

Network Visualization

HELLO!

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historian and DHer.

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You can find me at
[@throughthe_veil.](#)



“

Network visualizations helped me understand how these ca. 5000 stories and 1,400 individuals relate to each other. They often confirmed what I knew but regularly surprised me and raised interesting questions.

--Martin Düring

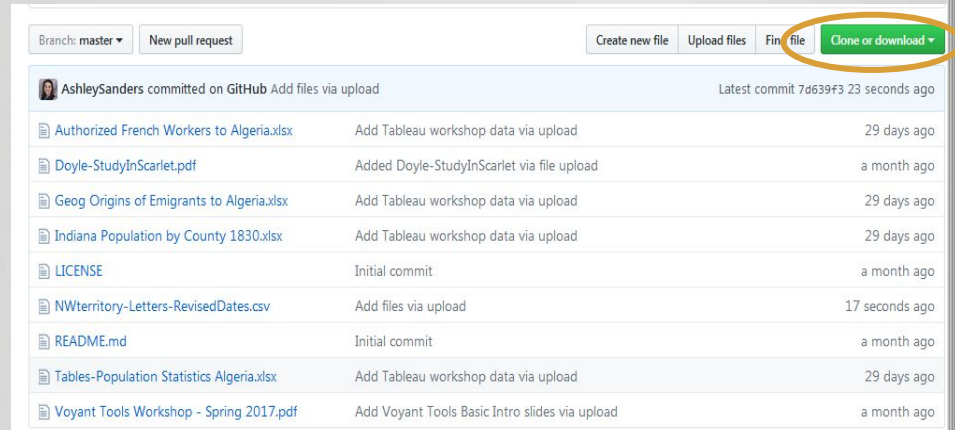
1. Getting Started

Get Data: 2 Options

1. Download all data sources for the tutorials on this site from: <https://github.com/AshleySanders/Tutorials>.

(Follow the steps on the next slide)

2. Download just the data for this workshop by clicking the link below the slides.



Branch: master New pull request

Create new file Upload files Find file Clone or download

AshleySanders committed to GitHub Add files via upload Latest commit 7d639f3 23 seconds ago

Authorized French Workers to Algeria.xlsx	Add Tableau workshop data via upload	29 days ago
Doyle-StudyInScarlet.pdf	Added Doyle-StudyInScarlet via file upload	a month ago
Geog Origins of Emigrants to Algeria.xlsx	Add Tableau workshop data via upload	29 days ago
Indiana Population by County 1830.xlsx	Add Tableau workshop data via upload	29 days ago
LICENSE	Initial commit	a month ago
NWterritory-Letters-RevisedDates.csv	Add files via upload	17 seconds ago
README.md	Initial commit	a month ago
Tables-Population Statistics Algeria.xlsx	Add Tableau workshop data via upload	29 days ago
Voyant Tools Workshop - Spring 2017.pdf	Add Voyant Tools Basic Intro slides via upload	a month ago

AshleySanders / Tutorials

Unwatch 1 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Pulse Graphs Settings

DH tutorials and related materials Edit

Add topics

7 commits 1 branch 0 releases 1 contributor MIT

Branch: master New pull request

Create new file Upload files Find file Clone or download

AshleySanders committed on GitHub Added image URLs to view Gallery in Palladio

Authorized French Workers to Algeria.xlsx	Add Tableau workshop data via upload	
Doyle-StudyInScarlet.pdf	Added Doyle-StudyInScarlet via file upload	
Geog Origins of Emigrants to Algeria.xlsx	Add Tableau workshop data via upload	
Indiana Population by County 1830.xlsx	Add Tableau workshop data via upload	
LICENSE	Initial commit	a month ago
NWterritory-Letters-RevisedDates.csv	Added image URLs to view Gallery in Palladio	3 minutes ago
README.md	Initial commit	a month ago
Tables-Population Statistics Algeria.xlsx	Add Tableau workshop data via upload	a month ago
Voyant Tools Workshop - Spring 2017.pdf	Add Voyant Tools Basic Intro slides via upload	a month ago

Clone with HTTPS
Use Git or checkout with SVN using the web URL.
<https://github.com/AshleySanders/Tutorials>

