

Digital Research Data and Human Sciences (DRDHum) 2024

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Poster proposal

Towns on the Eastern Border of the Swedish Great Power Power Structures and Commercial Networks in the Second Half of the 17th Century

The Towns on the Eastern Border of the Swedish Great Power project explores the power and trade networks of five cities in the late 17th century. Nyen, Kexholm, Sortavala, Brahea and Kajaani located closest to the eastern border. Despite their small size, they were important commercial centers of their regions. The project examines interaction within and between cities, but also connections with other regions of the Swedish Empire and Russia. The aim is to bring a comparative perspective to microhistorical research, enabled by new digital methods. In cooperation with the National Archives of Finland, HTR technology is used to produce a digitized corpus of sources that is analysed with digital network analysis tools. Network analysis, comparison of cities and a close reading of sources characteristic of microhistory are expected to reveal new features of the patterns of behaviour of urban communities in the early modern era.

The workflow of the project is as follows. The project has about 700 pages of machine-readable material ready for teaching the HTR-program's algorithm. The approximately 10,000 document pages in the audited cities are interpreted into an electronically readable format with the help of the Transkribus program in the National Archives of Finland. Coordinates can be added to the XML file format, for example, for place names where the detected point of text is located in the machine-scanned image. When creating the observation matrices, the PDF file format enables search functions based on OCR technology.

Observation matrices are created with Excel from the corpus for network analysis. Visone, which operates in a Java environment, has been chosen as the network analysis tool. The internal and external interactions of cities are primarily seen as explicit social networks. Through their descriptions, the systemic meanings of interaction and dependence are sought. Visual network descriptions produced with the Visone application may be accompanied by attributes that describe time and place (geographic coordinates).

The data can be combined with a digital map model, whereby the networks are also presented as distances to nodes that are connected to each other (links). The directions of interaction (knot, in-grade, or out-grade) and strength (intensity) may also be included in the review. From the city, place or group under consideration (hub), it is possible to determine its characteristics in the network, i.e. whether it is a "star" in the middle of the network, a "liaison", a "bridge" or a so-called "gatekeeper". In this way, abstracted network descriptions of the interaction between places and people make it possible to investigate commercial systems between cities and bourgeois on the eastern border and compare networks within and between cities.

The project studies also the different aspects of segregation inside the cities. In segregation research, QGIS geoinformatics software is used for visual representations of the social dimensions of urban space. This is done by creating a digital map from town plan drawings to which various collected real estate data can be added, such as occupation derived from the titles of the plot owners, wealth based

on tax information, ethnic background derived from the name (Swedish, Finnish, German, Karelian, Russian) and thus also an assessment of the person's religion. In this way, a picture can be obtained of the spatially ordered social characteristics of urban areas.