



# THE MIGRATION OF THE LOW COUNTRIES MENNONITES

How visualisation can be used in the Mennonite story  
from 1500 to 2018

## ABSTRACT

Visualisation has been a tool within research for a long time. However, looking at visualisation as a way to spread scientific information to a larger audience, or how it can support and deepen understanding of a topic has not been extensively analysed. In this thesis the topic is the migration of the Mennonites from the Low Countries from 1500 to 2018, as a means to see what visualisation can reveal about their story that the written sources have overlooked or could simply not show. The main trends in the Mennonites migration was from west to east on the Eurasian continent and from north to south in the Americas, with a preference to open and flat areas such as deltas or plains. This thesis shows that visualisation can be a useful tool to study migration, and it can reveal possible factors within migration such as elevation, biomes, and climates.

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## Introduction and background

This thesis is composed of two separate parts. The first is the written thesis itself, the second is the story map that tells the story of the Mennonites and their migration throughout time. This written part is to give background information and the academic insights gained during the making of this thesis.

It should be noted that the story map is available and targeted to the general public and is therefore written without the inclusion of references and in layman's terms so that a wider audience can understand the data presented in the story map.

In this written part the theories around migration, the different considerations, and methods used in this thesis will be discussed and explained, but the multiple maps that have been made as part of this research are only available in the story map.

### Background Mennonites

Over the course of human history people have been persecuted for various reasons, one of which is religion. The Mennonites, the topic of this thesis, are a subsection of the Anabaptists. They have been persecuted in Europe due to their differing religious beliefs (Ohio History Central, 2010).

Where their ideology differed from the rest of Christianity was their belief in adult baptism. The Anabaptists, and with that the Mennonites, believed that a person should be able to make an informed decision on whether or not they are baptised, hence adult baptism. The other streams within Christianity baptised people as babies, partly due to religious reasons and partly due to administrative reasons by using the baptisms to enter people into the record of the city or town where it took place. One other important tenant of the Mennonite beliefs is the fact that they do not want to touch a weapon or do harm to other people (Mennonite Church, 2022).

Both the Mennonites' stance on baptism and violence caused them to be viewed with suspicion by others. All of the Anabaptist factions were labelled as heretics by the more dominant streams of Christianity, both Roman Catholic and Protestant. In many regions, they were actively persecuted. This persecution led to the Mennonites fleeing from their homes and settling elsewhere. It is this pattern of migration that this thesis wants to take a look at, within and across the Eurasian continent, as well as across the Americas (Mennonite Church, 2022; Ohio History Central, 2010).

We will focus here on the Mennonites from the Low Countries, also known as the ethnic Mennonites (henceforth labelled as just Mennonites). The majority ended up moving to the Americas in two steps, both through Russia. The first of these resulted in the Amish settling in

Pennsylvania. The second wave of Mennonite migrants from Russia landed in Middle and South America, where they were later also joined by Mennonite migrants from North America (Mennonite Church, 2022). All of these Mennonites are still descendants of the ones that left the Low Countries. It is only this group that will be looked at in this thesis.

### Research questions

In the current literature on the migration of the Mennonites the main focus lies on the socio-religious analysis of the migrants (those that left and why they left). There is less attention for the people that stayed behind. However, these people should be noted since they can move later on, and this has happened with the Mennonites that had settled in Russia. And in particular, there seems to be a lack of focus on the spatial aspects of migration: the links between the departure and arrival locations. Did they specifically choose their new location, or did they simply settle wherever the ruler was indifferent or friendly to them?

Consequently, this research aims to give a holistic view of the migration of the Mennonites. From where to where did they move and why, how many people stayed behind, and is there a link between the departure locations and the arrival locations? With this focus, this research aims to enrich the understanding of the migration of this specific group of people. As a way to visualise the movements, modern cartographic methods have been used. In this way, an overall view of the locations of the Mennonites can be created as well as a timeline of maps to show how the migration went and still see the groups that stayed behind. This then leads to the main question of the research:

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*How can visualisation support and deepen our understanding of how the migration of the Mennonites went between 1500 and 2018?*

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To answer the main question two secondary ones need to be answered as well. The first of these is:

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*What were the different steps in this migration process?*

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To understand the migration process one needs to know the different steps and phases that the group in question went through. For the Mennonites there seem to be 15 large and impactful migrations and these are the focus of this research.

The other secondary question is:

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*What can visualisation teach us about the choice of destinations and the new settlement locations?*

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The reasons for leaving are well-known, religious persecution, fear, missionary missions, and needing more space, but are there similarities between the different settlement regions? The Mennonites, e.g., originate from the Low Countries which are fairly flat and open, so it can be that the Mennonites choose to settle in locations which are also flat and open. To see whether or not this is the case is the goal of this second question.

## Theoretical background and framework

### 'Determinist' and 'Integrative' views on migration

To understand migration the first that needs to be discussed are the two ways of thinking about migration which also influence the theories that are created. Samers and Collyer (2017) have split migration theories into two camps.

The 'determinist' and the 'integrative' groups. The 'determinist' theories can explain patterns found in migration on their own, without having to include any other theories. These theories are often based on political and economic systems which Samers and Collyer discuss in chapter 2 of their book migration (2017).

The second groups of theories named in the book are the 'integrative' theories. These theories rely on parts of other theories and say that there is more than one driver behind migration and that migration decisions can be influenced by many factors behind the scenes. It is in this group that theories such as social networks, social capital, and temporal views can be found.

Samers and Collyer do note that the difference between the 'determinist' and 'integrative' theories is sometimes difficult to see, but in their book, the 'determinist' theories discussed all have roots in economics, whilst the 'integrative' theories have roots in social studies. For this research the 'integrative' theories discussed by Samers and Collyer are quite interesting, seeing that the subject matter is the timeline of migration of one specific group. To analyse this timeline a temporal view of migration can be used.

