

# Mapping Landscapes in Transformation

## Multidisciplinary Methods for Historical Analysis

Edited by

Thomas Coomans, Bieke Cattoor, and Krista De Jonge

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Mapping Landscapes in Transformation: Multidisciplinary Methods for Historical Analysis  
Thomas Coomans, Bieke Cattoor & Krista De Jonge

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### POSTFACE

Mapping Historical Landscapes in Transformation: An Overview  
John Bintliff

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© The respective authors 2019  
ISBN 978 94 5867 173 1 (Paperback)  
ISBN 978 94 6166 283 5 (ePDF)  
<https://doi.org/10.11116/9789461662835>



Leuven University Press

# 11.

## Mapping Through Space and Time

### The Itinerary of Charles of Croÿ

Sanne Maekelberg (University of Leuven)

According to Immanuel Kant geography is the study of space, while history is the study of time (1781/2004). Pushing this classic dictum a bit further, a map is a representation of space which does not show time or changes over time. However, human movement in space as well as in time has attracted the attention of geographers for decades and the examples of social geography are legion. In this chapter, we will look into one individual's reach and constraints in space and time. Charles of Croÿ was, as the fourth Duke of Aarschot, one of the highest ranking noblemen in the Low Countries at the time. He had important functions at court and held several governorships of strategic provinces during his lifetime. The function of governor was an important military position that entailed presence in the territory and defending the borders from external attacks, in the case of Hainaut especially from France. Through a visualisation of the itinerary of his life, we can distinguish patterns linked with his functions and responsibilities as well as with specific events in his private life. Through the composed itinerary a correlation is sought with the network of residences, serving Charles of Croÿ and his nomadic lifestyle. According to Paravicini and Kruse, length and frequency of stay are paramount in defining which residence is 'important' and which is not (Paravicini 2002), an analysis that we want to apply to Charles of Croÿ. The perennial question is which residence is more important in the residential system and why.

### The sources

The reconstruction of Charles of Croÿ's itinerary is based on two important sources: his own memoirs and a collection of his letters.

Charles of Croÿ briefly described his own life in his *mémoires autographes*, which he wrote himself in 1605. These memoirs were published in 1845 by the baron de Reiffenberg and are an important source concerning the life of Charles of Croÿ (de Reiffenberg 1845). However essential to gain insight into his mind and thinking, they are unfortunately not detailed enough to reconstruct his itinerary, since they only give a year-by-year outline of his activities. In that sense, they differ from the itineraries reconstructed by Paravicini for the Burgundian dukes in the fifteenth century, which are based on the day-to-day accounts of consumables at the court.

A second, more extensive source gives more insight into his whereabouts. The *lettres missives* conserved in Brussels at the State Archives of Belgium constitute a collection of correspondence containing 912 letters, written from 1580 to 1612. Most of these letters were not actually penned by Charles of Croÿ himself but by a secretary. In accordance with the customs of that time, each letter bears the signature of Charles of Croÿ, in his own hand, together with the location and date of sending. This information makes it possible to retrace the duke's movements.

The use of historic correspondence to research spatial patterns and relations is not new. Several projects work on the question 'how to solve a problem like correspondence?' (Cultures of Knowledge). The University of Oxford created an open source catalogue and archive of letters, making them available to researchers worldwide (Cultures of Knowledge 2009). This initiative was based on the fact that the collection of letters created by one person is often scattered across different archives located all over the world, making it extremely difficult to master for one researcher. Applied examples are the 'Mapping the Republic of Letters' project of the University of Stanford, which focuses on the visualisation of complexity in spatial, temporal, and biographical information (Mapping the Republic of Letters 2015). A number of case studies demonstrate the information that can be deduced from these letters, ranging from travel to publication data. Since 2013 the Huyghens Institute has been working on a project entitled 'Circulation of Knowledge and Learned Practices in the seventeenth-century Dutch Republic' (Circulation of Knowledge 2013). Through the *ePistolarium* linked to this project visualisations of social networks, established by the analysis of more than 20.000 letters, are made possible. Here a virtual research environment, the database of letters and metadata, can produce dynamic visualisations based on several filters.

All of these examples have a strong focus on networks, as letters establish a connection between sender and receiver. As the letters we examined were mostly addressed by Charles of Croÿ to the consecutive governors of the Low Countries,



Fig. 1. Adrien de Montigny, The castle of Chimay, 1597. Dülmen, Herzog von Croy'sche Verwaltung, Hs. 38: 'Album of Croÿ – Croÿ properties in Hainaut', fol. 5 (digitised by KU Leuven Libraries).

and especially Archduke Albrecht of Austria and the Infanta Isabella of Spain, a network analysis of this collection would not add much to our research. We decided to focus on the biographical information that could be deduced from these letters, since we aim to study the role of the ducal residences in the itinerary of Charles of Croÿ (Fig. 1).

