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THE CARTOGRAPHIC WORK OF ANTAL REGULY

Theses of Doctoral Dissertation

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Introduction

Antal Reguly (1819–1858), a Hungarian ethnographer, linguist and traveller, achieved significant results also in cartography. It is less known that, based on his sketches made on the field, he prepared the first detailed map of the northern Ural Mountains in Saint Petersburg in 1846. His map has been an important work of reference for linguists, ethnographers and researchers of historical geography. There are four versions of Reguly's map, and they are of different quality:

- 1.) *The original manuscript map*, which is kept in Saint Petersburg, where the map was made.
- 2.) *The lithographed map*, which was also made in Saint Petersburg. Two existing copies – together with the eight map sketches made on the field – can be found in the Manuscript Collection of the Library of the Hungarian Academy.
- 3.) *Reguly's map edited by the Hungarian Geographical Society*, which was made after the lithographed map held in the Academy library in 1906.
- 4.) *Reguly's map edited by the Department of Cartography of ELTE*, which was published in 1983. This is actually a copy of the lithographed map reduced to half size in poorer quality.

Reguly's cartographic work is an outstanding individual achievement. He mapped the land without surveying instruments, and in many cases, he registered the names of objects in languages that did not use written records in those days. In this way, he saved the heritage of a past era.

Although Hungarian cartographers have already examined Reguly's cartographic work, their studies only dealt with certain parts of the subject, and several aspects of his life-work were unexplored until my research in the topic.

Research objectives

My main purpose with this dissertation was to broaden the knowledge on the topic and to produce a comprehensive study on Reguly. My objectives at the start of research were as follows:

- 1.) Presenting Reguly's field sketches and the four versions of his map and giving their detailed cartographic analysis.
- 2.) Exploring Reguly's mapping activity based on contemporary documents and studying the publications related to his map.
- 3.) Processing Reguly's field sketches and his manuscript map with modern cartographic methods.

Methods

I divided my doctoral research into several clearly distinct phases, so my research methods are also diverse. For studying Reguly's field sketches and map, I concentrated on their cartographic analysis and evaluation as well as on the comparison of the manuscript map with the other three versions.

Understanding Reguly's field activity and the circumstances under which he prepared his map demanded quite a different approach: in addition to analysing cartographic works, I had to do research in map history too, which included studying letters, notes and other written documents in Hungarian, German and Russian.

Preparing the maps processed by modern cartographic techniques, which included the complete workflow of map design and map editing, was a pillar of my dissertation. Compiling the gazetteer was based upon toponymical research and on the identification of place-names in Russian topographic maps.

In short, my research methods are related to several branches of cartography (map design and editing, geographical names, map history, thematic cartography).

Results

1.) I have done the detailed cartographic analysis of Reguly's field sketches known today and the four versions of his map.

In my research, I studied Reguly's field sketches as a whole and one by one, and I made an inventory of the place-names occurring on them. My analyses of the map sketches and the quantity of identified geographical names have significantly exceeded the achievements of Zsófia Szőnyi, who had studied the sketches earlier. I was first among the Hungarian cartographers who studied the content elements of Reguly's manuscript map kept in Saint Petersburg. I compared the original manuscript map with the lithographed version and with its two twentieth century editions. My dissertation can be considered the first study in Hungary that discusses Reguly's field sketches and the four versions of his map simultaneously.

2.) I have presented Reguly's mapping method and the way he compiled the map sketches.

Prior to my research, very little was known on how Reguly collected geographical and topographic information on the Russian terrain. I considered it important to present a cartographic view of Reguly's travels in the Ural Mountains

and in Western Siberia as well as to give a comprehensive view of the circumstances under which he prepared the map sketches. I put stress upon presenting Reguly's mapping method and gave high priority to discussing the role of his local informants. I also studied Reguly's travel diary, from which, first in Hungary, I have collected his notes related to cartography.

3.) I have significantly improved the knowledge on the cartographic aspects of how Reguly made his manuscript map.

I have examined not only the content of the original manuscript map of Reguly, but I provided new knowledge on the history of its making. I have explored Reguly's specific attitude to cartography and his editorial concepts that he used for compiling the manuscript map. My research paid special attention to analysing Reguly's letter that he sent to academic Köppen and in which he added comments on the map. The publications issued earlier only mentioned the possible sources of Reguly's map, but they did not discuss them in detail. I have searched for all cartographic works that had served as sources, analysed them, and showed to what extent they had contributed to the preparation of the manuscript map.

