

# TEXT & DATA ANALYSIS TOOLS TUTORIAL

## **PART 2: PALLADIO**



# TEXT & DATA ANALYSIS

Some of the first work ever considered to be of the digital humanities involved creating computer-readable text to analyze with computer programs. Manually reading texts one-by-one and taking extensive notes to find correlations and relationships can be tedious and often futile with large bodies of text.

Therefore, text and data analysis tools are amazing, useful options that allow you to see relationships and frequencies of themes and words you would likely otherwise miss. Moreover, these tools can analyze texts and produce results that you can find useful without ever having to read every single line of text. This tutorial is Part 2 of three types of analysis tools: Voyant Tools, Palladio, and RAWGraphs.

# PALLADIO



Palladio is a tool developed by Stanford University especially for digital humanists. Palladio takes raw data and generates visualizations in the form of maps, graphs/webs, galleries, tables, and timelines. Palladio is straight-forward and easy to use to manipulate data and see unique relationships.

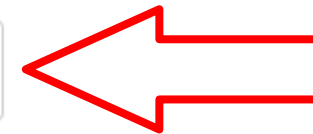
# 1. VISIT [HTTP://hdlab.stanford.edu/palladio/](http://hdlab.stanford.edu/palladio/)

- Scrolling down will give you more information about Palladio and its features
- Click **Start** to begin using Palladio



Palladio. Visualize complex historical data with ease.

Start »

