Where Am I From? Showing Geospatial Location of Ancestors Through A Generational Perspective

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INTRODUCTION

In this paper, I present a work-in-progress of showing where people are from using geo-political boundaries. The future part of the project is not yet completed and will show the correct geo-political boundaries for the past.

Where am I from? Or, more specifically, where did my ancestors come from in terms of countries?

People often have a specific idea of who they are, which affects their behavior. Knowing where they came has been shown to be very important to people [1].

Eavesdropping on conversations in the United States one can hear snippets of conversations such as "I am Irish" or "My ancestors came from Germany." Such self-identity statements are important to people, but are usually grossly inaccurate.

We present a time-based geospatial visualization tool that shows generational genealogical data. Specifically, we present a way for people to answer where they came from in maps based on how many generations away an ancestor is.

For example, Figure I shows the concentration of ancestors for the author. The yellow circles are significant events in the author's life. In this example, they show where the author was born, married, and where different children were born. More details are available as tooltips with a mouse hover.

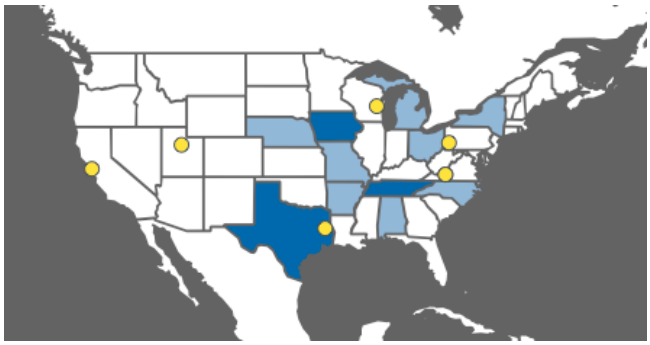


Figure I Map highlighting the ancestry of the author showing the 4th generation back (Great-great-grandparents).

Figure I also shows a series of different shades of blue colored states. The darker the color the more ancestors that person had at that place for that generation. In this particular case, there were two ancestors that were born in Iowa, Tennessee, and Texas. There was also one ancestor born in Arkansas, Alabama, Nebraska, Michigan, Missouri, New York, Ohio, Virginia, and. Four generations back all of the author's known ancestors were born in the United States.

Figure II Map highlighting the ancestry of the author showing the 9th generation back (Great-great-great-great-great-great-great-great-grandparents).

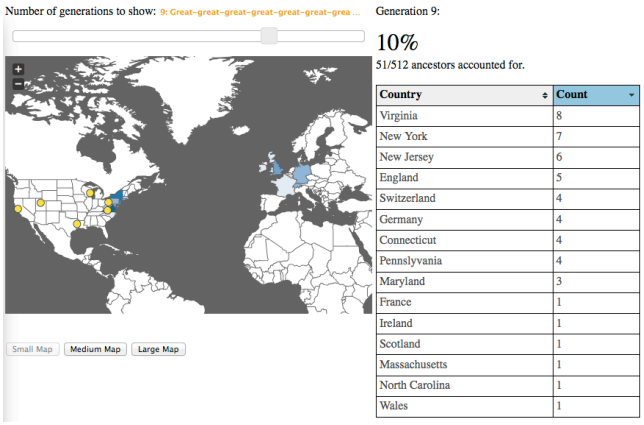
Figure II shows the migration pattern from the fourth generation to the ninth generation – from his great-great-grandparents to his great-great-great-great-great-great-great-great-grandparents. The visualization shows that as time passed all of the author's known ancestors were originally from Europe and migrated west to the United States.

At a quick glance one can see that at the ninth generation the author still had more ancestors that were born in the Unites States than any other country and more ancestors in Virginia than any other state.

It should be noted that the map shown breaks the United States into individual states and Great Britain into separate sovereignties (i.e. England, Wales, Scotland, and Northern Europe). However, this is not a necessity, the map could just as easily be configured to show the United States and Great Britain as single entities.

As an example of satisfying individual needs the different counties of a particular state or other more detailed views could also be shown based on the exact heritage of the user.

Figure III shows part of the webpage that shows the map. At the top one can see a slider where the user can quickly view the locations of the births of the ancestors by generation.



Country	Count
Virginia	8
New York	7
New Jersey	6
England	5
Switzerland	4
Germany	4
Connecticut	4
Pennslyvania	4
Maryland	3
France	1
Ireland	1
Scotland	1
Massachusetts	1
North Carolina	1
Wales	1

Figure III Overview of part of the webpage showing the map with details for each of the places where ancestors were born. For example, the table on the right shows that more of the known ancestors of that generation were born in Virginia than any other place.

On the right there is a percentage number that shows how many ancestors are actually known for the generation. In this example only 51 of the possible 512 ancestors are known, or approximately 10%.

Underneath that percentage is a sortable table that shows the count of how many ancestors were born in each particular place for that generation. For example, in Figure III it shows that eight ancestors were born in Virginia, seven in New York, etc.

RELATED WORK

In this paper we present a visualization technique for showing a person's family history with a generational focus based on where their ancestors lived.

Otterstrom and Bunker in the 2012 Family History Technology Workshop (FHTW) presented a poster using Google Maps that shows the locations of ancestors for a given generation. The visualizations major weakness is a lack of overview where potentially hundreds of ancestors map to the same location [2].