### Voluntary and forced migration

Piguet (2018) asks what the difference is between voluntary and forced migration. To do this Piguet went into both types of migration by simply asking why and what. Voluntary seems to be explained by looking at the economic factors in the region of origin and the region of destination. This follows the more neoclassical school of thought, but behavioural factors have been added to this as well. It is also worth mentioning that people might not have all the information or only an image sold to them of the destination which makes them bound in some manner.

The way of thinking explained above should not be confused with the concept of push and pull factors, since those can also apply to forced migration. A war pushes people to flee and a region where there is no war pulls the refugees in due to there being no war. The image below is how Lee (1966) pictured how the push and pull system would work. The factors in the origin and destination can be positive, negative, or neutral and people will likely choose the location that has a better situation than the one they left.

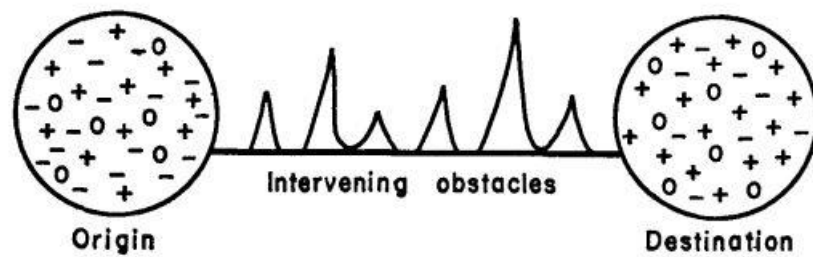


Figure 1 Origin and destination factors and intervening obstacles in migration. Lee (1966)

Forced migration is often caused by outside forces or major unfavourable changes in the living situation in any region. One of these can be war, but phenomena such as climate change can also force people to move and flee their homes. Pull factors are also considered less important for this group of migrants since they have no real choice in whether or not they move and had no time to plan for a move. Whereas people who planned to move might have more of an idea about the destination and what it is truly like at the destination, according to Kunz (1973).

For the Mennonites, the migrations across the Eurasian continent were forced due to them having to flee in fear of persecution for their beliefs. However, with some of the migrations, they were allowed to choose in which regions they settled which is not always the case for forced migration, such as the move to the Russian Empire on the invitation of Catherine the Great (Smith, 1981). As for their migrations across the Americas, those seemed to have been entirely voluntary since they were not persecuted and there are no records that the Mennonites were pushed out either.

### 'Us' or 'them'

An important theory in understanding the 'us' or 'them' divide' is the social identity theory of Tajfel (1982). In 1982 Tajfel proposed that people can derive great pride and self-esteem from their group memberships. People can identify their group by pointing out the differences of other groups and the similarities of things in the same group. This creates an 'us versus them' idea in people's minds.

Tajfel and Turner (1979) write that there are three main mental processes involved with classifying 'us' or 'them'. The first is categorisation, which describes a person including in which 'box' this person would fit. Secondly, there is social identification, which is where one adopts the identity of the group that they are a part of. Thirdly, there is comparing the group that one is a part of with other groups.

The processes were indeed adopted by both the Mennonites and other Christian religious groups in Europe. Other Christian groups often saw the Mennonites as strange and different

due to their practice of adult baptism and their opposition to the baptisms of babies. The Mennonites themselves saw the practices of the other versions of Christianity as incorrect and sought a way in which they believed Christianity should be practised.

### Mobilisation of social capital

Social networks are part of social capital (Anthias, 2007) and can be linked to resource mobilisation. Anthias references Bourdieu's interpretation of social capital which he quoted from the text of Bourdieu himself.

*'Social capital is the sum of resources, actual or virtual, that accrue to an individual or a group by possessing a durable network of more or less institutionalised relations of mutual acquaintance and recognition'. (Bourdieu and Wacquant 1992, cited by Anthias 2007, p790).*

There is also a link between social capital and membership to a group.

*'The volume of the social capital possessed by a given agent... depends on the size of the network of connections he can effectively mobilize and on the volume by each of those to whom he is connected' (Bourdieu 1986, cited by Anthias 2007, p790).*

The idea of social capital itself is older than the writings of Bourdieu and was put back on the map in the social sciences by Putnam in a number of influential works (Putnam, 1995; 1993). For this thesis, however, the interpretation that Bourdieu gives of the concept is more interesting since it can be linked to other theories and concepts that are used by Anthias.

When the Mennonites left any given area they left behind the networks they had built there and needed to build new ones at their destination. There are two ways in which to mobilise the social capital of a group (Anthias, 2007). These are the 'positively advantaged social capital' and the 'negatively advantaged capital'.

The 'positively advantaged social capital' focuses on consolidating the position of someone who has an advantage. This method of mobilising social capital takes advantage of someone's position within the hierarchy of the community and helps to improve their standing even further.

'Negatively advantaged social capital' is a more defensive way of mobilising the social capital available to the migrant. This strategy is more frequently used by migrants because they do not have access anymore to their original social network. An example is given by Archer and Francis (2006), about Chinese migrants who were focused on the future and escaping their less than ideal situation by furthering their children's education. The mindset was based on the hardships they had endured as migrants, and their ethnicity and social networks were a great resource to them.



The main idea of the 'negatively advantaged social capital' does hold true in part for the Mennonites. The Mennonites were fleeing from a situation and leaving behind everything they had known and focusing on building a better life for themselves somewhere else. It may not have been in the same way as the Chinese migrants used as an example, but it does show some similarities that the theory around it can be true in the case of the Mennonites.

#### A temporal view of migration

The focus on time in migration has been lost in research according to King et al. (2006), and the distance seems to be favoured over the time spent at the new location. However, migration does not just rely on the distance between the two locations, but also on the time spent in the new location. King et al. (2006) describe it as relocation to another place for a significant period of time, and a permanent or semi-permanent shift of residence.

One influential work was time-geography by Hägerstrand (1975). He viewed it as a set of particular events in a person's life over time. There were some key components such as time paths, which were described by Pred (1977) as 'a weaving dance through time-space' from start to finish of a person's life. For this research, these ideas can be changed for the Mennonites as a group instead of just an individual. Time, and the changes that come with new times, has played a role in the migration of this group. As mentioned before they had to flee in the beginning when people were not very open-minded about new religions, but currently they can move around without fear of persecution due to the attitude of people having changed over time.