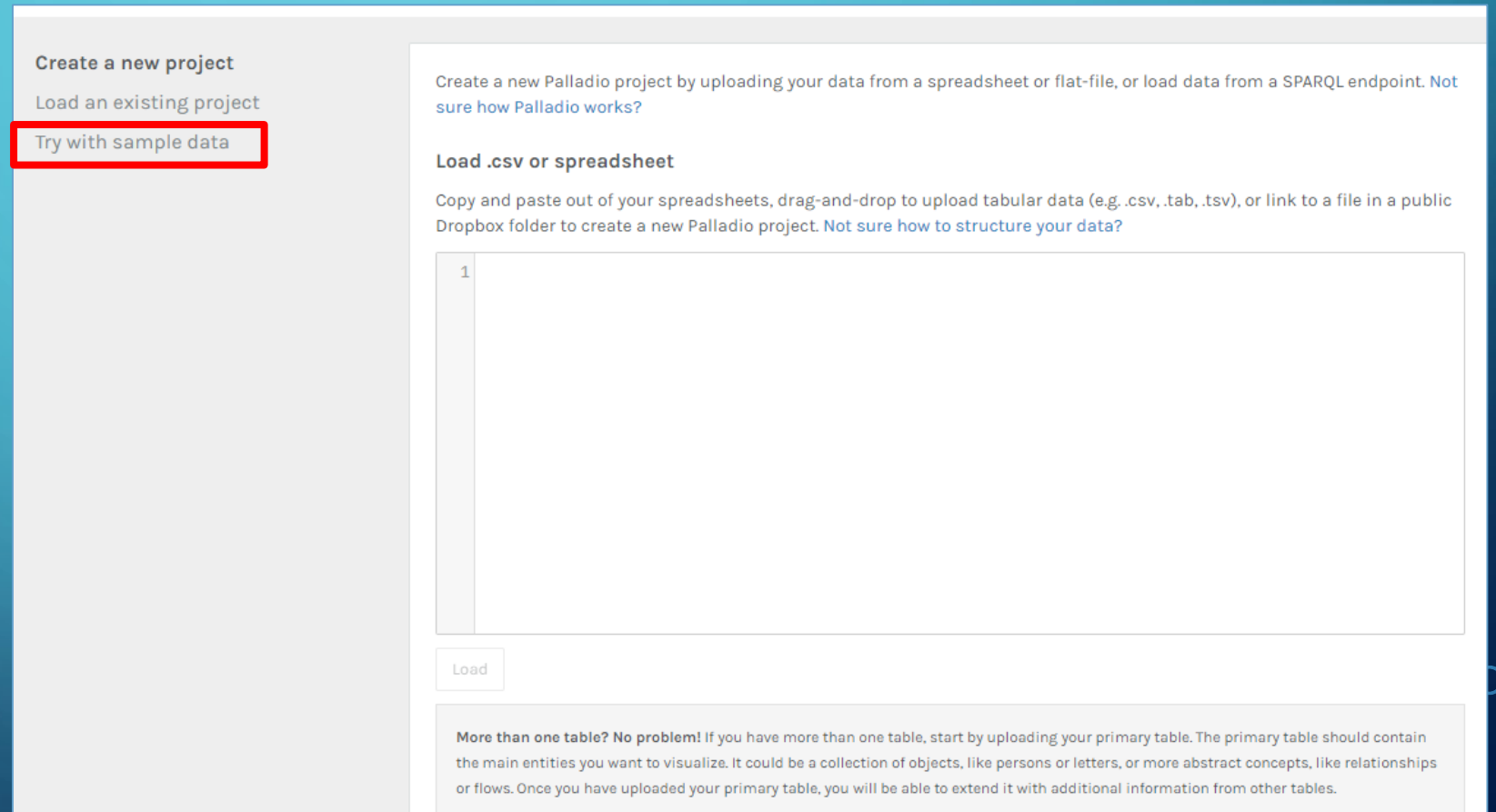


What can I do with Palladio?

# 2. UPLOAD YOUR DATA

- You can copy-paste a spreadsheet or Google sheets of data into the box
- Or you can drag and drop your data set

*\*For this tutorial I will be using Palladio's sample data set as seen on the left-hand side*



The screenshot shows the Palladio web interface. On the left, there are three options: 'Create a new project', 'Load an existing project', and 'Try with sample data'. The 'Try with sample data' option is highlighted with a red rectangular border. On the right, there is a section titled 'Load .csv or spreadsheet' with a text area containing a single row of data with the value '1'. Below the text area is a 'Load' button. At the bottom, there is a note: 'More than one table? No problem! If you have more than one table, start by uploading your primary table. The primary table should contain the main entities you want to visualize. It could be a collection of objects, like persons or letters, or more abstract concepts, like relationships or flows. Once you have uploaded your primary table, you will be able to extend it with additional information from other tables.'

# 3. EDIT & UNDERSTAND YOUR DATA

- First click “Provide a title to this project” to title your work
- Each item listed represents a portion of your data that Palladio has determined as a category
- Click on an item to see more information about it and make edits to how Palladio recognizes it

The screenshot displays the Palladio interface. At the top, a red box highlights the text "Provide a title to this project". Below this, the "Show details" section is visible. On the left, the "People" table is shown as the primary table with 73 rows. It lists various attributes: Name (Text), Birthplace (45 Places), Arrival Point (1 Places), Birthdate (Date), Gender (Text), Position (Text), Place of Death (18 Places), Date of Death (Date), Pic (Url), Site (Null), and Primary (Text). On the right, the "Places" table is shown with 69 rows, listing Place (Text) and Coordinates (Latlong). Both tables have download and delete icons at the bottom.

# 3. EDIT & UNDERSTAND YOUR DATA

- If you notice a red dot by one of your items, this means that Palladio needs you to accept or modify unusual elements it detected in your data set. Do so by clicking on that item.
- You can change the “data type” if Palladio incorrectly identified what type of data you have

**Edit dimension**

Title:

Data type:

All the values match this type.

Unique values:  Sort by Value:

Verify special characters ?

Multiple values ?