## Spatiotemporal approach using QGIS

Based on these sixteenth-century sources we created our own dataset. While the spatial-geographic information from the autobiography was a bit harder to decode, the extraction of information from the letters was pretty straightforward. The resulting dataset consists of the location, which is the name of a town or village, and an accompanying date. To make this information legible for GIS software, the location was expressed in geographic coordinates [Table 1]. GIS enables very accurate locations, however the historic evidence that we have does not. Wherever possible, we used the coordinates of the residence where Charles of Croÿ stayed, but more often the centre of the city mentioned in the letter was used.

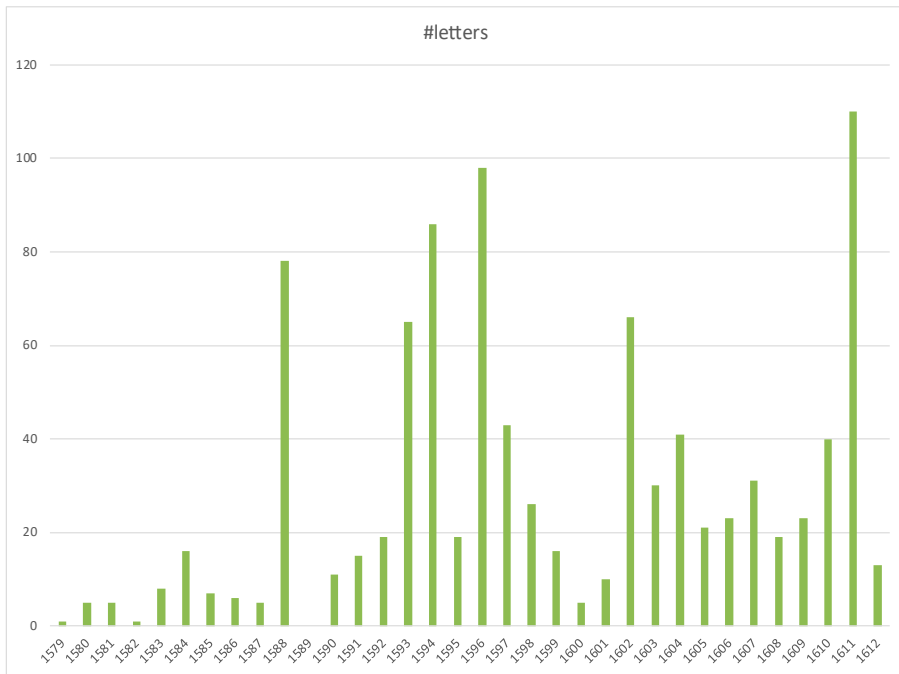
One of the other characteristics of historic sources, however, is that they are not systematic nor fully preserved/found. The same goes for the source material we used. The letters collected in the State Archives in Brussels cover 32 years with 912 letters. Even though the collection is extensive, it is not nearly large enough to cover 32 years of travels and duties. Thus, there are important gaps in the continuity of the source material that must be considered and shown in the visualisation [Table 2].

The geographic aspects are one layer of the information, but the dataset also includes time. Using the Time Mapper plugin for QGIS the time dimension can be added, after converting the time data to the Gregorian timeframe. Dates from before 1582 are expressed in the Julian timeframe, leading to a discrepancy in the data. This is solved by converting the Julian times to the current Gregorian timeframe, which is also recognised by most GIS software. Now the gaps in our data really become visible. We can cover the entire life of Charles of Croÿ with a three-hour movie, but obviously for long stretches on end no information is available. The gaps can, however, be reduced to a minimum by including all the additional source material and literature on the life of the fourth Duke of Aarschot. Most importantly, the dataset was completed with all the documents that we could find that were also signed and dated by Charles of Croÿ. These comprise the numerous descriptions, pre-cadastral maps, plans, contracts, and specifications concerning his properties and domains, all personally revised by him.

Table 1: Dataset of the itinerary.

	Day	Month	Year	field_4 ▲	field_5	X-co	Y-co
2539	26	11	1611	1611-11-26	Comines	50.76534399...	3.006975000...
2540	26	11	1611	1611-11-26	Bruxelles	50.84209299...	4.359360000...
2541	27	11	1611	1611-11-27	Lille	50.63988400...	3.061823000...
2542	27	11	1611	1611-11-27	Lille	50.63988400...	3.061823000...
2543	28	11	1611	1611-11-28	Ippre	50.85115600...	2.886246000...
2544	28	11	1611	1611-11-28	Ippre	50.85115600...	2.886246000...
2545	28	11	1611	1611-11-28	Lille	50.63988400...	3.061823000...
2546	29	11	1611	1611-11-29	Dixmude	51.03347300...	2.864942000...
2547	30	11	1611	1611-11-30	Bruges	51.20880700...	3.224119000...