Another work of note is the times of migration by Cwerner (2001). He made a conceptual framework with eight 'times of migration' in it. The ones of most importance to this research are 'remembered times' and 'diasporic times'. The 'remembered times' mainly focus on remembering the homeland that they left with keepsakes, pictures, food, music, and other traditions. However, since the things used to remember can be intangible it could also be stories about the landscape or just landscapes in general. For the Mennonites, this landscape would be a delta, or at least a flat and open space, since that is what the Netherlands is. The 'diasporic times' state that migrants thrive when they recreate some of the rhythms they had in their homeland. Now, this might be more difficult since the current Mennonites are 500 years in time removed from the Mennonites that fled the Netherlands, but stories about what life was like can be passed down and therefore these traditions can be kept alive as well.

Most of the studies that look at time in migration focus on a single-family unit or a single person and might therefore be difficult to translate to a study on a historical group of people that still exists today, but it does not mean that it is impossible. The three works discussed before can

indeed be changed to fit a larger group, as has been done, but more studies with a focus on the concept of time on larger and longer existing migration patterns should be done to see how this can impact these groups and their history.

During the 21st century 'time' has become more of a focus in migration studies. Not just by looking at the timeline of one person's movement but also how changing times have impacted migration in general. The article by Baas and Yeoh (2019) gives an overview of the different ways time is seen in migration studies, which shows that there have been shifts in how the temporal view of migration has been used over time. Another source which speaks on the temporal view of migration is the book Migration by Samers and Collyer (2017). They focus on the biographical approach in which a migrant's decision to move should be seen in relation to a migrant's past and anticipated future. This biographical approach can also be called a temporal or time-space approach. Since this thesis will focus on the timeline of movements of the Mennonites a life course or time-space approach could be useful. However, this will be done by using ArcGIS pro to visualise the different steps that the Mennonites went through. This visualisation can help to understand the different steps better since the distances as well as the surroundings can be seen.

### Visualisation

Papers and books were written on the topic of migration focus on theory and the reasoning for the migration (Baas & Yeoh, 2019; King, Thomson, Fielding, & Warnes, 2006; Piguet, 2018), however not many visualise the migration that has taken place. The use of visualisation can help people to understand the distances crossed by migrants and even some of the reasoning behind why people move.

Visualisation also has a value which van Wijk (2005) tried to assess. His results were that the value of visualisation depends on its use and how one views visualisation. This is due to the different ways in which visualisation can be used and the many different fields it can be applied to.

Some of the papers on visualisation talk about specific tools and the benefits of these tools. One of those papers is by Dominguez (2019) and discusses how using GIS and other visualisation methods can reveal more of the interconnections between countries and how these relate to migration, whilst showing their own designed tool for the job. The paper concludes that each of the visualisation methods used in the research helped to understand the migration phenomenon better.

For this research, the fact that they looked at different non-economic factors influencing migration and visualising those is of importance, as this research aims to do the same for the

Mennonites. On top of that their conclusion that using visualisation makes migration easier to understand, or helps in deepening our understanding is important since that is what this paper argues.

GIS, which is useful for visualising spatial data, has been used over time. The article historical GIS and visualisation (Fyfe, Holdsworth, & Weaver, 2009) shows what GIS and other visualisation methods can do when dealing with archival data, such as the data from hotel guest books from the late 19<sup>th</sup> century. In the end, the article concludes that GIS can help with large data sets that cover larger areas, but that smaller locations might be missed. To handle this the authors felt more and different visualisation methods need to be used to better represent the data researchers work with.

Based on the small discussion above the added value of visualisation depends on its purpose, but also which methods are used. For research such as the one carried out in this thesis GIS, graphs, and story maps seem to be appropriate. The research looks at the spatial patterns in the migration of the Mennonites and does not just want to describe it, but also show it to a wider audience by using a medium that has not been used when discussing this group. The one source that does cover the entire history of the Mennonites, up till the 1980s, is a written work with not many spatial analyses in it.

Using spatial analyses and visualisation can shed new light on the migration of the Mennonites and the choices they made when looking for a new settlement location. However, as mentioned by Fyfe et al. (2009) the smaller settlement regions can fall away when one zooms out on the map, making it so that they cannot always be seen.

## Methodology

### Study area

For this thesis, the study area is a combination of three things. These are: the timeframe, the Mennonites themselves, and the areas in which they have settled over the duration of the timeframe.

A basic overview of the history of the Mennonites was outlined in the introduction and background sections of this thesis, so we will not go over those again. It is important to note that there are between 9 to 15 major movements identified for the Mennonites. movements are what will be looked at in this research.

The timeframe that the research looks at is from the start of this group, somewhere in the 1500s, to the last noted major movement in 2016 from Belize to Peru. In this way, the thesis will have a life course approach to the group. Similar research has been done for other groups as well and it is in those cases referred to as a time-space approach or a temporal view of the migrations of the groups in question.

### Methodology

The approach for this research is both descriptive (the migration processes, those participating and those staying) and analytical (mainly the choice of destinations). A mixed-methods approach will be used, combining historical accounts and statistical data to create maps for a visual representation of the migration of the Mennonites. This is mainly due to the nature of the topic, a historical group, and the way in which the findings will be presented, via maps and the life course approach.

Most of the information on the Mennonites is found in historical accounts or books on historical events. To get the needed data out a literature review of these sources will be needed as well as double-checking between different sources to make sure that the information is valid and reliable. Currently, there are also statistical sources on the number of Mennonites in different countries which can be used in the maps to show the different groups, thus quantitative data is also used in the research.

The research will mainly be done through GIS (Geographical Information Systems) with data collected from both qualitative sources, such as historical accounts, and quantitative data based on estimates and historical accounts. This way a picture can be painted of the movements of these people and it might show and highlight parts of the story that may have been overlooked before.