If the dimension contains multiple values, insert the delimiter string above

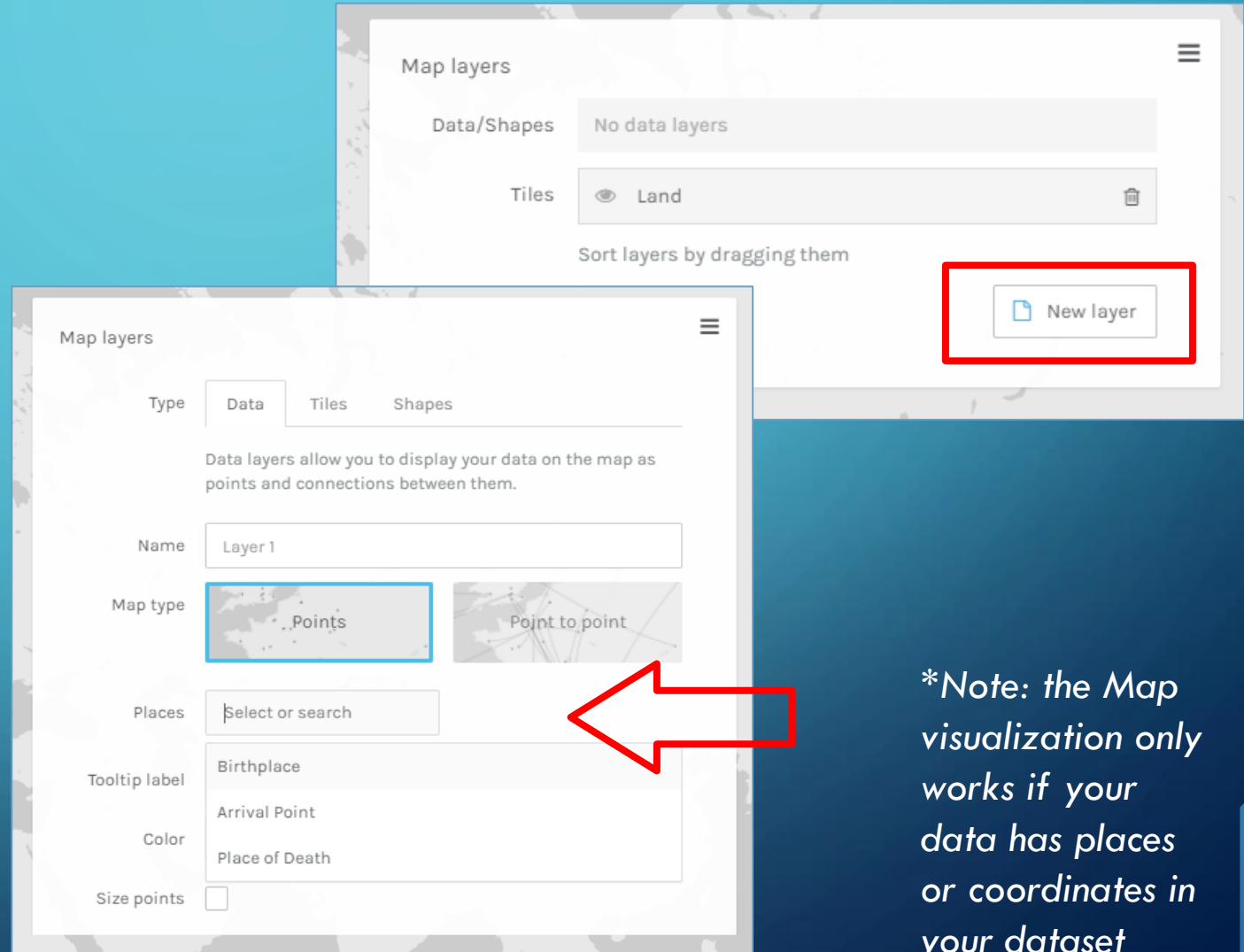
73 values displayed. [Download](#)

Extension:

You can provide additional information about this dimension with data from another table.

# 4. DATA VISUALIZATIONS: MAPS

- Once your data is as you want Palladio to recognize it, click the “Map” tab in the upper left
- Next click **New Layer**
- Select the portion of your data that you want to see on the map by clicking in the “Places” box and selecting