Table 2: Number of letters according to year.



In addition we can make up some hypotheses concerning the whereabouts of Charles during the gap periods. For example, his autobiography mentions that he studied in Leuven, so we assume that he stays there for several years. If he is said to participate in a battle, we can hypothesise on his journey, but still the lacunae remain significant, as demonstrated by the movie. This linear visualisation allows

to identify some of the important functions of Charles of Croÿ. For example his appointment as governor is always followed by an exploratory tour of the respective province, but it is impossible to deduce personal patterns linked with his own preferences.

As base map to display the information deduced from the composite biography we used a map of the Low Countries. In the sixteenth century the Low Countries consisted of 17 provinces, roughly corresponding with present-day Belgium, Luxembourg, The Netherlands, and Northern France. By 1600, a pivotal time for our analysis, the Northern Low Countries (approximately The Netherlands) had virtually split off from the Southern Netherlands. Despite the fact that until the Peace of Westphalia (1648) the boundaries would remain subject to constant change due to the continuous military conflicts, we use a static map for the nine Southern provinces under Spanish rule, based on contemporary sources (Jongepier 2014) [Map 2]. Underlying the provinces we use the little-known ‘Vrients’ map from 1602 showing the Low Countries during the reign of Archduke Albrecht and the Infanta Isabella (1598-1621) (Vrients 1602). This map — consisting of twelve sheets glued together — is oriented towards the west [Map 1], but after meticulous geo-referencing it can be made to match the seventeen provinces.

## Web-based presentation

The biography of Charles of Croÿ can be visualised using several online tools. A first approach was developed using StoryMap JS, a free online tool that allows one to tell stories based on the locations in which they occurred. The sites linked to the itinerary of Charles of Croÿ can be easily visualised on a map of the present-day borders and state lines. However, these borders have little to no significance with regard to the political situation in the sixteenth century. To implement the contemporary map with the borders of the seventeen provinces, the underlying layer should be a pixel-dense file of this map, i.e. an image. The advantage of using this tool is that you can tell the story of one lifetime through a semi-interactive tool, while the locations can be combined with a certain level of narrative information on the whereabouts of the duke. However, it is essentially a linear approach, which moves through the life of Charles of Croÿ in a forward direction and which does not allow one to emphasise certain locations or information. Furthermore a lot of the locations in the itinerary are often repeated, as Charles visits certain locations on several occasions during his lifetime, which makes the StoryMap JS visualisation rather complex. The tool seems more suited to creating travel visualisations or tours around a certain territory.