The main idea is to create a story map using GIS to give a visual representation of the movements of the group and give short explanations of what is shown. In this way the information gathered and produced in this thesis can be presented in a condensed and understandable way to a wider audience. The main reason for making the information available to the wider public is that the history of the Mennonites and the Mennonites themselves are not well known. The main Anabaptist group that seems to be known to the wider public are the Amish. When the Amish are mentioned people seem to recognise the name of the group, however when the Mennonites are mentioned most people do not seem to know who they are. This research, therefore, aims to make the story surrounding the Mennonites, their migrations especially, better known and easier to access for a wider audience outside of academia.

### Ethics

This research does not have direct respondents and therefore there are no real ethical issues in that area that need to be addressed.

Any other data used in this research is secondary data from large databanks and it is assumed that this data has been gathered and handled ethically. Since many of the larger databanks are operated by national governments one can assume that it is done in a way in which the privacy of their citizens is maintained. Another thing to note is that this research just looks at the numbers and the main settlement area of the Mennonites and not necessarily at other information about them.

### Source commentary

Many of the sources used in this project come from organisations and people affiliated with the Mennonites, or the Mennonites themselves. Due to the sources being written by either the Mennonites themselves or opponents of the movement the accounts of the group might have been embellished to suit a certain point of view. On top of that this research also relies on older and historical accounts, that due to their age, might not have the full story of this group either. Some of the older sources also do not differentiate between the different Anabaptist groups which makes it harder to look for information specifically on the Mennonites in these sources. An example is the seminal study by Jonathan Israel (1995) on the Dutch Republic.

Another example is Smith's *Story of the Mennonites* (1981). It first came out in 1941 and has been amended and revised over time, but the author was a Mennonite and grew up in a different time so the information might be outdated or presented in a way that makes the Mennonites look better. It is, however, one of the few sources that tries to tell the entire story of the Mennonites from their origins in the Anabaptist movement to the current day, which for the fifth edition was 1981. In this fifth edition, more information about the Mennonites during

the Second World War was added, which was needed due to them fleeing Germany due to fear of religious persecution by the Nazis.

This research tries to do the same, but through the medium of maps, and without the focus on the political and religious reasoning behind the moves of the Mennonites, which other sources have done as well, whereas this thesis will focus on the physical aspects of the regions in which the Mennonites live.

As for the numbers of people that moved in each wave of migration, these are based on estimates made by historians, historical sources, and statistical organisations from different countries. The older sources should once again not be taken as the full picture since they are estimates and sometimes for the entire Anabaptist movement and not just the Mennonites. For the numbers in South America, there is more certainty since these moves have been made more recently and the numbers were recorded by government officials in the different countries. These records are therefore seen as more reliable than the older ones that are about the migrations across the Eurasian continent.

### GIS and Story Maps

As mentioned earlier in this section the main output of this research will be a story map created with GIS. The data gathered from the historical sources is the basis for this map, especially the written-down settlement locations. As this map shows the migration of the ethnic Mennonites it is important to note that the Mennonite communities in Africa and most of Asia will be ignored as no ethnic Mennonites settled in these regions. The last movement that the map shows is only included due to ethnic Mennonites moving to Columbia. There were already Mennonites here but these were converted people and not ethnic Mennonites. This map also does not include what will be called micro migrations. These migrations might be two or three families moving but it is not seen as a large migration or a migration with a large impact on the Mennonite community.

This means that the migration of Mennonites to Pennsylvania is not included, although there is a Mennonite community there as well as a museum on Menno Simmons. The group of Anabaptists in Pennsylvania is a collection of mainly Amish, Hutterites, and some Mennonites. However, it is unclear whether or not these Mennonites are ethnic Mennonites or converted people and the migration was not mentioned as one of the major and important ones in the different sources consulted to make the timeline. Although the Amish themselves do share some of the Mennonite beliefs they are considered a separate group from the Mennonites. The same goes for the Hutterites. They are all Anabaptists, but not all Anabaptists are Mennonites.

Lastly, the regions that are depicted on the map are where the group has been reported to be, but the exact spread of the Mennonites across these areas has not been noted. Usually, one or two towns are mentioned, but they also live in small villages across the area which might not have been noted down. This leads to the maps being an estimation of the territories where the Mennonites have settled. An example is the province of Manitoba in Canada. This province goes from the Southern border of Canada to the Northern coast. The Mennonites might not have been to the Northern most part of Canada, but this is not known for a fact, but it is known that they lived in that province, which is why the entire province is included on the map. This is not just the case here but for most regions on the map. It has been noted that the Mennonites lived there, but not what the exact bounds of their regions were.

### Considerations

For this research different considerations were needed. Some of the earlier ones were what to label certain regions on the maps. The use of Low Countries instead of the Netherlands is simply due to the Mennonites also living in Belgium at the time, and not just the Netherlands.

Using the Vistula Delta instead of Poland and the Russian Empire/Soviet Union instead of Russia and Ukraine is more in line with the historical sources. The Vistula Delta used to be part of a German state when the Mennonites moved there, but then it became part of Prussia, and the Mennonites only settled in this region and not in the rest of what today is Poland. However, the main city in which they settled will be referred to as Gdańsk since this name was used at the time alongside the name Danzig, the city is in Poland and the Polish, and the most used name for the city today is Gdańsk. As for the use of the Russian Empire/Soviet Union is simply because the Mennonites moved to and from the region whilst it was part of these entities. There have been no significant migrations during the time that Ukraine and Russia are two different countries.

Then there are the technical considerations within GIS and presenting the data produced by it. The first is the projection used in GIS, the main one used in this research is the Mercator projection. Although it might not be entirely accurate and changes the sizes of certain regions, it is the one most people are familiar with, since it is the most commonly used. With the maps being used in a story map available to the general public the used projection should be one that the public is familiar with.

## What were the different steps in the migration process?

The migration history of the Mennonites can be divided into two parts. The first is the different migrations across Europe, and the second part is the stages of migration across the Americas. Apart from the difference in the continents it also seems as if there were different reasons for moving, which will be discussed in more depth later, and a larger pattern of how the Mennonites moved across these continents.