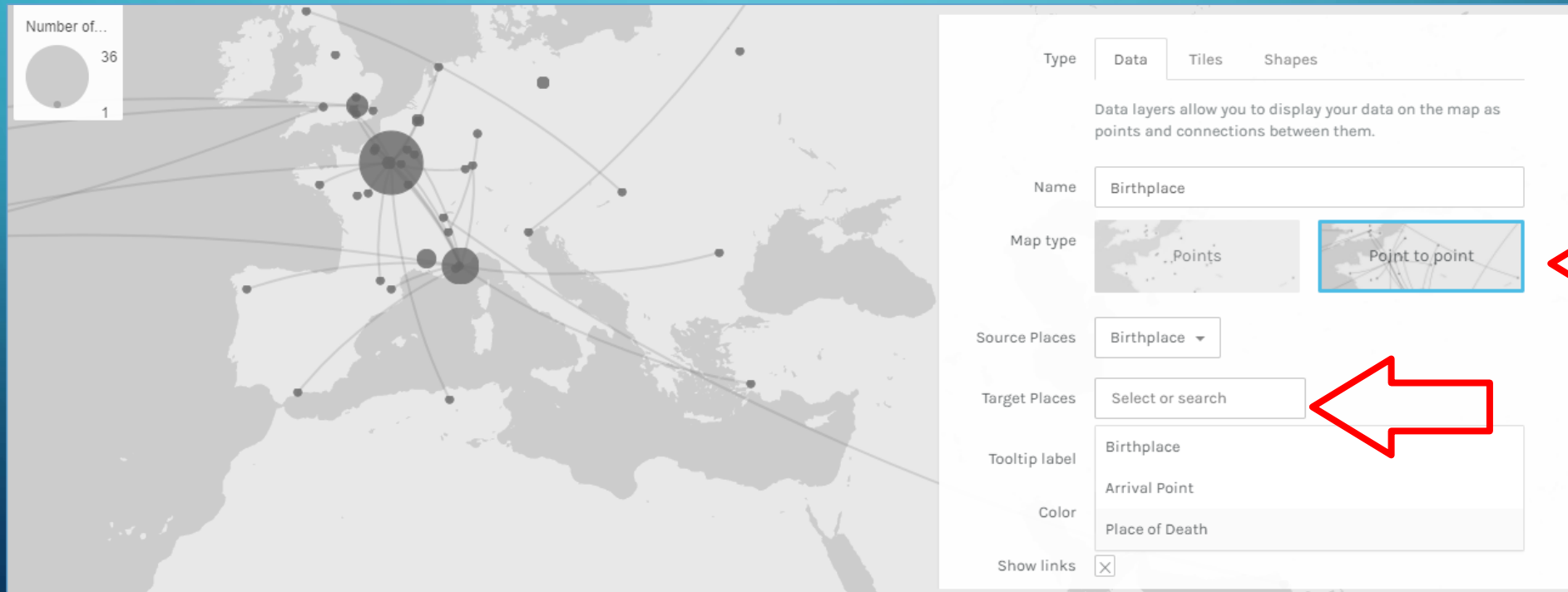


*\*Note: the Map visualization only works if your data has places or coordinates in your dataset*



# MAPS

- Palladio will plot points or show connecting lines between points; to create lines between points, click the **Point to Point** box while editing your layer, then select your second set of locations from the “Target Places” box.
- To show the lines between the two points, click the “Show Links” box. To make the points bigger or smaller depending upon how many times that place is present in your data, click the “Size Points” box.
- Be sure to click “Add Layer” or “Apply” whenever you edit.



The screenshot displays the Palladio interface. On the left, a map of Europe shows a network of points and connecting lines. A legend in the top-left corner of the map area shows a large grey circle labeled '36' and a small grey circle labeled '1', with the text 'Number of...' above them. On the right, the configuration panel is visible. It has three tabs: 'Data', 'Tiles', and 'Shapes'. Below the tabs, there is a text box with the name 'Birthplace'. The 'Map type' section has two options: 'Points' and 'Point to point', with the latter selected and highlighted by a red arrow. The 'Source Places' dropdown is set to 'Birthplace'. The 'Target Places' dropdown is set to 'Select or search' and is also highlighted by a red arrow. The 'Tooltip label' is set to 'Birthplace', the 'Color' is set to 'Arrival Point', and the 'Place of Death' is listed below it. The 'Show links' checkbox is checked.