Open in Desktop Download ZIP

1. Clone or Download
2. Download ZIP
3. Open it and save the files.
4. Open:

**NWterritory-Letters-Revised
Dates.csv**

	A	B	C	D
1	Date	Location	Source	Target
2	1771-04-14		George Rogers Clark	Jonathan Clark
3	1772-11-22		John B. Roy	Jonathan Clark
4	1773-01-09		George Rogers Clark	Jonathan Clark
5	1774-12-18		George Rogers Clark	Jonathan Clark
6	1798-06-17		George Rogers Clark	Samuel Brown
7	1775-04-01		George Rogers Clark	Jonathan Clark
8	1775-07-06		George Rogers Clark	Jonathan Clark
9	1776-02-26		George Rogers Clark	Jonathan Clark
10	1776-06-15		Inhabitants of Kentucky	Convention of Virginia
11	1776-08-12		John Clark	Jonathan Clark
12	1776-10-01		J. G. Jones and George Rogers Clark	House of Delegates

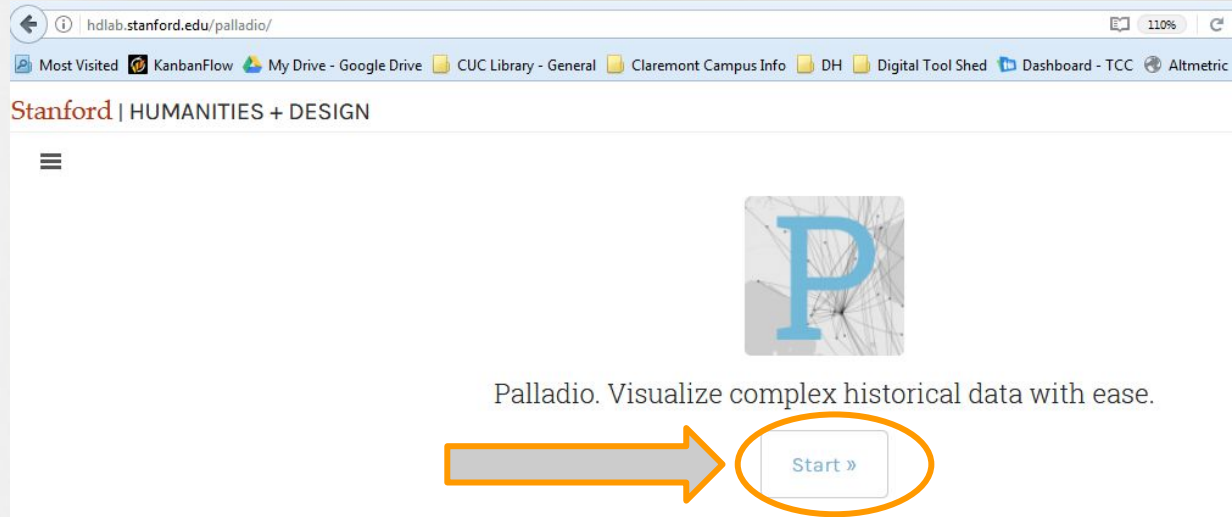
2. Data

Open the .csv file and take a look at how the data is organized.

3. Palladio

Palladio is a product of the [NEH Implementation grant](#) (July 2013-June 2016), Networks in History: Data-driven tools for analyzing relationships across time.

<http://hdlab.stanford.edu/palladio>



What can I do with Palladio?

Load data by choosing one of the 3 options from the left sidebar

P

v 1.2.

Create a new project

Load an existing project

Try with sample data


Create a new Palladio project by uploading your data from a spreadsheet or flat-file, or load data from a SPARQL endpoint. [Not sure how Palladio works?](#)

Load .csv or spreadsheet

Copy and paste out of your spreadsheets, drag-and-drop to upload tabular data (e.g. .csv, .tab, .tsv), or link to a file in a public Dropbox folder to create a new Palladio project. [Not sure how to structure your data?](#)

1	
---	--

Loading Data: For this workshop...