### Within Europe

The beginning of the groups is in the Netherlands in the 1500s, especially in Friesland, since this is the region of origin of Menno Simons, who is the namesake of the Mennonites (Israel, 1995). The exact numbers of the Mennonites within the low countries are not known. However, some estimates place the total Anabaptist population around 2 per cent of the total population, which is estimated to be around 1,000,000 people. The reason to mention this is to make clear that the size of the earlier Mennonite migrations is not completely clear. From the Low Countries, the Mennonites moved across Northern Germany to the Vistula Delta in what is now Poland. At minimum there were one thousand Mennonites since this is the amount that lived in the city of Gdańsk, however, they were spread throughout the entire delta (Smith, 1981).

The main reason that the Mennonites could spread out across the delta was that due to a flood the previous inhabitants had either drowned or left the area. Part of this region even became known as little Holland or Little Friesland due to the architecture and the origin of the Mennonites. The Mennonites stayed in the Vistula delta region for almost 200 years, and about 6000 people of the 12000 Mennonites left and moved to what was at that time the Russian empire. The specific regions in which they settled were the Dnieper and Volga deltas. The settlements that were founded in the Dnieper delta are located in modern-day Ukraine. The Volga settlements were way further inland than the Dnieper settlements. This move also formed what is known currently as the Russian Mennonites, who are also considered to be part of the group known as the Ethnic Mennonites.

In the 1870s and 1880s, there was a split and the Mennonites moved to two completely different regions, but in this part, the focus will be on one of them since this is the movement that stayed on the Eurasian continent. This move-in question is the one to the Talas Valley in modern-day Kyrgyzstan. Where the Mennonites settled specifically in this valley is unknown, but it has been confirmed by multiple authors that there was a community of German-speaking and North-Western European-looking Mennonites in the region.

The last moves of the Mennonites in Europe were two in which they fled from Russia to escape Communism, to Germany. The first wave left Europe due to the rise of Nazism but the second one in 1987 stayed in Germany.



Overall the moves made across the Eurasian continent were mainly in an eastward direction and slightly to the south. Many of the regions mentioned above still have Mennonite populations to this day, but some of them have shrunk significantly. The Mennonites in the Netherlands count less than 3000 today and there used to be around 7000 in Friesland alone back in the 1500s. This can be due to the migration, persecution, or the secularisation of the Netherlands as a whole.

### [Across the Americas](#)

Around the same time as the move to Kyrgyzstan and Central Asia, another and larger section of the Mennonites moved to the Americas. The regions where they settled were the Manitoba province in Canada and the central states of the USA, Minnesota, South Dakota, Nebraska, and Kansas close to the border with the Manitoba province. The move to the Americas was due to the fear of being conscripted into the Russian army which goes against Mennonite beliefs. After having lived in the area for roughly 40 years a first move southwards was made, to Mexico and Paraguay. After the 1920s quite a number of moves have been identified with the help of the censuses in the different countries involved as well as the immigration offices of the time. This means that if a group left Mexico it was noted down in Mexico that they had left, and in the country of arrival it was noted that they had arrived. Although sometimes the move only includes a couple of hundred people moving.

During the 1930s and 1940s, a large group of Mennonites from Russia first moved to Germany fleeing the communist regime in Russia. However, with the rise of the Nazis and their attitudes towards groups such as the Jehovah, who are also pacifists, the Mennonites decided to flee Europe. Around a hundred thousand of them made their way to Paraguay and other regions in South America, hoping that they would not be persecuted or shunned for their beliefs.

Most of the moves later on that involved the South American continent were between the different countries and sometimes the Mennonites just expended within a desert that happened to be in two different countries.

Most of the migrations across the Americas have been in a southward direction. The regions where the Mennonites settled were often deserts or coastal areas and were mostly flat. One of the reasons they moved seems to have been missionary missions. After those missions established a colony amongst Indigenous people the Mennonites would move to the region as well in larger numbers. It should be mentioned that the most recent of these happened in 2016 when Ethnic Mennonites moved from Mexico to Colombia, which already had a small Mennonite population due to conversion.

## What can visualisation teach us about the choice of destinations and the new settlement locations?

The first question addressed the migration timeline and this question will look at the chosen settlement locations. To see if there is a pattern in the choice of location three things will be taken into consideration. These have been chosen based on the researcher's interpretation of the statement that Mennonites moved to regions similar to the Low Countries. In this research, this will be interpreted as the Mennonites looking for a region where they can do agriculture, animal husbandry, and various craftwork since these are the skills the Mennonites are known for and what they did in the Low Countries. This means the region must be somewhat flat and open, the climate needs to be favourable to agriculture and animal husbandry, and the soil and plant life needs to be able to be used in agriculture.

This leads to the three chosen factors being elevation levels and terrain within the settlement of the region, the climate of the region, and the biomes of the different regions. Another reason for choosing these factors is that each of them can be observed and experienced by someone out in the world without the need for much equipment. Elevation and terrain differences can simply be seen, the climate has an influence on the weather and can therefore be experienced by a person on the ground, and the biomes are simply a class system of the plants that are in the surroundings which can also easily be seen whilst in the area.

### Elevation levels and terrain

To see whether or not there were any similarities between the different regions a hill shade layer was added to the map. A hill shade layer shows the shadows of hills and mountains to show the terrain in an area. Using this terrain layer different regions can be compared by looking at the presence of mountains and hills or the absence of them. This is a simple visual analysis to see if there are general patterns that can be observed. Based on what can be seen on the map the Mennonites seem to favour flat areas, often in valleys and deltas. It has been brought up in some sources, including Smith's story of the Mennonites (1981), that the Mennonites preferred areas similar to the Low Countries, and based on the regions where they settled it can be seen as partially true. Most of the regions where they settled are flat and relatively open, and agriculture can take place there, but the Low Countries are a coastal delta. In some regions, they do live in deltas, in others they live close to the coast, but there are Mennonite communities living in deserts or closer to the mountains of the Andes.

