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The Public Defense of the Doctoral Dissertation of

# András Vadas

on

**Who Stole The Water?**

**The Control and Appropriation of Water Resources in Medieval Hungary**

will be held on

**Friday, 20 March 2020, at 9:00 am**

# in the

# Monument Building, Senate Room

**Central European University (CEU)**

**Nádor u. 9, Budapest**

**Examination Committee**

Chair: László Pintér, CEU Department of Environmental Sciences and Policy

Members: Alice M. Choyke, CEU, Medieval Studies Department (primary supervisor)

Katalin Szende, CEU, Medieval Studies Department (associate supervisor)

József Laszlovszky CEU, Medieval Studies

István Tringli, Institute of History, Research Centre for the Humanities, Budapest

External Readers: Gerrit Jasper Schenk, Technical University of Darmstadt (present)

 Richard C. Hoffmann, York University, Toronto (not-present)

The doctoral dissertation is available for inspection on the CEU e-learning site.

Should you wish to access it contact Csilla Dobos (dobos@ceu.edu)

**Summary of the Doctoral Dissertation**

In the dissertation I address conflicts surrounding water management, a space where different economic and other socio-political interests met and sometimes clashed. Modern politics focuses on who has legitimate rights to claims in such disputes, but for historians, it is certainly more relevant to understand how such conflicts were approached and resolved in the past by posing questions about how pre-modern societies dealt with these same problems. These questions include what kind of disputes unfolded with regard to the use of water and the degree to which water conceived as private or as ‘common’? How were different interests aligned with each other? In this dissertation I raise these questions in the context of Central Europe, and more particularly, in the Kingdom of Hungary in the Middle Ages (from the ca. tenth century to the mid-sixteenth century), i.e. the period of the re-appearance of literacy in the area after the Roman period. Throughout the different chapters of the dissertation I argue that use of water by the societies of the Kingdom of Hungary in the Middle Ages gave rise to fairly complex sets of customs and norms that, until the Modern times, were the most important principles in settling water use related disputes.

The work wishes to understand how the manipulation of the different rivers, the creation of “socio-natural sites” proceeded, how it impacted various people who lived by and away from the water bodies. In doing so, after an exhaustive overview of the literature on historical water management and conflicts related to water use in Chapter 1, I first address the formation of the various means of exploitation of different water bodies by local economies. Chapter 2 discusses the spread of the most important infrastructural elements to modify riverscapes in the Kingdom of Hungary, water mills. This development has traditionally been associated with the foundation of the Christian state around the year 1000, and the settling of monastic orders, most importantly the Benedictines, within the kingdom. I argue that their role in introducing water mills may have been taken as too self-evident in research. Nonetheless from around the eleventh and early twelfth century onwards, there seems to have been a small increase in the number of water mills. By the thirteenth century, this increase lead to a variety of legal cases that are discussed in the following chapters.

Chapter 3 represents the longest part of the dissertation. It focuses on the fourteenth- to sixteenth-century rural and urban waterscapes of the Kingdom of Hungary, and looks at the different ways dams, weirs, and all kinds of stream construction works that lead to legal controversies as well as what sorts of arrangements were made in order to avoid or resolve these disputes. The archival and edited primary evidence show many of the water problems seemed to have occurred in towns – either free royal, mining or towns of other legal status. This is easy to explain by the fact that the needs of the higher number of people living within a relatively small area had to be fulfilled compared to the situation in the countryside. Urban industries, including grinding grain along with the need to catch and keep fish close to markets, protecting towns with moats, building harbors, navigation, draining wastewater as well as providing the people with drinking water lead to a number of resource conflicts in urban environments. The exploitation of urban waters lead to increased environmental pressure on urban environments as has been shown in different urban waterscapes throughout Central Europe. These environments proved to be the most important case study areas in this dissertation.