- ◆ Open the .csv file
- ◆ Select & copy all of the data
- ◆ Paste it into the window on the Palladio site
- ◆ Click 

Load .csv or spreadsheet

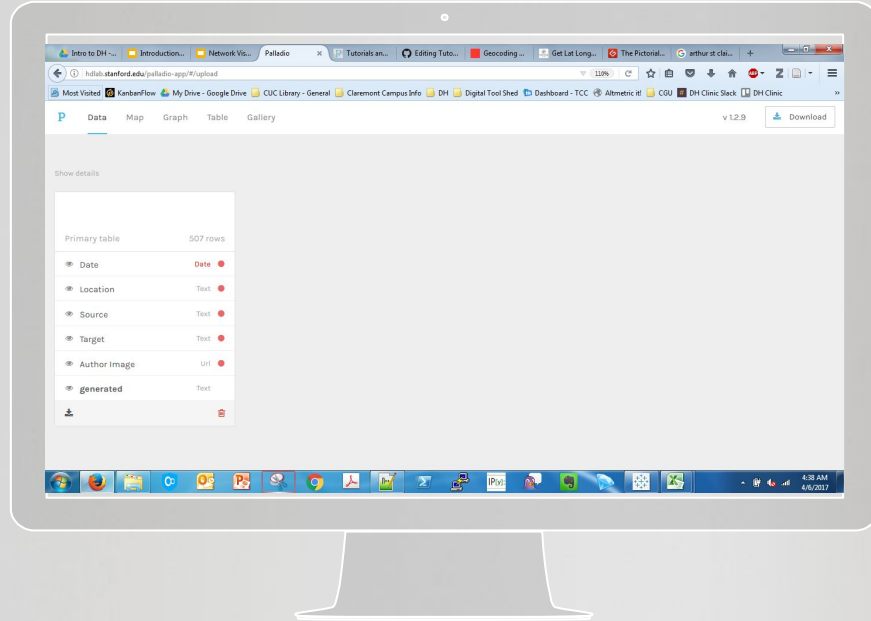
Copy and paste out of your spreadsheets, drag-and-drop to upload tabular data (e.g. .csv, .tab, .tsv), or link to a file in a public Dropbox folder to create a new Palladio project. [Not sure how to structure your data?](#)

```
501 1795-06-20 Treasury Department Oliver Wolcott Arthur St. Clair
502 1795-06-20 Cincinnati Arthur St. Clair Governor Shelby http://s3.amazonaws.com/mtv-main-assets
    /files/resources/st-clair-peale.jpg
503 1795-06-30 Cincinnati Arthur St. Clair Anthony Wayne http://s3.amazonaws.com/mtv-main-assets
    /files/resources/st-clair-peale.jpg
504 1795-08-19 Greenville Anthony Wayne Arthur St. Clair
505 1795-08-24 Cincinnati Arthur St. Clair Edmund Randolph http://s3.amazonaws.com/mtv-main-assets
    /files/resources/st-clair-peale.jpg
506 1795-09-26 New Madrid Governor Gayoso Arthur St. Clair
507 1795-11-01 Philadelphia Arthur St. Clair George Washington http://s3.amazonaws.com/mtv-main-
    assets/files/resources/st-clair-peale.jpg
508 1795-12-05 Maskingum Arthur St. Clair Anthony Wayne http://s3.amazonaws.com/mtv-main-assets
    /files/resources/st-clair-peale.jpg
509 |
```

Load

DATA Screen

Check to make sure Palladio has accurately recognized your data types. If not, you may have some more cleaning to do.



Hide details

Author(s)