A second step in looking for any possible elevation differences was by using a cross-section of the different regions and then using those to create a profile graph. These profile graphs show the elevation of the regions in meters as well as the distance covered by the cross-

section line. From the graph, it can be seen that some regions do have large elevation differences.

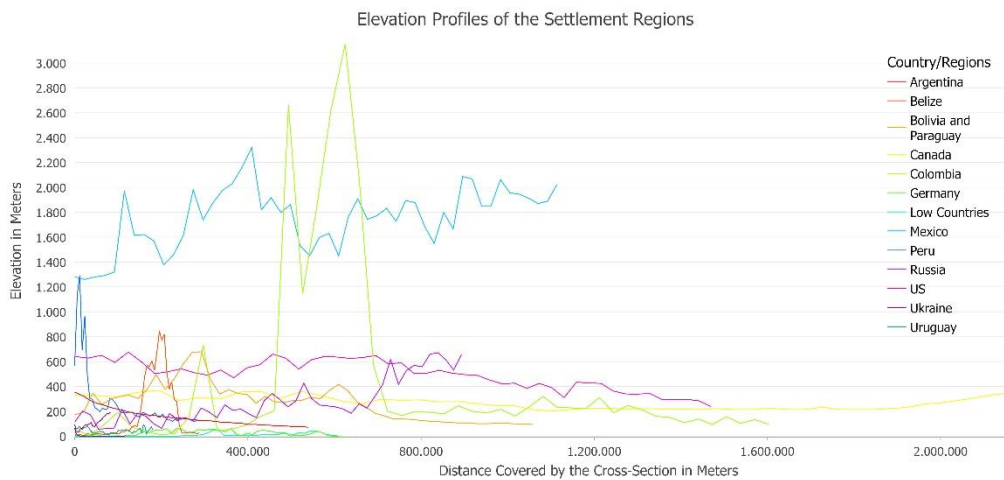


Figure 2 Elevation Profiles of all the Settlement Regions

To explain these differences one can simply look at the administrative region that the Mennonites have settled in. For Colombia, the entire country was used since it is unclear in which town the Ethnic Mennonites settled, and right through the middle of Colombia runs part of the Andes mountain range. Due to this, there is a large spike in the line representing Colombia. But the Mennonites are not the sole inhabitants of the region, nor are they distributed across the entire administrative region. According to Smith (1981), the Mennonites settle in the valleys and at the foot of mountain ranges if these are present in the region.

### Climate zones

There are other differences between the regions apart from elevation. Another one is the type of climate zone in which the Mennonites settled. From the data gathered on where they settled and the data on worldwide climate zones, it can be seen that the Mennonites have settled in many different climate zones over time. As mentioned at the start of this chapter different authors such as Smith (1981) mention the Mennonites settling in regions similar to the Low Countries, but the Low Countries have a certain climate to them.

In the Köppen-Geiger Model, the Low Countries are located in a Cfb climate region. The capital C indicates that it is a temperate climate, the lower case f indicates that there is no real dry or wet season, but that there can be rain throughout the year, and lastly the lower case b means that there is a warm summer.

Some extra explanation on the Köppen-Geiger climate classification has been used to create the layer used for the visual analysis. Before the visual analysis can be done the different types of climate need to be explained. The A-class climates are tropical, B-class climates are dry or arid climates, C is temperate, D is continental or boreal climates, and finally, E climates are polar or Alpine climates (Beck, et al., 2018; Peel, Finlayson, & McMahon, 2007).

From what the map shows the Mennonites have settled in many different climate zones. In Europe, they mainly settled in C and D climates, whilst in the Americas, they have known locations in all the climate zones except E climates. Due to the Mennonites settling in many different climates it can be said that climates are not a deciding factor in the choice of settlement location for the Mennonites. Whereas elevation is was seen both on the map as in the written records that the Mennonites seemed to settle primarily in flat and open regions, such a conclusion can not be reached for the climate.

Apart from the larger patterns it can be seen that the Mennonites only had two other regions with the same climate classification as the Low Countries, namely the Vistula Delta and Germany. The other C climate region that they settled in were Cfa climate zones, which have hot summers. However there seems to be no connection between the climate and choice for the settlement regions, as almost none of the settlement regions match the climate classification of the Low Countries, and the Mennonites have also settled in rainforest climates and steppe climates reinforce this.

### Biomes and vegetation

The last factor that might have influenced the settlement in regions is the vegetation cover of the area. The Low Countries were an open and grassy delta, so regions with similar vegetation might give a sense of home, or link to a long-left homeland. These feelings can be very important for people to establish themselves in a new location according to Cwerner (2001) with the 'diasporic' and 'remembered' times. These two times focus on the immaterial heritage and ideas from the homeland, therefore landscape, vegetation and climate can play a role in making people feel comfortable in a new location.

Apart from that certain biomes are more suited to agriculture than others, a desert is less favourable if one is moving to find new agricultural land. The reason for using this to see if there is a pattern in the choice of settlement locations is that the biomes can be seen with one's own eyes since it is mainly determined by the plants that grow in the area.

For the visualisation of vegetation, the major biomes from the world are used. Although the biomes are influenced by the climate in the area, one climate can have different biomes in different parts of the world. In the classification of the shapefile used for this research, a distinction has been made within the tropical and subtropical biomes since there are different types of tropical and subtropical biomes in the world (Dinerstein, et al., 2017).

With the classification used in the research, the Low Countries are classified as a temperate broadleaf and mixed forest region. This means that certain plants and trees are characteristic of the area. But based on the map with the biomes in combination with the known settlement locations of the Mennonites, it is difficult to say that the Mennonites prefer one biome over

another. Although they do seem to settle in temperate and tropical and subtropical biomes, there are many subclasses within these biomes (Dinerstein, et al., 2017). The Mennonites have stelled in regions from subtropical savannas to boreal forests and taigas. The conclusion is that there is no one biome dominant in the choice of location for the Mennonites.