4.) I have critically compared Reguly's map with those Russian cartographic products of the time that directly used his map and his geographic data.

One of the major exploiters of Reguly's cartographic work was Ernst Hofmann, who led an expedition to the Ural Mountains in 1847–1850 organized by the Russian Geographical Society. I have thoroughly examined its history and its relationships with Reguly. I analysed the content of the map of Hofmann's expedition and opposed it to the map of Reguly. I have identified two cartographic products that were provably made by using Reguly's map.

5.) I have processed the original manuscript map of Reguly by modern cartographic technique.

One of the spectacular results of my research is the visual processing made after the manuscript map and an accompanying comprehensive gazetteer. I have redrawn every graphic element of the manuscript map with a representation method that brings their interpretation closer to today's readers, and I displayed the place-names in my reading using the available fonts. This kind of cartographic visualization greatly helps the correct interpretation of the map content and

contributes to making the content of the manuscript map known and available for the interested public. I have collected 1771 philological data and 184 distance data from the map. The gazetteer contains every textual element of the map as well as the results of my name identifications arranged in tables.

6.) I have processed Reguly's map sketches by modern cartographic technique.

I have processed Reguly's sketch maps (kept in Budapest) in the same way as his manuscript map. I have completed each sketch with its cartographic visualization identified by a number. My toponymical and topographic research has resulted in a uniform gazetteer with 2046 geographical elements and 184 other data collected from the map sketches. The toponymical collections supported by visualizations and made by modern cartographic processing are the most comprehensive gazetteers ever published in the Reguly research.

Conclusions

My dissertation is an important contribution to understanding the lifework of Antal Reguly. In my perception, this dissertation is a comprehensive study that not only deals with Reguly's cartographic work, but also discusses extensively the history and significance of cartography as well as the topography of the mapped area.

My main purpose with processing the manuscript map and the map sketches was to save the cultural heritage; at the same time, I also wanted to call our attention to the modern and specific attitude of cartography can be properly used even in non-related disciplines. Further, the linguists, ethnographers and researchers of historical geography may be even more successful if they occasionally invite cartographers to join their research.

This dissertation has not concluded the research on Reguly at all. There are still several questions about Reguly's mapping in Russia. I plan to continue my research to find answers to the questions. I hope that this basically cartographic dissertation will prompt also other researchers to become involved in studying Reguly's lifework extensively.

Publications

Publications in the topic of the dissertation:

- 1.) *A szentpétervári kéziratós Reguly-térkép modern kartográfiai feldolgozása.* (With a summary in English)
Geodézia és Kartográfia 2014/5–6.: pp. 12–17.
[Cartographic Processing of Reguly's Manuscript Map from St. Petersburg]
- 2.) *Értékes uráli vázlatok: Reguly Antal, a térképész.*
Élet és Tudomány LXX.: (16) pp. 489–491. (2015)
[Valuable sketches of the Ural Mountains: Antal Reguly, the cartographer]
- 3.) *Reguly Antal kartográfiai munkái.* (With a summary in Russian)
Folia Uralica Debreceniensia 22.: pp. 47–62. (2015)
[The cartographic works of Antal Reguly]
- 4.) *A modern kartográfia alkalmazása a néprajzkutatásban.*
Néprajzi Hírek 44: (3) pp. 16–20. (2015)
[Modern cartographic techniques in ethnographic research]

Presentations in the topic of the dissertation:

- 1.) *Uráli és nyugat-szibériai területek Reguly Antal térképészeti munkáiban.*

Cartographic Section of the Hungarian Society of
Surveying, Mapping and Remote Sensing. (Budapest, 20th
March 2014)

*[Uralian and Western Siberian regions in the cartographic
works of Antal Reguly]*

2.) *Reguly Antal kéziratok térképének korszerű feldolgozása.*

Conference on Dénes Balázs, Hungarian Geographical
Museum. (Érd, 17th September 2015)

[Modern processing of Antal Reguly's manuscript map]

3.) *Térképezés és értékmentés – Reguly Antal munkássága
kartográfus szemmel.*

Day of Related Peoples – Finno-Ugric Cultural Festival,
Reguly Antal Museum. (Zirc, 15th October 2015)

*[Mapping and saving cultural heritage – The lifework of
Antal Reguly as seen by a cartographer]*

4.) *Reguly Antal, az uráli vidékek térképezője.*

Hungarian Friends of Maps. (Budapest, 28th October 2015)

[Antal Reguly, the mapmaker of the Uralian lands]