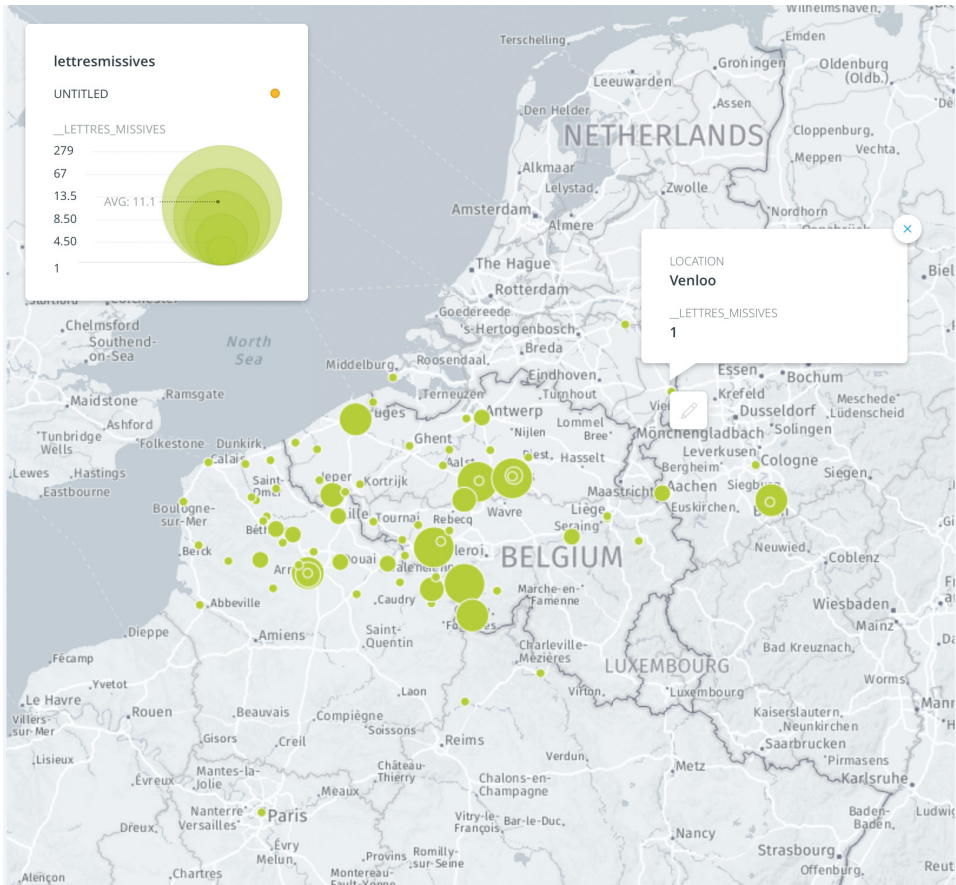


Fig. 2: Sanne Maekelberg (2017), *Relative Time Spent at Different Locations during Charles of Croÿ's lifetime*, made with CartoDB.

The challenge of illustrating changes over time is solved here using web-based interactive maps, made with CartoDB. Unlike printed maps, these allow the viewer to browse through certain time periods and to go back and forth, contrary to the linear movement of the guided animation (made using QGIS) and the approach using StoryMap JS. Essentially developed for modern-day applications, this tool can also be transformed to fit historic research. The composed dataset used in QGIS can be directly imported into CartoDB, and after geo-referencing you immediately get the locations plotted on a present-day map. Using the built-in options for visualisation you can easily achieve a map showing the 'importance' (that is, the relative time spent based on the number of letters) of the different locations by the size of the spheres (Fig. 2) [Map 3]. Here, too, additional information



can be added in a pop-up window, such as the location, the number of letters and even the reason for the presence of the duke, which is narrative information. CartoDB also allows one to take the time-factor into consideration by adding a timeline to the visualisation. Despite the limitations of the open source software that was used, a coherent visualisation with browsing options was possible.

## Discerning personal patterns

This analysis gives a general overview and a visualisation of Charles of Croÿ's lifetime. However, keeping in mind our general aim of reconstructing his network of residences, we are looking for patterns such as seasonal migration which will allow us to make more sense of his itinerary in relation to his residential network. An approach using static superimposed maps provides a solution. After dividing and superimposing the maps according to season we get some interesting results. During Spring (March–June), Charles of Croÿ distinctly preferred to stay in Beaumont and in Heverlee, both residences with important hunting facilities. This actually matches the archdukes' preference for going hunting in the Spring. Brussels, on the other hand, is most visited during Autumn and Winter, which is understandable if we consider that the city was probably uncomfortably hot, not to say unhealthy, during the Summer. Despite the incompleteness of the sources, some seasonal migration can thus be discerned, with a hunting season in the Spring and the avoidance of the main court residence city during the Summer [Map 4].

The same conceptualisation is used to cover the 'seasons' of the life of Charles of Croÿ, divided according to his functions. Again we see some distinctive patterns, linked with the different periods in his life. In the period 1580-84 the focal point is in Flanders, which seems self-evident when considering his governorship of the province. During the following time periods, Flanders completely disappears from the itinerary. Also his appointment as governor of Hainaut is clearly visible, with a major increase in his stays in Mons, capital of the province, from 1595 onwards. However, we also see a parallel tendency to retire towards Beaumont and Heverlee. At the same time the number of letters increases, probably meaning that Charles spent less time in the close vicinity of the court (making letters more necessary) [Map 5].

As shown by these strategic maps, a nobleman of the highest rank such as Charles of Croÿ had, to some extent, the luxury of his own migrational patterns, free from the obligatory attendance at court. Charles does not follow the distinctive seasonal

migration of the archdukes to their country residence in Mariemont, where they spent long periods every Spring and Autumn, as shown by an analysis of their correspondence (Demeester 1978). On the other hand, Charles of Croÿ remained at their beck and call, as shown by the summons to Brussels on several occasions. Even when he retired, from 1605 on, he continued travelling in the service of the archdukes.

From the information in the source material we can also deduce some of the travels that Charles of Croÿ undertook in his lifetime. Two examples are especially informative. In 1580, at the beginning of his career, Charles undertook the journey from Aachen to Antwerp to join the Revolt together with his wife Marie de Brimeu, as he had Protestant sympathies at the time. By mapping out this journey it becomes clear that he obviously did not take the shortest possible route, clearly avoiding the territories controlled by Alexander Farnese, moving from the principality of Liège (which was a separate state at the time) through France and continuing by boat to Antwerp [Map 6].

The second journey is dated 1611 when, aged 51 and at the end of his career (and life), Charles undertook a last trip through the provinces of Flanders, Artois, and Hainaut [Map 7]. During this two-week journey he visited one town a day. Considering his age and health issues, as Charles of Croÿ was known to have gout which caused painful inflammations in his hands and feet, this journey cannot have been an easy undertaking. We can deduce, however, an average daily travel distance equal to thirty kilometres, which is approximately the distance between Heverlee and Brussels, and Beaumont and Mons, respectively. This proximity to important political capitals also helps to explain the crucial role of the residences of Heverlee and Beaumont as favourite places of retreat of Charles of Croÿ.