#### [Answer to the question](#)

To conclude this section and to answer the question: visualisation does show that the Mennonites prefer open and somewhat flat areas, such as delta, plains, valleys, and the foot of mountain ranges. However, visualisation also shows that biomes and climate zones are not consistent between all the different settlement locations. This might be due to these factors being less important, or that they simply did not have much choice in where they went due to persecution, but could find a flat and open area in the regions ruled by rulers who were more favourable to the Mennonites.

## Conclusion and discussion

To return to the main question of this research on how can visualisation support and deepen our understanding of how the migration of the Mennonites went between 1500 and 2018? The answer is that visualisation can make the migration process easier to understand since 'an image can convey a thousand words' as the proverb says.

As mentioned in the theoretical background different visualisation methods can reveal different aspects and factors within already established fields such as migration. For this thesis, it was shedding more light on what could have been meant by the statement that Mennonites looked for regions similar to the Low Countries and seeing what general patterns there were in the migration of the Mennonites.

The first finding was that on the Eurasian continent they moved from west to east between 1530 and 1800 and then in the 20<sup>th</sup> century they moved from east to west. In the Americas, they mainly moved from north to south establishing the first Mennonite settlements in the different countries as they went. As for the factors that could play a role it was found that the only factor all known settlement locations shared was they were all relatively flat. Biomes and climate, which for farmers might play a role in deciding where to settle, did not play a role as the Mennonites settled in many different ones.

However, making the visualisations to see this does take a lot of time. One cannot expect to make a map and do the analysis in a short time such as one or two days. One first needs to find the data that they need, and check if it works or if more is needed.

In research like this, there is not one big data bank that can be used to gather all the numbers of migrants from, especially since this research focuses on the Ethnic Mennonites. Because of this historical sources and census bureaus were where the data could be found and collected. Which means that for the maps showing the numbers and years a separate data set had to be collected from varying sources and put together by the researcher.

After the data collection and reworking, the appropriate tools and symbology need to be chosen to do the analyses. This step might also take a long time since the varying options to do analyses need to be tested to see if it works or not and whether or not the tools can be used for the research.

It should be said that the story map is a useful tool to show the story of this group, but it takes time to build one. Reworks are common in the making of story maps since it is meant for the general public and the level of knowledge on the topic can differ from the level of knowledge of the researcher. Another reason is that the symbology on the web map function of ArcGIS online cannot do the same as the symbology in ArcGIS Pro, the main programme used to

make the maps. This led to having to rework some of the maps in the web map environment to make them usable in the story map.

This thesis concludes that visualisation can deepen the understanding of the migration of the Low Countries Mennonites by combining different visualisation methods and visual analyses. These methods brought to light factors that were not extensively looked at before and expanded upon statements made by historians about the choice of settlement location by the Mennonites. Most sources on migration are written texts and the distances that migrants travel can get lost, as well as the different stages, through time and space, a map can bring it all back into focus by showing from where to where they went. Showing these on a map can also bring more insight a make this information available to a larger audience. Although time is needed to produce proper visualisations, but if the effort is put in it can greatly help in the understanding of the migration of the Mennonites between 1500 and 2018 and telling their story.

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## Appendices

### Appendix 1

Link to the story map: [Migration of the Mennonites \(arcgis.com\)](https://arcgis.com)

### Appendix 2



## Migration of the Mennonites

The Mennonite story from 1500 to 2018

Elsa Lassche  
25 July 2022

### Introduction

This story map will go over the migration of the Mennonites from the Low Countries, who are also known as the ethnic Mennonites, from the origin of their group in Friesland around 1500 to the current day. The steps of their migration that are shown are the ones that were done by the ethnic Mennonites that had an impact on either the group or the new settlement location. What is meant by the impact on the new settlement location is the establishment of a Mennonite community in countries where there were no Mennonites before, this mainly occurred on the South American continent.

The way in which this migration timeline will be done is through the medium of maps with the locations where the Mennonites lived, the elevation, climate, and biomes in those regions. The last three are to see whether or not there is a pattern to be found between all the different settlement locations and to see what visualisation can teach us about the migration of the Mennonites.

The main question of this story map is what can visualisation teach us about the migration of the Mennonites between 1500 and 2018?

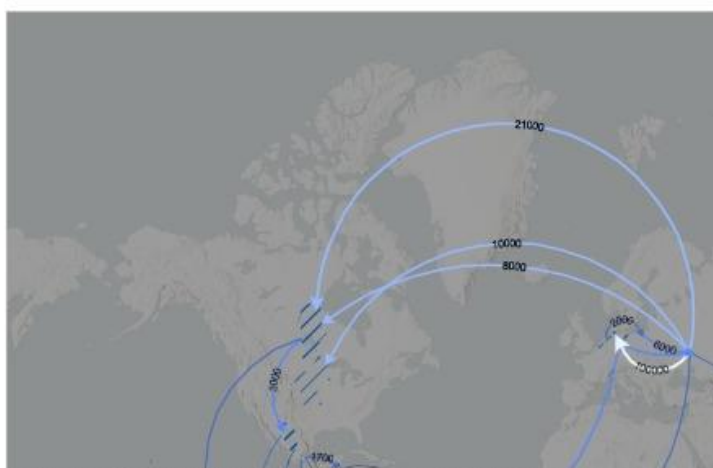
With the secondary questions of what were the steps in the migration and what can visualisation teach us about the choice of destinations and the new settlement locations?

### Timeline

To begin we will go over the migration timeline itself. This timeline, locations, number of migrants, and reasoning are based on historical accounts, eyewitness accounts, estimates made by historians, and population data from central census bureaus from different countries.

The map below shows the different regions in the migration timeline of the Mennonites. Each of the arrows represents the number of migrants in each stream, by clicking on the polygon/shape from which the arrow comes you get to see the year in which they moved, from where to where, and how many. Some regions have had more than one stream in or out of them and therefore have more arrows and entries associated with them.

One example of this is the area of Russia and Ukraine. On top of that the moves were not described as coming from one of the three settlement regions here, therefore the arrows originate and arrive at a point in the middle of the area of Russia and Ukraine.



Source: Esri, USGS, Airbus DS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, MMA, Geodatenzoo/Esri, R... Powered by Esri.