The first subchapter (Chapter 3.1) examines primarily rural environments. By studying the term, *locus molendini*, an argument is made that from the early fourteenth century onwards, the rights around using water for milling had already acquired a rather well-defined legal norm. In general, the earlier acquired right had a privilege over the later acquired one. I then continue the analysis by studying places where the problem of water rights and access probably comes to light most frequently, that is, in urban space. Here, a relatively large number of people living in a small area aimed to use water resources for more diverse activities than in rural spaces. Urban space therefore provides one of the best “laboratories” for looking at water-related legal disputes. The different subchapters here are dedicated to a variety of urban environments from two aspects; first the water bodies that served (or sometimes impeded) the well-being of these settlements, and second, the function, and legal standing of these settlements. The different water bodies discussed include major waterways, small rivers and streams, including rivers fed by hot springs, and urban moats (Chapter 3.2). This part is followed by a study of the problem of water access in a special town type found in the Kingdom of Hungary, that is, mining towns (Chapter 3.3). These settlements enjoyed special privileges provided by the kings in order to settle these settlements with miners and to facilitate their development, and last but not least increase royal incomes from gold and silver extraction. Water power is a crucial resource for mining settlements. Therefore, the privileges accorded to these settlements in some cases indicate the forms in which water rights could have been appropriated by different groups. A special kind of water-related conflict that is poorly studied, not only in Hungarian but in foreign scholarship as well, is the problem of rivers as borders is addressed in the following subchapter (Chapter 3.4). This, as is shown in the chapter, was a source of numerous conflicts where environmental changes – whether natural changes in the riverbed or artificial alterations of rivers – leading to lasting fights for riverbeds and the connected floodplains as well as other lands. The manipulations of the waterscapes lead to numerous intended and unintended consequences. The silting up of riverbeds, the lack of water to run water wheels, flooding other people’s lands and mills and, the dis-annexation of lands all appear in the legal evidence.

The analyses demonstrated that by the Late Middle Ages complex systems existed for using urban waters in the most efficient way possible. The most important norms were established despite the fact that neither laws nor many of the privilege charters awarded to different urban communities explicitly mention water rights and privileges of using waterways. The problem in urban environments was somewhat different from the case of smaller rivers in the rural areas where most of the registered disputes concerned landlords with interests in the same activities, that being mostly milling or fishing. In many cases the conflicts in urban landscapes focused on the different interests of ferrymen, fishers, millers, etc. The lasting conflicts testify to the difficulty of tackling these conflicts.

 Chapter 4 is dedicated to the social groups behind the different water control and regulation works. Based on late medieval and sometimes later sixteenth-century sources, I argue that millers as well as pond masters had a complex task to manage water bodies. Their duties extended well beyond the mere task of grinding grain and supervising water-levels. In Chapter 5, apart from drawing some basic conclusions, I point to the modern parallels of water-related disputes discussed in Chapter 3 and the potential relevance of pre-modern case studies in understanding present contests for waterscapes.

**Curriculum Vitae**

**Education**

2013- PhD in Medieval Studies, Central European University, Budapest, Hungary (supervisors Alice M. Choyke and Katalin Szende)

2009-2014 PhD in Early Modern History, Eötvös Loránd University, Budapest (supervisor: Balázs Nagy)

2009-2010 MA in Medieval Studies, Central European University, Budapest, Hungary (supervisor: Alice M. Choyke)

2004-2009 History and Geography MA and MSc Degree, Eötvös Loránd University, Budapest (supervisor: Balázs Nagy)

**Scholarships, Grants, Awards**

2019 DAAD Research Mobility grant to Ruprecht Karls Universität Heidelberg

2017 Fulbright Postdoctoral Scholarship, Georgetown University, Washington DC (5 months)

2016 CEU Scholarship to attend The Princeton-Sabancı-Münster-Oxford-CEU Workshop in Early Modern History at TORCH, Oxford University

2015 Research fund of the University of Vienna (1 month)

2015 Henrik Birnbaum Memorial Fund for archival research in Vienna (1 month)

2011 Hungarian State Scholarship (Campus Hungary) for archival research, Vienna (1 month)

2010 Hungarian State Scholarship (Campus Hungary) for library research, Munich (1 month)

2008 Erasmus Exchange at École des hautes études en sciences socials, Paris (5 months)

**Conference Papers Relevant to the Dissertation**

2019 Városi vízhasználati konfliktusok a középkorban – Zágráb példája (Water-use conflicts in the Middle Ages – The example of Zagreb) – Környezettörténet 2019 (Environmental History 2019) – Eötvös Loránd University, Budapest, 30 October, 2019 (poster presentation)

2019 Water Use in the Medieval Mining Towns of the Kingdom of Hungary – Konflikte um Wasserwirtschaft und Wasserrechte. Vom Ende der Antike bis zur Industrialisierung, Lorsch, Paul-Schnitzer-Saal Museumszentrum – 2–4 September 2019

2018 A soproni tóásó és a körmendi molnár – néhány megjegyzés a vízépítéshez kapcsolódó szakmák történetéhez (the pond digger of Sopron and the miller of Körmend – some notes on the history of water-construction related professions) – Techné: a szakképzés módszerei az ókorban és a középkorban (Techné: methods of professional training in the Ancient times and the Middle Ages) – Pázmány Péter Catholic University, Budapest, 12 October 2018

2018 Malmok és vízhasználati konfliktusok a késő középkori Magyar Királyság bányavidékein (Mills and water-use conlicts in the mining areas of the late medeival Kingdom of Hungary) – VIII. Colloquia Comaromiensia Historicorum Archivariorumque. „A víz szerepe a történelemben” (The role of water in History) – Museum of the Danube, Komárno, 26–27 September 2018