## Conclusion

There is certainly an added value in using GIS to work on historic data. Due to the lack of sources, it is hard to discern patterns using the linear representation covering the entire lifetime of Charles of Croÿ. However, the creation of strategic superimposed maps does throw new light on the movement habits of this high nobleman. In order to make it accessible and comprehensible to a larger audience, the representation needs to include a certain level of interactivity. This is achieved by the implementation of a web-based representation, which allows one to toggle between time periods and locations.

We can conclude that by using GIS to query the available data, we saw things that we had not seen before, which makes this approach an undeniable gain with respect to the classic methods. The visualisations revealed an obvious centre of gravity in the province of Hainaut when it comes to the duke's presence. Because of the results of this research we decided to focus on Heverlee, Brussels, Beaumont, and Comines, as they emerge as the primary places of residence not linked with the military duties of the duke. The use of this method highlights the different uses of the residences — military, hunting, and proximity to the court — which was the base of the selection of case-studies for further research.

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# Maps



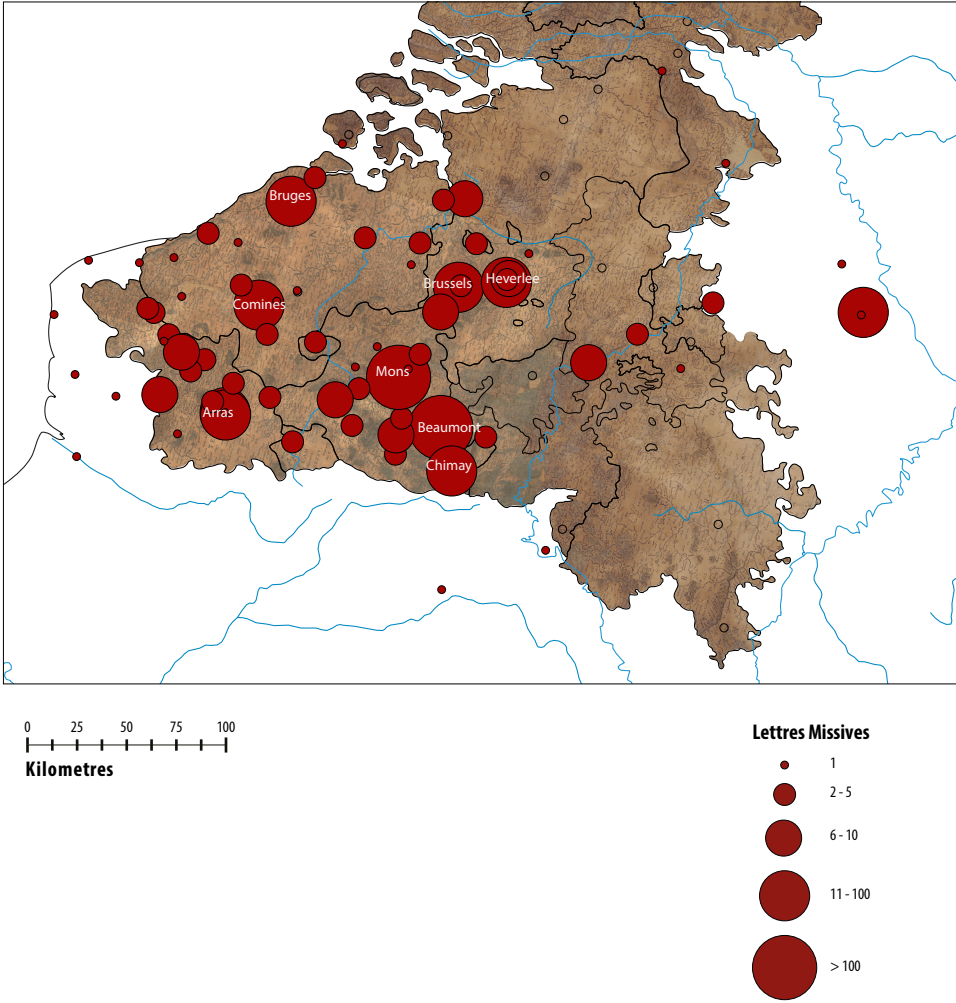
**Map 1:** Vrients, J. B. (1602), *Nova et emendate totius belgi sive inferioris germaniae cum adiacentibus et finitimis regionibus geographica description antverpiae apus ioannem baptistam vriens anno a christo nato MDCII* [© City Archive Furnes (Veurne)].