**1530**

From the Low Countries to the Vistula Delta due to religious persecution.

**1798**

From the Vistula Delta to the, at the time, Russian Empire. The Mennonites were invited to live in the Russian Empire by Catherine the Great. The main reason for leaving the Vistula Delta was that it became part of Prussia and the Mennonites lost rights and privileges.

**1874**

From the Russian Empire to the US and Canada. The reason for leaving was that it seemed as if Russia would go to war and the Mennonites would be forced to participate, which goes against their beliefs.

**1880**

From the Russian Empire to Central Asia. The reason was the same as the group that went to the US and Canada.

**1920-1925**

From the Soviet Union to Canada and Canada to Mexico and Paraguay. The first move was to flee from the Communist regime and the second move was part of the plan. However, some of the Mennonites who already lived in Canada came along to settle in new lands.

**1930**

From the Soviet Union to Germany. Once again fleeing the Communist regime in Russia, the situation was not improving as the remaining Mennonites had hoped.

**1940**

From Germany to Paraguay. The Mennonites are fleeing from the Nazis after seeing the persecution the Jehovah face for being pacifist, as well as the other groups being persecuted in Nazi Germany.

**1950**

From Mexico and Paraguay to Bolivia. There was a need for more space for the growing Mennonite population, and to establish the first Mennonite settlements in Bolivia.

**1950**

From the Soviet Union to Uruguay. Once again fleeing Communism. First Mennonites in Uruguay.

**1958**

From Mexico to Belize. Looking for more land and establishing the first settlements in Belize.

**1960**

From Mexico and Belize to Bolivia. Missionary missions, looking for more space, and growing the Mennonite population in Bolivia.

**1980**

From Mexico to Argentina. This caused the establishment of the first Mennonite settlements in Argentina.

**1987**

From the Soviet Union to Germany. Once again fleeing Communism and bad living conditions and persecution.

**2015**

From Bolivia to Peru. Establishing the first Mennonite settlements in Peru, as well as looking for more space to live.

**2016**

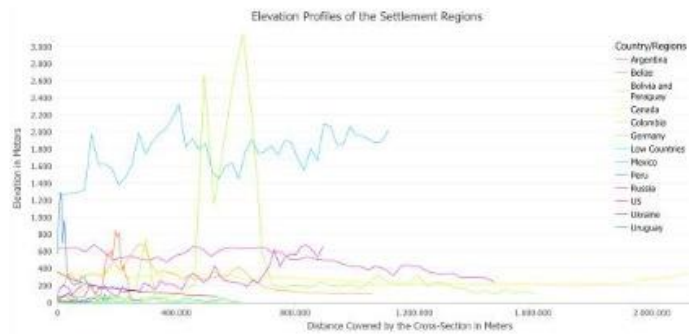
Mexico to Colombia. There was a Mennonite population in Colombia, but these were converts. So, the arrival of the first Ethnic Mennonites was seen as an important event by the Mennonites.

**2018**

From Belize to Peru. The main reason seems to be to grow the Mennonite population in Peru.



the Low Countries, the Vistula Delta, Germany, Uruguay, and Ukraine



With all the information presented in the map and the graph, alongside the information within historical sources, it can be said that the Mennonites live in regions where the elevation differences are not that high. There can indeed be mountain ranges within the regions, but due to the available information we know that the Mennonites did not establish residence in these mountain ranges.

Due to this it can be assumed that the Mennonites do seek out regions that are flat, and therefore elevation in the region can be seen as an important factor for location choice.

### Climate Zones

Next, we move on to the different climate zones. The way in which the climates are qualified is the Köppen-Geiger Climate Classification. Based on the map there is no one climate dominant, so why was climate considered as a deciding factor?

The Low Countries have a specific climate, in the Köppen-Geiger Climate Classification it has a Cfb climate. This means that the Low Countries have a temperate climate, with no determined wet or dry season, and with a warm summer. So, searching for a region with a similar climate might not be all that strange. The Mennonites mainly would have the weather to base their decisions on, but the weather is influenced by the climate. This is the main reason why it is included in this research.



Esri, HERE | Sources: Esri, USGS, Airbus DS, NOAA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NIMA, Geodesy... | Powered by Esri

Climate Zones and Settlement Locations

The conclusion that can be drawn from the map above there seems to be no one climate zone that the Mennonites favour. The only other times the Mennonites lived in the same climate as the Low Countries is in Germany and the Vistula Delta. Apart from these two regions there are no other regions that matches the Low Countries in climate type.

Due to this it can be said that there is no relation between the climate zone and the choice of location by the Mennonites.

## Biomes

The last thing that was considered were the biomes of the settlement regions. This mainly includes the plant life found in the regions, and certain plants might have fit the Mennonites' idea of their homeland if that was the reason when choosing a new settlement region.



Esri, HERE | Sources: Esri, USGS, Airbus DS, NOAA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NIMA, Geodesy... | Powered by Esri

Biomes and Settlement Locations

The Mennonites originate from a region which has broadleaf and mixed forests in it. However based on the map above it can be seen that they have settled in many different regions over time and do not seem to favour one biome over another. Therefore it might not be an important factor for the Mennonites in deciding



where to settle during and after migrations. It should however be noted that most of the Ethnic Mennonites alive today have not been in the Low Countries themselves, so might not know what they actually look like and only have stories about them.

## Conclusion

Before we answer the main question lets answer the two sub question posed in this story map. The first one was what were the different stages of the Mennonites migration between 1530 and 2018? The answer to this was seen in the first map in here, but the general trends within the migration where west to east on the Eurasian continent, and north to south in the Americas.

The answer to the second question is that visualisation shows that the Mennonites favour flat areas, and that climate and biomes do not seem to play an important role in the Mennonites choice of settlement locations and regions.

To answer the main question posed at the beginning of this story: visualisation can show which factors play a role in the choice of location, and it can show what the different steps within the migration were. Additionally with different visual aids the different streams can be shown proportionally to one another. It can also help to bring this type of research and information to a wider public since images can be more easily understood than academic articles.