# MAPS

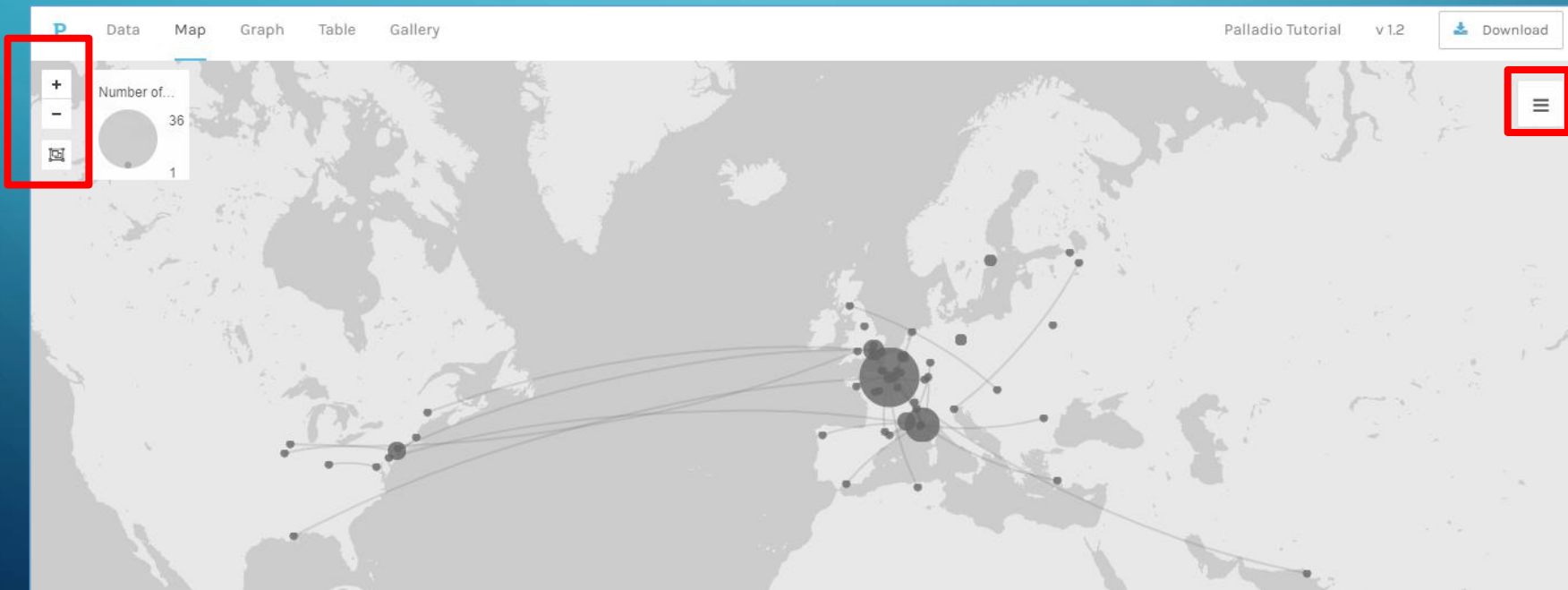
- Other features of the Maps visualizations include being able to upload unique geo-related shapes using geoJSON by clicking the “Shapes” tab.
- You can also customize what map view you want under the “Tiles” tab.

The screenshot shows the 'Shapes' tab selected in a map application. The interface includes a header with tabs for 'Type', 'Data', 'Tiles', and 'Shapes', with 'Shapes' highlighted by a red box. Below the header, there is a text prompt: 'Upload a geoJSON file including polygon features to overlay on the map.' A text input field labeled 'Name' contains the text 'Layer 1'. Below this is a large text area labeled 'geoJSON' containing the number '1'. At the bottom of the form, there is a footer instruction: 'Drop geoJSON file or paste geoJSON in the area above'.

The screenshot shows the 'Tiles' tab selected in a map application. The interface includes a header with tabs for 'Type', 'Data', 'Tiles', and 'Shapes', with 'Tiles' highlighted by a red box. Below the header, there is a text input field labeled 'Name' containing the text 'Layer 1'. Underneath is a section titled 'Tiles type' with six options: 'Land', 'Buildings and Areas', 'Streets', 'Terrain', 'Satellite', and 'Custom tiles'. The 'Land' option is selected and highlighted with a blue border. Below the options, there is a descriptive text: 'A basic layer, showing only lands.' At the bottom right, there are two buttons: 'Add layer' and 'Cancel'.