'Vrients' map from 1602 showing the Low Countries during the reign of Archduke Albert and the Infanta Isabella. The map — consisting of twelve sheets glued together — is oriented towards the west.



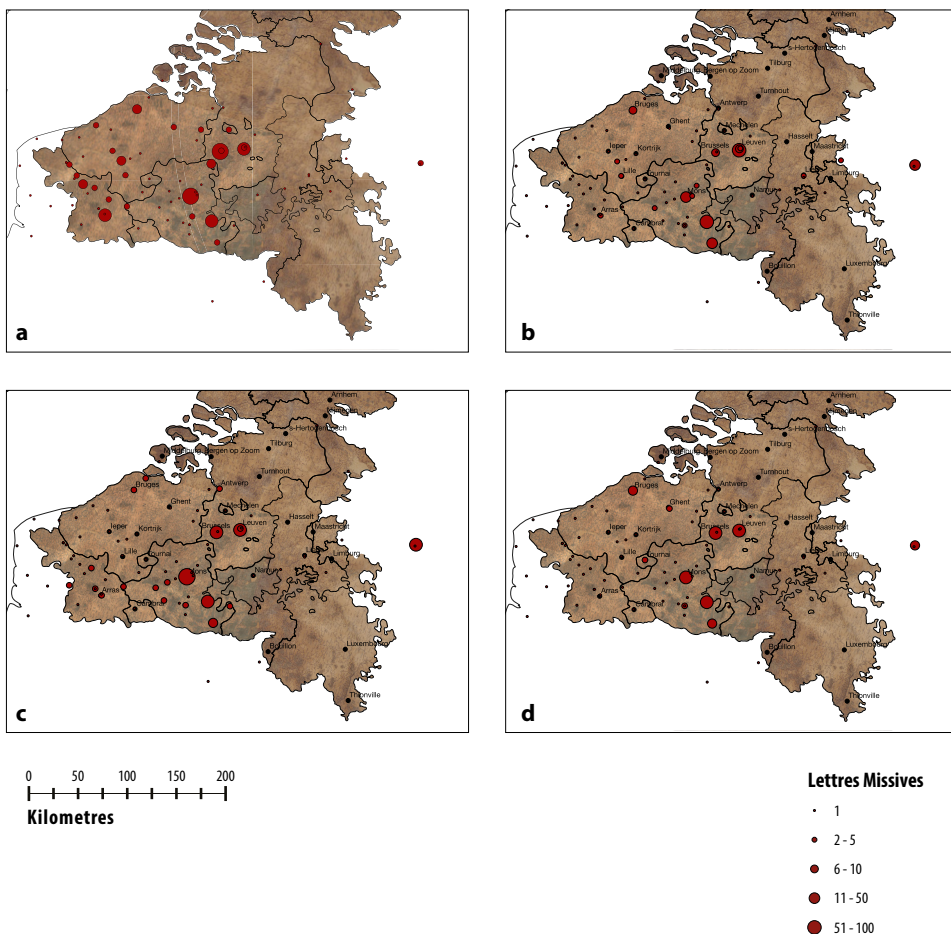
**Map 2:** Sanne Maekelberg (2017), *The 17 Provinces of the Low Countries around 1600* [Combination of the ‘Vrients’ map © Stadsarchief Veurne, with a reconstruction of the Low Countries © I. Jongepier/GIStorical Antwerp – University of Antwerp/Hercules Foundation].

Map of the Low Countries around 1600, displaying the 17 provinces, roughly corresponding with present-day Belgium, Luxembourg, The Netherlands, and Northern France. Despite the fact that until the Peace of Westphalia (1648) the boundaries would remain subject to constant change due to continuous military conflicts, we use a static map for the nine Southern provinces under Spanish rule.



