that humanity is a biological species and a conscious actor in the Anthropocene. It was also necessary to gain insight into the thinking of the officialdom while summarizing the implications that energy politics had on forestry in the 1930s and during World War II. However, on the whole I tried to bring voices, frameworks and interests other than those of the state, county and local administration. That is why I decided to make extensive use of the archival material of the National Forestry Association, mainly stored at the library of the same NGO, when talking of the history and impact of professionalization and of the institutional background of commodification of forests. The second method I applied for reaching beyond official arguments was that I tried to read the documentation about specific issues against the grain. This was especially fruitful in the section on Szatmár County and while accessing personal histories.

As one can already conclude from what I have said above, the dissertation follows a chronological order. This

is so because political changes, namely, the borders after World War I and the installation of the state socialist regime resulted in fundamental shifts in terms of distribution of forest property, as well as in the internal, regional and global position of actors. Thus, while recognizing and spelling out continuities, it was reasonable to separate main chapters according to divisions in political history.

C. Results

1. In the second half of the 19th century, the state of relationship between Hungary vis-à-vis the centre of the Habsburg Empire, and forestry management practices in Cisleithania were major factors that shaped the political and social position of forestry as a profession in Hungary as well as the way professional frameworks influenced landscape change. In Hungary, through institutions of formal education, it was the methods of German forest management practices and underlying ideas thought to be adequate and reasonable that became the accepted professional norm. This was the case in western part of the Habsburg Empire, too. Importantly, the medium of education was German until 1867. Moreover, imperial needs triggered large-scale cartographic operations without which forest management as engineering practice could not be carried out.
2. While forestry as an area of standardized knowledge was the outcome of global knowledge

circulation and despite the strong ties between institutionalized professional education and the Habsburg Empire, by launching the programme for creating a national professional language the National Forestry Association integrated into the nationalist political elite and took part in shaping its programme.

3. From the point of view of landscape change as an epochal event in the Anthropocene, the interactions between imperial policies, nationalist mainstream politics and professional forestry were specific and important characteristics of the region that contemporary Hungary was. One may also see this as a reminder. Since the state and content of knowledge that were based on engineering principles interacted with the political and social conditions of specific eras as well as with non-expert knowledge articulated at the local level, it would be a mistake to see professionalization as a straight line leading to ever better practices.
4. I presented the local impact of the administration that the Forest Law of 1879 created by looking at

the example of the eastern part of Szatmár County, and the forested areas under the jurisdiction of the municipality of Debrecen. In the case of the former area, the lack of pastures and the varied perception of the new reality within communities came to the foreground. Regarding Debrecen, the longevity of particular traditional claims on forests and patterns of land-use and herding were the most striking elements. In both cases, we could point out the slow emergence of a compromise. For Szatmár, the works of Sándor Márton, a forester and mid-level official made it clear that recognition of silvopasture as a form of land-use was of the key areas of compromise. Around Debrecen, the narrow-gauge railway line, and the presence of a particular group of forest workers, the *vákáncsos* proved to be responses of lasting – nearly a century-long – importance.

5. The example of forestry made it clear that professionalization played a role in the formation of the Anthropocene epoch in at least three ways. First, the second nature that emerged in the 19th

century was partially the consequence of forest management implemented based on a management plan. Such plans involved the idea of reaching an ideal distribution of age and species in the forests, as well as a system of planting and cutting that facilitated simple geometric calculations and the installation of infrastructure. Moreover, the strict division of pasture and forest overwrote or even erased existing economic practices that in many cases had proved sustainable and favourable to biodiversity. Areas of second nature emerged as a result of similar processes that might look natural and fine but in fact are often more vulnerable than previous bio-coenologies and landscapes.

Second, calculations made with the aim to assess the worth of forests, and methods of placing timber on the market resulted in the commodification of forests. This process was in interaction with the idea of a national economy. Third, the analysis also made it clear that scientific research and knowledge production had close links with the

above mentioned processes from the late 19th-century and these became ever tighter after 1945.

6. Other researchers have already shown that the notion that hydrological patterns and forest cover in the Carpathian Basin require a common political framework was one of the key arguments against the partition of Hungary. I emphasized that it also formed the starting point for rethinking the relationship between economy and ecology of post-World War I Hungary. Among contemporary Hungarian thinkers Károly Kaán stood out with his ability to recognize (in a Keynesian vein) economic investment by states as an economic multiplier and, at the same time, accounting for the ecological role of resulting anthropogenic landscape change. He believed that a national economy becomes sustainable when planners and decision makers consider both aspects.
7. However, it was exactly because of intensified state intervention into land-use that deprivation hit a low among certain social groups, such as the so-called *vákáncsos* forestry workers, in Hungary

already in the 1920s. State intervention was an unfavourable development for ethnic minorities in some of the new or enlarged states, for example Romania, that used the intervention into land distribution patterns as the occasion to side-line the Hungarian minority.