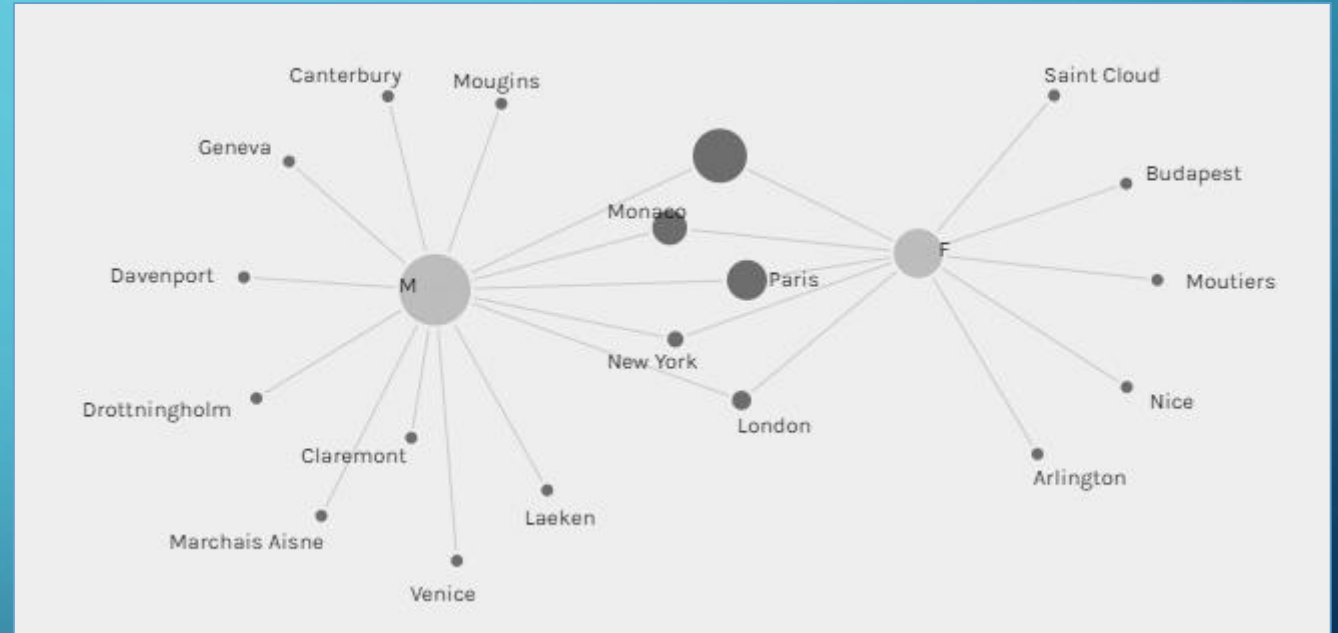
# MAPS

- Click the lined box in the right corner to hide the layer editing functions.
- You can zoom in and out or exactly to your data using the + - and square icons on the left side corner. Hovering over a point tells you information about that specific data point.
- To download the image of your map, click the **Download** box at the bottom of your edit box.



# 5. DATA VISUALIZATIONS: GRAPHS

- Palladio also creates graphs in the shape of interconnected webs, allowing you to see relationships between different categories in your data.
- Click the “Graphs” tab at the top of the screen.



# GRAPHS

- To see a relationship between two categories you will need to pick a “source” and a “target” aka Category of Interest #1 and Category of Interest #2.
- Clicking the “Highlight” box darkens that set of points.
- Clicking the “Show Links” box shows the lines among the points.
- Clicking “Size Nodes” makes the points bigger or smaller just like with the Maps function.