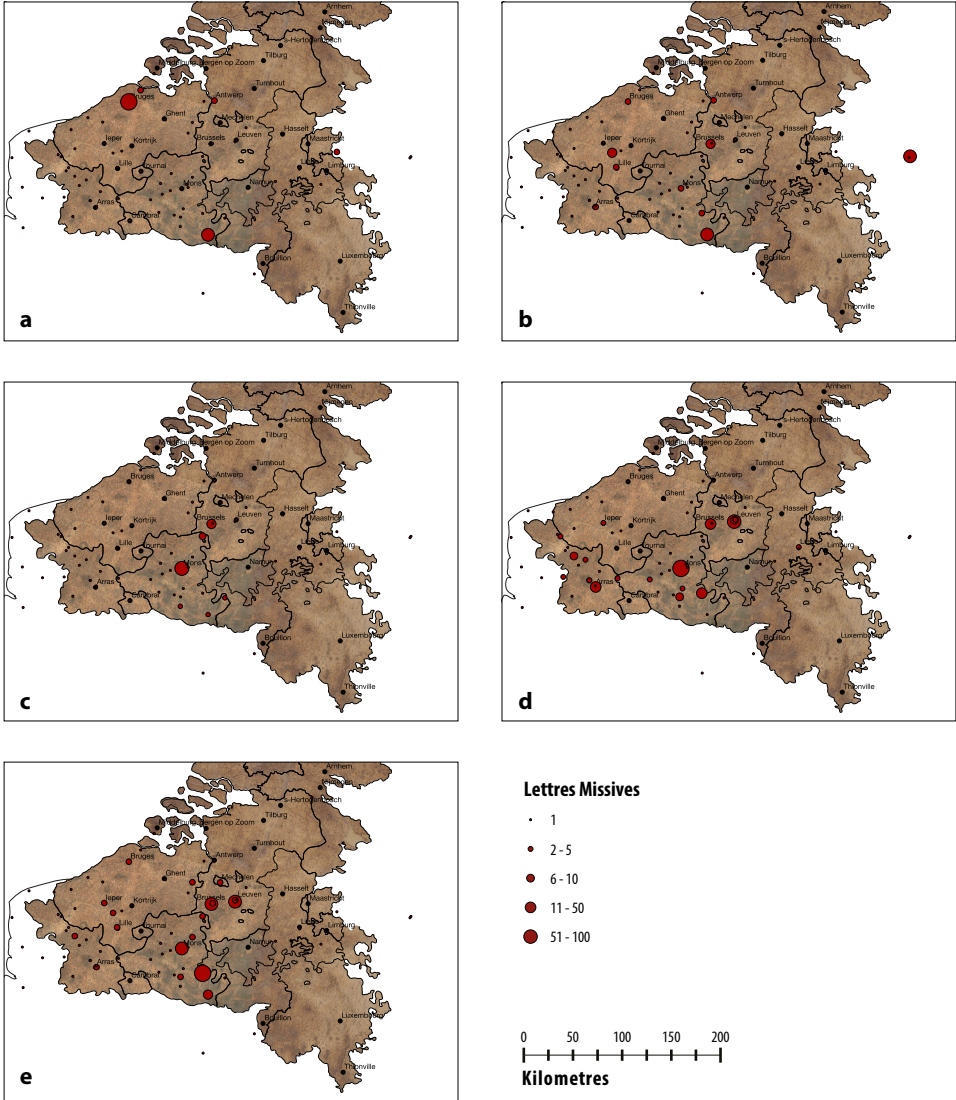
**Map 3:** Sanne Maekelberg (2018), *Relative Time Spent at Different Locations during Charles of Croÿ's lifetime.*

Map elaborated on the basis of CartoDB analysis [Fig. 2], showing the relative importance — that is, the relative time spent in based on the number of letters — of the different locations



**Map 4:** Sanne Maekelberg (2018), *Superimposed Residences of Charles of Croÿ*. a: fall residences; b: spring residences; c: summer residences; d: winter residences.

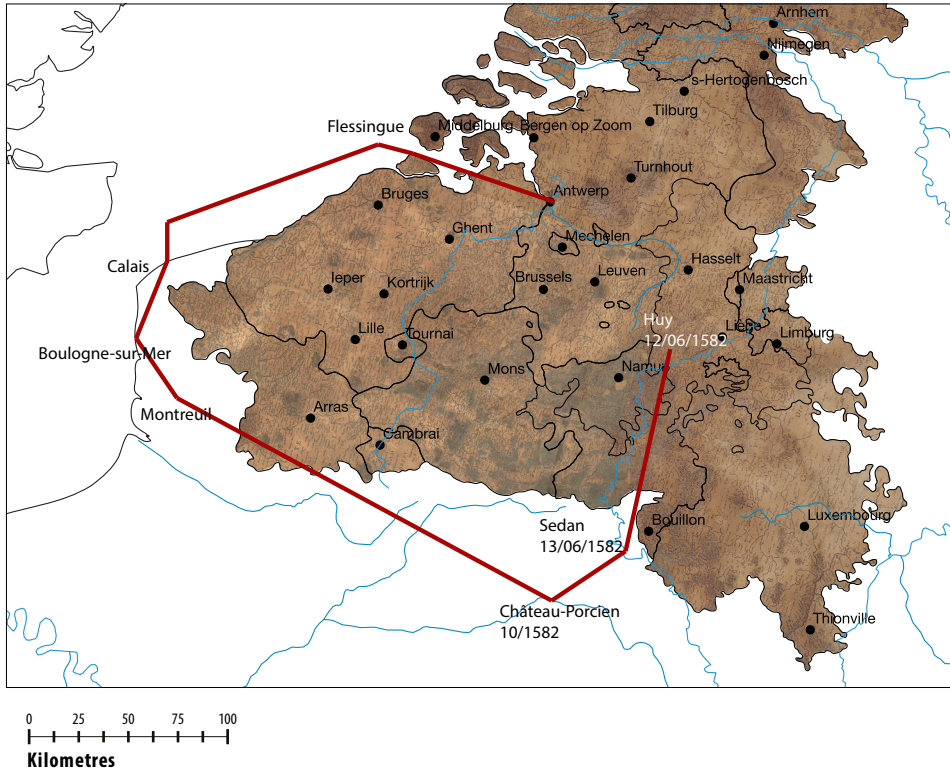
Static super-imposed maps, divided according to season, show the seasonal migration of Charles of Croÿ. During Spring, he distinctly preferred to stay in Beaumont and Heverlee, both residences with important hunting facilities.