2018 Border by the river… but where is the water? – Between Three Seas: Borders, Migrations, Connections. The Third Biennial Conference of the MECERN – University of Zagreb, 12–14 April 2018

2017 Urban Moats and Water-Management in Central European Towns in the Middle Ages and Early Modern Times – Institut für Österreichische Geschichtsforschung – Universität Wien, 4–6. October 2017

2017 Technologies on the Road between East and West. The Spread of Water Mills and the Christianization of East Central Europe – invited lecture funded by the Fulbright Outreach Lecturing Fund – University of California, Riverside, 18 May 2017

2017 A víz mint konfliktusforrás a középkori Magyarországon (Water as a source of conflicts in medieval Hungary) – Invited lecture at the series: Történeti tájak – vizes élőhelyek: régészet, környezettörténet, tájvédelem (Historical landscapes – riverine environments: archaeology, environmental history, protection) – Central European University, Budapest, 17 January 2017

2016 David and Goliath? The scale of water management works in medieval Europe and China – A comparison – Social Governance in Medieval Europe and China – Beijing Normal University, Beijing, 22-23 October 2016

2016 Mills as symbols of power in medieval and early modern Europe – Material Exchange in the Early Modern World – TORCH, University of Oxford, 6-8 September 2016

2015 Vár(os)árkok és vízgazdálkodás a közép-európai városokban a késő-középkorban és kora újkorban (Urban moats in the towns of Central Europe in the Late Middle Ages and the Early Modern Period) – Városok és természeti erőforrások (Towns and Natural Resources) – Budapest City Archive, Budapest, 18–19 November 2015

2015 The control and appropriation of water resources in late medieval and Early Modern Hungary (15th–17th centuries) – Water in Medieval Culture (16. Symposium des Mediävistenverbandes.) – Universitat Bern, Bern, 22–25 March 2015

**Publications Relevant to the Dissertation**

2019 A középkori Magyar Királyság bányavárosai és a malmok különös tekintettel Körmöc- és Újbányára [Mining towns and their water mills in the medieval Kingdom of Hungary with special regard to Kremnica and Nová Baňa]. In: *Márvány, tárház, adomány. Gazdaságtörténeti tanulmányok a magyar középkorról* [Marble, warehouse, privilege. Studies in the economic history of medieval Hungary]. Ed. Boglárka Weisz, Renáta Skorka, and István Kádas. Budapest: MTA BTK Történettudományi Intézet, 2019. 483–506.

2019 Border by the River – But Where is the River? Hydrological Changes and Borders in Medieval Hungary. *Hungarian Historical Review* 8, no. 2 (2019): 336–360.

2018 Vízépítés és munkaszervezési formák a késő középkori és kora újkori Magyar Királyságban. [Water construction and labor organization in late medieval and early modern Kingdom of Hungary] In: *Techné: A szakképzés módszerei az ókorban és a középkorban* [Techné: forms of practical education in the Ancient times and the Middle Ages] (Studia Philologica, 5). Eds. Márta Munding– Kornél Szovák – László Takács*.* Piliscsaba: Avicenna Kutatási Non-profit Kft., 2018. 477–510.

2018 Technologies on the Road between West and East The Spread of Water Mills and the Christianization of East Central Europe. In: *The Medieval Networks in East Central Europe: Commerce, Contacts, Communication*. Eds. Balázs Nagy – Felicitas Schmieder – András Vadas. New York: Routledge, 2018. 123–138.

2017 Economic Exploitation of Urban Moats in Medieval Hungary with Special Regard to the Town of Prešov. *Mesto a dejiny* 6, No 2 (2017): 6–21.

2017 Some Remarks on the Legal Regulations and Practice of Mill Constructions in Medieval Hungary. In: *Gebrauch und Symbolik des Wassers in der mittelalterlichen Kultur* (Das Mittelalter. Beihefte, 4)Eds. Gerlinde Huber Rebenich – Christian Rohr – Michael Stolz.Boston: De Gruyter, 2017. 290–314.

2017 A malomépítéstől a gabonaőrlésig (From building a mill to grinding grain) *Élet és Tudomány* 72, No. 25 (2017): 777–779.

2015 Városárkok és vízgazdálkodás Közép-Európa városaiban a késő középkorban. (Urban moats and water management in the town of Central Europe in the late Middle Ages) *Urbs. Magyar Várostörténeti Közlemények* 10–11 (2015): 323–353.

2015 Terminológiai és tartalmi kérdések a középkori malomhelyek körül [Questions of the terminology and the meaning of medieval mill places]. *Történelmi Szemle* 57 (2015): 619–648.