8. Commodification of forests required a new compromise among state intervention, international trade, diplomacy and private interests in the interwar period. This new equilibrium seemed to set in by 1935 when the new Forest Law came into force after years of negotiations. Although the political debate in parliament focused on the right of tourists to enter private forests, the real change was a break away from Kaán's policy of tightening administrative control on what happens in privately owned forests. Due to the war, the law had less effect than stakeholder had hoped, however it influenced post-World War II policies of environmental protection.
9. Several continuities between the pre- and the post-World War II periods came to light. This is one of

the arguments against applying the term Anthropocene only to the post-1945 years. The afforestation campaign is probably the best example to bridge the gap between the regimes of the two eras. While the propaganda related to afforestation during the Rákosi-regime revolved around the supposed sharp divide between the history of the afforestation programs carried out in Hungary are particularly relevant since they allow one to study the impact of different projects that took place in different decades and under different political conditions. The campaign launched in the late 1940s was more ambitious than previous ones. Since the forest belt intended to protect arable land from the impact of wind became part of Stalin's Great Plan to Transform Nature, such arrangements gained greater prevalence in Hungary, too. This meant the plantation of various tree species perpendicular to the main wind direction that would constitute multiple levels of foliage. It is important to take notice of the fact that this solution was already known and practiced

during the interwar period. Moreover, it is still an accepted practice in agroforestry that has proved viable in the long term.

10. The analysis pointed out links across the Iron Curtain in the case of these forestry projects including the role of international organizations. These considerations lead to the conclusion that there was no isolated state socialist impact on the environment during the Cold War. Yet, one may grasp the impact of the authoritarian nature of state socialist regimes in the ecological damage that the narrowing down of the spaces for professional expert debate and propaganda on the loose caused by sidestepping due diligence. More research is required to shed light on forms of local opposition to tree plantation projects.
11. In the late 1950s, rapidly growing demand for paper and the resulting rise in the cost of imports brought planners' attention to the so-called paper poplar varieties that may be used for paper production. This eventually led a large-scale

poplar plantation campaign in the 1960s in Hungary. The two major issues were, on the one hand, biological resilience of plantations and, on the other hand, if there was a sufficient correlation between features of soil types and requirements of the planted varieties. In 2020, a paper showed that the presence of poplar in some micro-regions between River Danube and River Tisza had an adverse impact on ground water level. This finding reflects that in some cases unquestioned and long-lasting professional paradigms together with a narrowing space for deliberation prevented sufficient caution and diligence while carrying out the poplar programme.

12. We find budgetary and industrial motivations behind the other large scale forestry project of the 1960s, namely, the one intended to increase the area of Scotch pine, too. Scotch pine has been an emblematic species of German forestry since at least the mid-19th century that was often cultivated in a plantation-like manner. In the early 1960s, the plan was to realize a common seed producing

project between the GDR and Hungary. However, it turned out seeds only adopt to environments where they were born and cannot be translocated successfully. Yet, the project proved important in Hungary because starting from the mid-1960s the Scotch pine varieties resulting from the experiments in Vas County were planted in large areas of many hilly areas in northern, western- and south-western Hungary. Today, however, due to dry conditions, these areas are increasingly susceptible to bark beetle infestation. Thus, the Scotch pine project shows that the outcome of landscape change cannot be predicted with certainty even if there are decades of knowledge accumulated in the background.

13. Overall, the history of afforestation and plantation campaign presented here suggest that bioengineering type of solutions hardly produce desired economic goals in the long term because there are factors unaccounted for, be it private ambition, politics, or the behaviour of species.



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List of publications related to the dissertation

Hungarian book chapters (3)

- Balogh, R.:** A személyes történelem, a transznacionális kapcsolatok és a hidegháború szerepe az erdészeti kutatásban: Bánó István és a fenyőprogram Vas megyében, 1954-1975.
In: Környezeti folyamatok a honfoglalástól napjainkig történeti és természettudományos források tükrében. Szerk.: Kern Zoltán, Demeter Gábor, Pinke Zsolt, Romhányi Beatrix, Biró László, Vadas András, ELKH Bölcsészettudományi Kutatóközpont, Budapest, 243-260, 2021, (Környezettörténet, ISSN 2063-4463 ; 3.) ISBN: 9789634162391
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