**Map 5:** Sanne Maekelberg (2018), *Superimposed Map of Charles of Croÿ’s Residencies*.  
 a: 1580–1584; b: 1585–1592; c: 1593–1595; d: 1596–1605; e: 1606–1612.

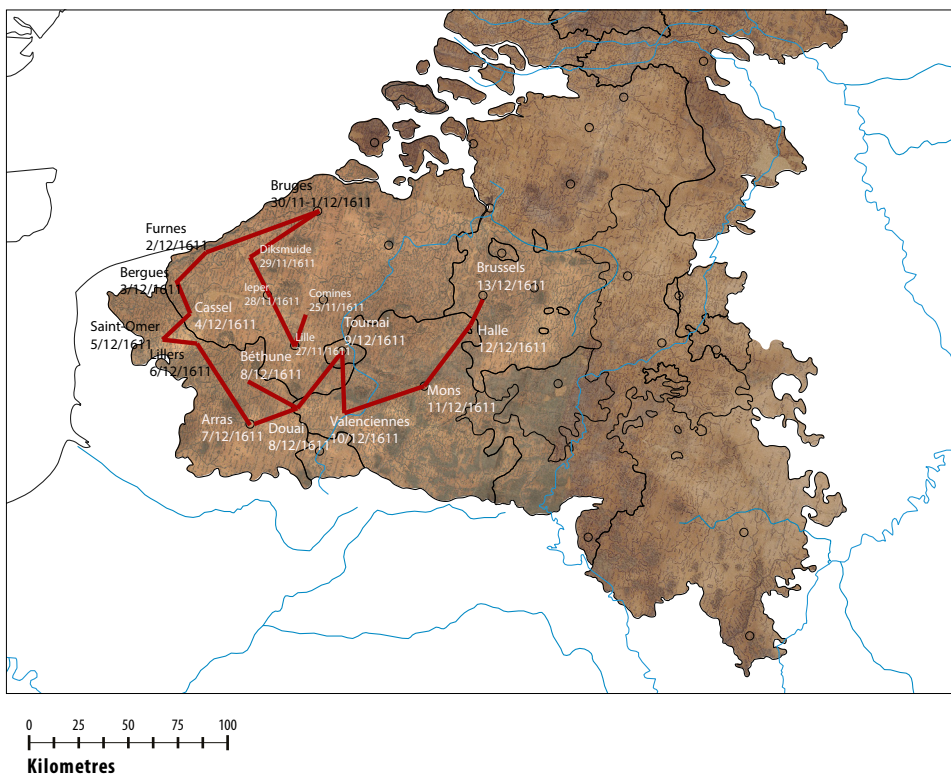
Static superimposed maps of the ‘seasons’ of the life of Charles of Croÿ show distinctive patterns linked with his functions. In 1580-84 the focal point is Flanders, as he is governor of the province. His appointment as governor of Hainaut is clearly visible, with a major increase in his stays in Mons from 1595. By the end of his life he retired to Beaumont. Charles of Croÿ had, to some extent, the luxury of his own migrational patterns, free from obligatory attendance at court.





**Map 6:** Sanne Maekelberg (2018), *Charles of Croÿ's Journey from Liège to Antwerp in 1582.*

In 1582 Charles of Croÿ undertook the journey from Liège to Antwerp to join the Revolt together with his wife Marie de Brimeu. The map of this journey shows that he obviously did not take the shortest possible route, clearly avoiding the territories controlled by Alexander Farnese, moving from the province of Liège through France and continuing by boat to Antwerp.



**Map 7:** Sanne Maekelberg (2018), *Charles of Croÿ's Journey through the Provinces of Flanders, Artois and Hainaut in 1611.*

Journey of 1611 through the provinces of Flanders, Artois, and Hainaut. From this journey an average daily travel distance equal to 30 kilometres can be deduced. This equals approximately the distance between Heverlee and Brussels, and Beaumont and Mons. This proximity to important political capitals helps to explain the crucial role of the Heverlee and Beaumont residences as favourite places of retreat of Charles of Croÿ.