Author

Date














Date

Description

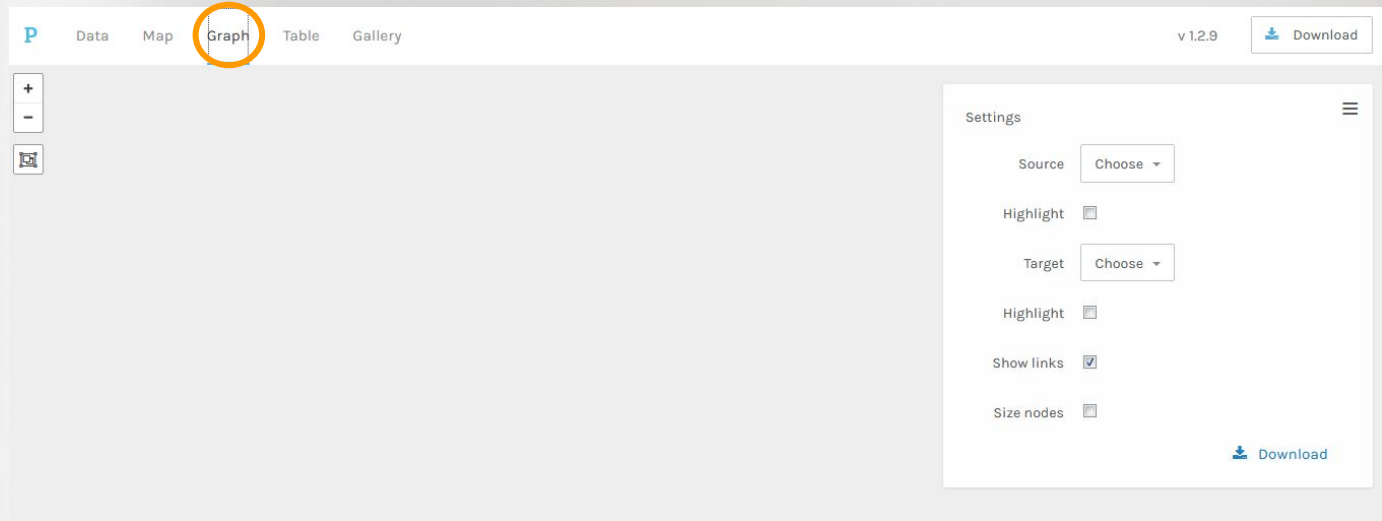
Provide a description for this project (e.g. description of the data, ...)

Primary table

507 rows

 Date	Date	
 Location	Text	
 Source	Text	
 Target	Text	
 Author Image	Url	
 generated	Text	
		

*Add details
about the
project
by clicking
Show Details*



Click **Graph** at the top to create your network visualization

Settings

Source


Highlight ☐

Target

Highlight ☐

Show links ☒

Size nodes ☐

 Download

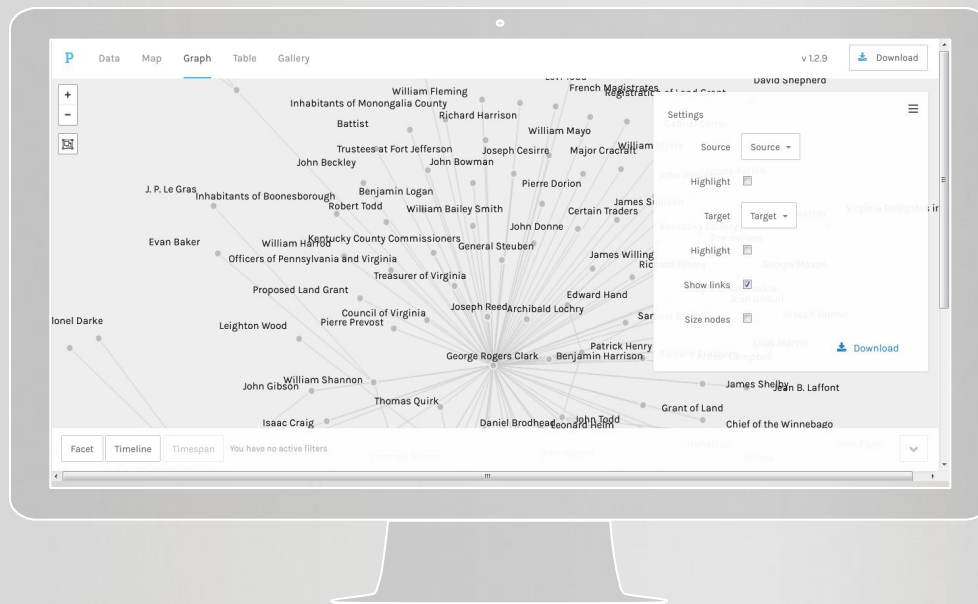
Choose source dimension ×

Author Image Date Location **Source** Target generated

Close

*Choose **Source**
for **Source**
And
Target for
Target
In the Settings
pane.*

You  have a graph!

