

# Spatial Humanities

## Ghent, sept. 2022

### Type of proposal:

Long Paper

### Authors:

Janna Coomans, Department of History, Utrecht University, The Netherlands

Léa Hermenault, Department of History, University of Amsterdam, The Netherlands

Rogier van Kooten, Department of History, University of Antwerp, Belgium

Claire Weeda, Department of History, Leiden University, The Netherlands

### Title:

Plague, Religion and Urban Space in Sixteenth-Century Antwerp

### Abstract:

The research we have conducted<sup>1</sup> during the past months aims to fill a significant lacuna in our understanding of responses to plague in the highly urbanized region of the Low Countries. It explores the spatial dimension of plague policies and its impact in late sixteenth-century Antwerp, when the city transitioned from Catholicism to Calvinism. Besides a large body of city ordinances, financial accounts and maps of the city, data was drawn from three plague-related sources. The first of those is the parochial burial register of the Sint-Jacobskerk (St. James) in Antwerp which contains registration of plague deaths between 1570 and 1577, often mentioning, in addition to the date of death, the name, location and profession of the deceased. The second is a list of the men and women who requested health passes in 1571-1572, detailing their names, professions and sites visited. Thirdly, one of the city locksmith's registers is preserved, revealing which houses were closed because they were infected with plague between 1579 and 1580. The jointure we made between the different databases, which have resulted from our reading of these three sources, and the 1584 geodatabase, created by Iason Jongepier and Rogier van Kooten<sup>2</sup>, not only enabled us to map the data extracted from historical documents within Geographical Information System (GIS), but also to compare data on plague with relatively precise knowledge of the names and locations of houses, value of real estate, socio-economic stratification and religious belonging - information that the geodatabase contains. This combination of sources on plague with spatial information and already compiled information about households makes Antwerp's case rather exceptional, that spatial analysis can help to build on.

In this paper, we will demonstrate that geospatial techniques help researchers to shed new lights on plague policies and impacts within a sixteenth-century city. We will show that it is possible to use these techniques to go beyond usual visualizations of historical data that GIS can provide to historians: researchers can use these tools to explore the latter. We will explain how spatial analysis of the data enables researchers to investigate how interactions between religion, socio-economic status and urban materiality were crucial in shaping plague incidences within the city.

We will show how Geographically Weighted Regression (GWR) and Multiple Correspondence Analysis (MCA) helped us to demonstrate that plague incidences echo, and therefore probably reinforce already existing inequality patterns within the city: while the GWR enabled us to confirm what was already discernible with a naked eye on our data visualizations,

---

<sup>1</sup> This research has been conducted in the framework of the ERC Project 'Healthscaping Urban Europe'.

<sup>2</sup> This has been done based on Gilberte Degueldre's cadaster of 1584. It was part of the GISHistorical Antwerp Project.

namely the existence of a contrast for different variables between districts of the inner-city and the others, the MCA allowed us to go a little bit further. If the range of values per district for most of the plague related variables is unfortunately not wide enough to reveal strong correlations between all the variables, statistical attractions are still to be seen. We saw for instance that districts mostly populated by poor and Catholics inhabitants living in small dwelling areas tend to count less allocated health passes and more houses closed because of plague than the rest of the districts. This is an example of the conclusions we drew and which led us to say that the variance in the effects of plague was shaped by a combination of preventive (and politically and economically motivated) measures on the one hand, and religious, spatial and socio-economic composition of infected households on the other. Spatiality, mobility, class and religion are thus three key and interlinked factors determining the differentiated, unequal impact of plague in Antwerp.

This paper will demonstrate the importance of spatial-environmental circumstances for health risks. Most notably, we have found that the size of the dwelling area was a relevant factor influencing the occurrence of plague infections, as suggested by the data on the locked houses and St. Jacob's parish. More cramped living spaces, which, unsurprisingly, were more common among the lower social echelons (and perhaps also for immigrants), meant higher recorded infection rates, perhaps also skewed by the biased gaze and policing policies of the authorities. Protestants, residing in the wealthier district, in less cramped houses, had more options to avoid the spread of plague and continue to go about their daily business. Plague thus cut through many different spheres: social, economic, religious, though space and via movement, with different outcomes for a diverse population.