### Settings

Source

Highlight


Target

Highlight

Show links

Size nodes

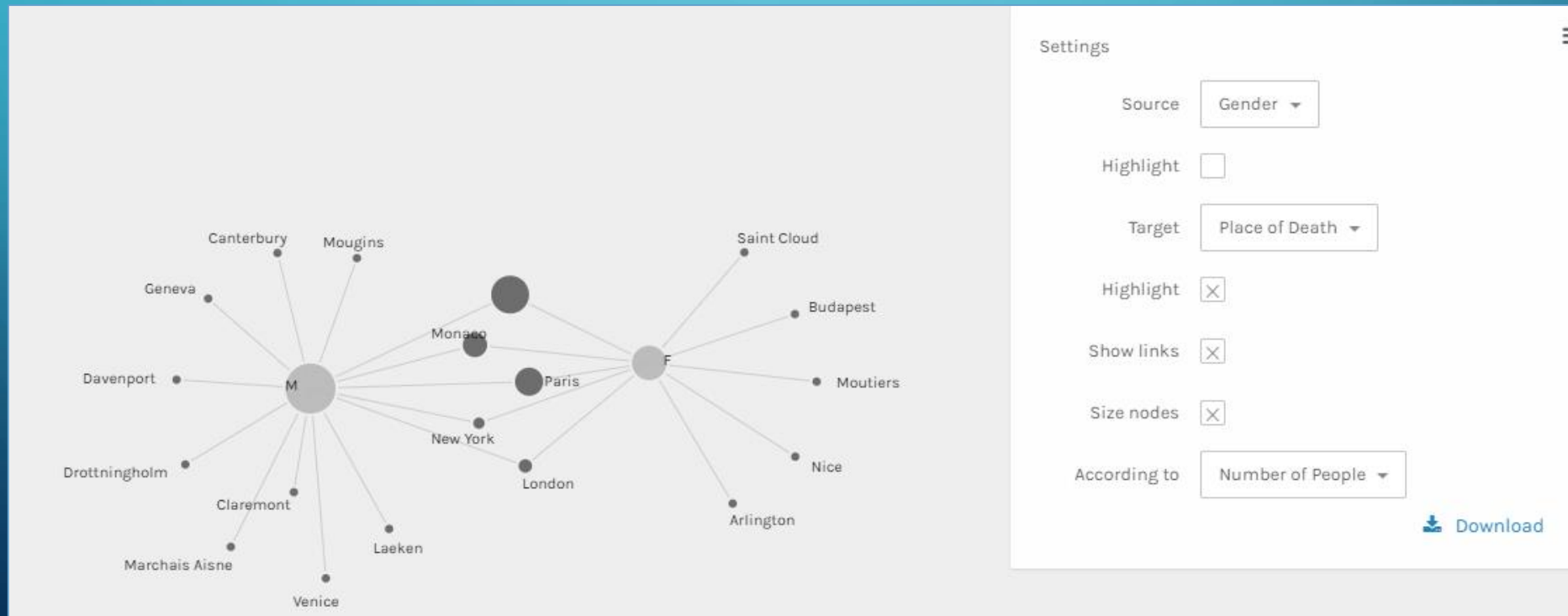
According to

 Download

# GRAPHS

\*In this example I wanted to see the relationship between Gender and Place of Death of the people in my sample dataset; thus, my “source” is *Gender* and my “target” is *Place of Death*. As you can see in the visualization, places where men and women both died are the points in the middle: Paris, New York, London, and Monaco.

You can drag points around to create the exact shape you want.



# 6. DATA VISUALIZATIONS: TABLES

- The “Table” tab does what it sounds like: creates a table with one row and one column to show relationships between those two categories in a very linear manner.

The screenshot shows the Palladio software interface with the 'Table' tab selected. The main area displays a table with two columns: 'Birthdate (62 of 62 rows displayed)' and 'Date of Death'. The 'Birthdate' column contains a list of dates, and the 'Date of Death' column contains a list of dates. A settings panel is open on the right, showing 'Row dimension' set to 'Birthdate' and 'Dimensions' set to 'Date of Death'. A 'Download' button is visible in the top right corner of the interface.

Birthdate (62 of 62 rows displayed)	Date of Death
1847	
1854	
1858	
1864	
1874	
1890	
1929-11-12	
1923-5-31	2005-4-6
1920-12-28	2011-3-18
1908-05-28	1964-08-12
1904-7-27	1983-11-25
1904-01-18	1986-11-29
1898-9-30	1977-11-17
1895-10-24	1964-11-10

# 7. DATA VISUALIZATIONS: GALLERIES

- Like the Table function, the “Gallery” tab visualizes your data with any images in your dataset. You can select what appears below each image and how the images are arranged in your gallery.

The screenshot displays the Palladio interface in the 'Gallery' view. The top navigation bar includes 'Data', 'Map', 'Graph', 'Table', and 'Gallery' (which is selected). The main content area shows a grid of portrait cards for various historical figures. Each card features a small image on the left and text on the right, including the name, gender, and birthdate. A 'Settings' panel is open on the right side, allowing users to customize the gallery's appearance. The settings include dropdown menus for 'Title', 'Subtitle', 'Text', 'Link', 'Image URL', and 'Sort by'. The 'Title' is set to 'Name', 'Subtitle' to 'Gender', 'Text' to 'Birthdate', 'Link' to 'Pic', 'Image URL' to 'Pic', and 'Sort by' to 'Name'. The 'Download' button is visible in the top right corner.