We solve this problem by showing an overview of countries and how much an particular generation is presented by a country by using a gradient color scheme where the darker the color the more that state/country is represented in that generation. If a particular state/country is of interest to the user then the country can be clicked and more details about the individuals from that country are shown.

Otterstrom and Bunker continued their work and later published a journal paper about genealogy migration patterns in geography. They present a paradigm of showing multiple generations in the same geographical location with an emphasis showing the gathering and dispersal of a family from a particular place [3].

Non-genealogical visualization examples of human migration patterns also exist. Specifically, these examples are about current patterns. For example, the website "people movin" uses a non-geospatial parallel coordinate plot to show migration trends (specifically emigration) from one country to another country [4]. Another example is the website global-migration.info that uses a circular network graph to show the current flow of migration from one continent to another (see [5] for their published article about their visualization).

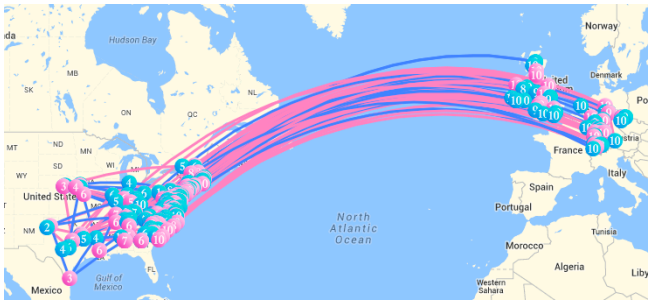


Figure IV Default view of RootsMapper with lines and pins showing maximum of ten generations.

The work most similar to this idea that I am aware of is RootsMapper (see Figure IV) [6]. Comparing the current state of RootsMapper to my current project shows a number of similarities with the following differences:

- RootsMapper limits view to 10 generations
- In RootsMapper when lines and pins are turned off and country is shown (see Figure V) no summary data is shown

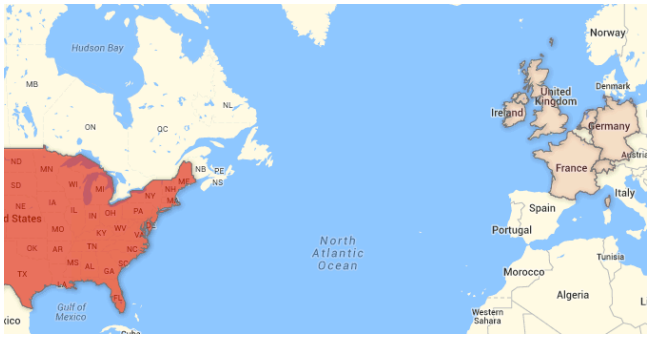


Figure V RootsMapper with highlighting of countries on with lines and pins off showing the maximum of ten generations.

However, these differences are minor. The defining characteristic of my project is not yet implemented. The next step is showing historically correct maps for the time period.

For example, Figure VI shows a current geo-political map of the sovereign states of the United States. RootsMapper uses the current geo-political boundaries to show where people are from, which is misleading.

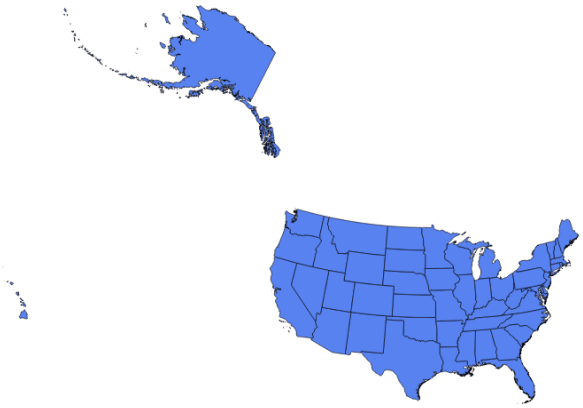


Figure VI United States geo-political boundaries in 1930.

In my own ancestry I have a number of people that lived in states that have changed boundaries over time. Showing current geo-political boundaries of where my ancestors lived can be deceiving or simply wrong.

For example, I have a number of ancestors that lived in Virginia. Looking at Figure VII one can see that Virginia in 1820 had different boundaries than present-day Virginia. Looking at Figure VIII one can see that Virginia also had different boundaries in 1790 as well.

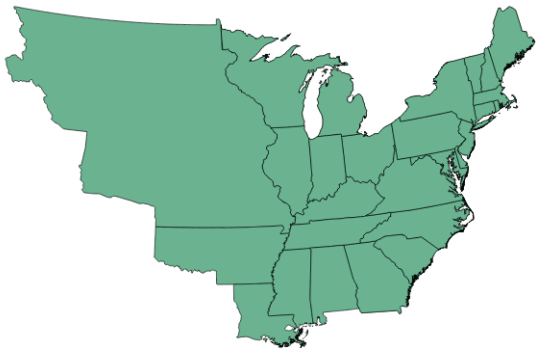


Figure VII United States geo-political boundaries in 1820.

Depending on when the state's boundaries changed my ancestors might have lived in yesteryear's Virginia but might live in present-day West Virginia or present-day Kentucky.

Figure VIII United States geo-political boundaries in 1790.

The map of Europe before World War I compared to the current one is also very different. For example, the country of Bohemia does not even exist anymore. Showing that one of my ancestors was born in the Czech Republic when he was really born in Bohemia is inaccurate.

The goal of this project is to accurately show where ancestors lived in the correct location with correct geo-political boundaries based on the historical boundaries and not present-day geo-political boundaries.

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