Name	Gender	Birthdate
Grimaldi Princesse Marie Caroline Gibert de Lametz	F	1793-7-18
Aga Khan III	M	1877-11-2
Albert Aubert	M	
Anton Dolin	M	1904-7-27
Antony Noghes	M	1890-9-13
Basil Zaharoff	M	1849-10-6
Carey Grant	M	1904-01-18
Charles Garnier	M	1825-11-6
Charles Wells	M	1841-1-1
Coco Chanel	F	
Colette	F	
Constantin Radziwill	M	
Consuelo Vanderbilt	F	

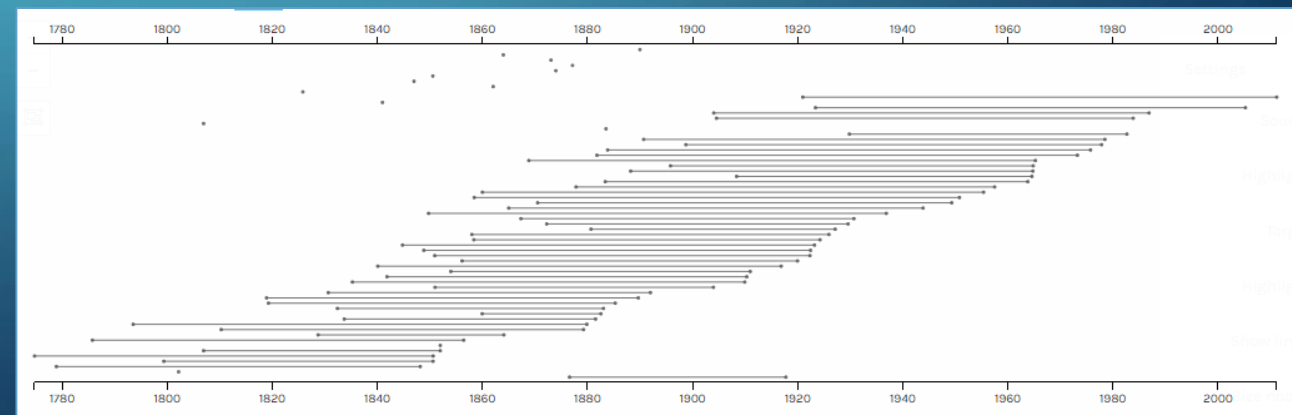
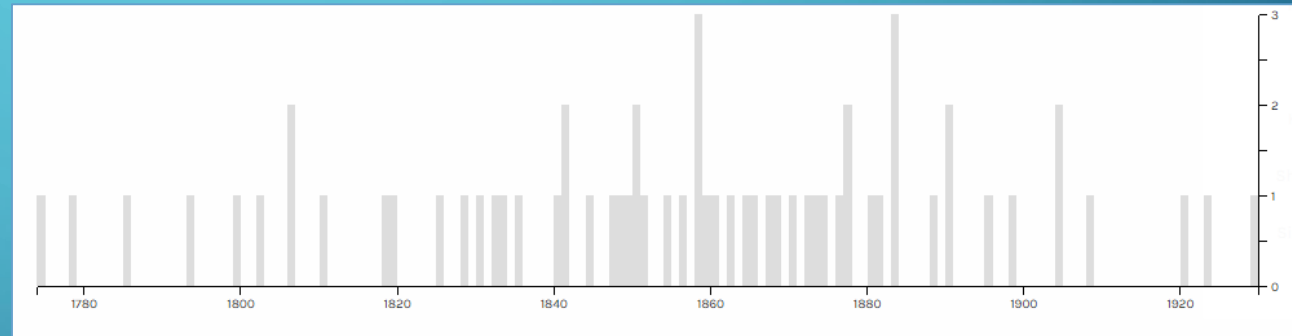


# 7. DATA VISUALIZATIONS: TIMELINES

- At the bottom of each visualization screen are **Facet**, **Timeline**, and **Timespan**

- **Facet** will show lists of each category you decide with the number of times it occurs
- **Timeline** will represent a category as a timeline, so long as it has a time element, like birthdate
- **Timespan** will show lifespans

Date of Death (50)	Birthdate (62)	Birthplace (46)	Place of Death (19)
23 / 23	11 / 11	Paris 18 / 18	28 / 28
1852-01-01 2 / 2	1806-12-12 2 / 2	Courthezon 4 / 4	Paris 15 / 15
1850-08-26 1 / 1	1778-12-3 1 / 1	France 3 / 3	Monaco 11 / 11
1881-7-25 1 / 1	1793-7-18 1 / 1	Monaco 2 / 2	London 3 / 3
1856-6-20 1 / 1	1799-5-20 1 / 1	Brussels 2 / 2	New York 2 / 2
1864-2-10 1 / 1	1802-3-14 1 / 1	Germany 2 / 2	Drottningholm 1 / 1
1879-4-12 1 / 1	1810-4-22 1 / 1	London 2 / 2	Davenport 1 / 1



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