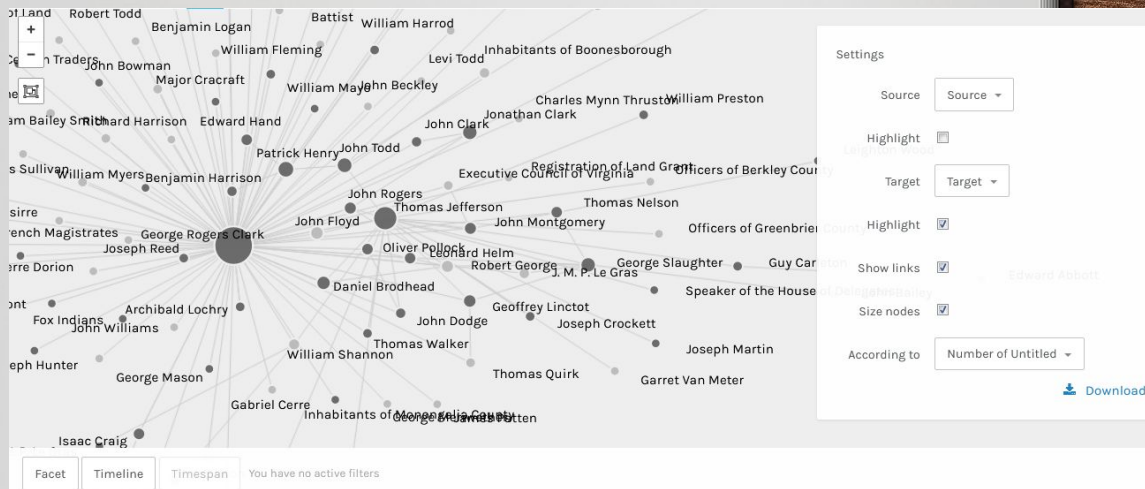




Now what?

Play!

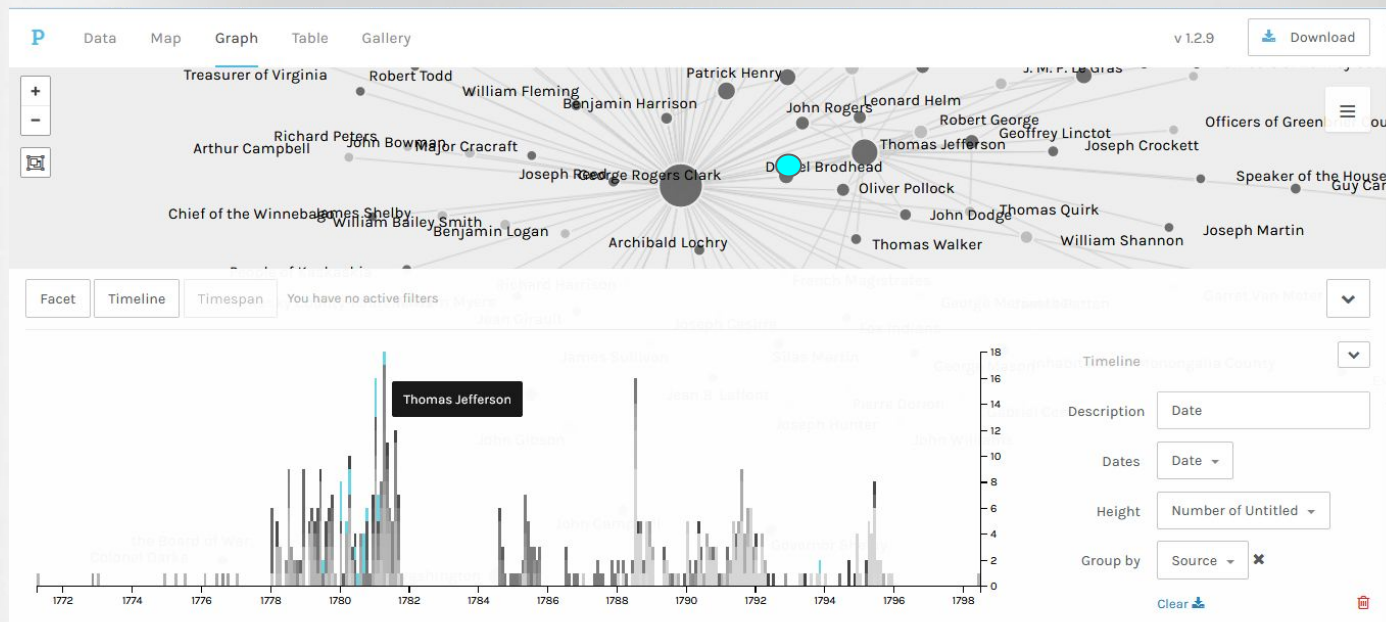
- Try adding **Highlights** and **Size**.
- Zoom in & out
- Try the “fit to screen” option



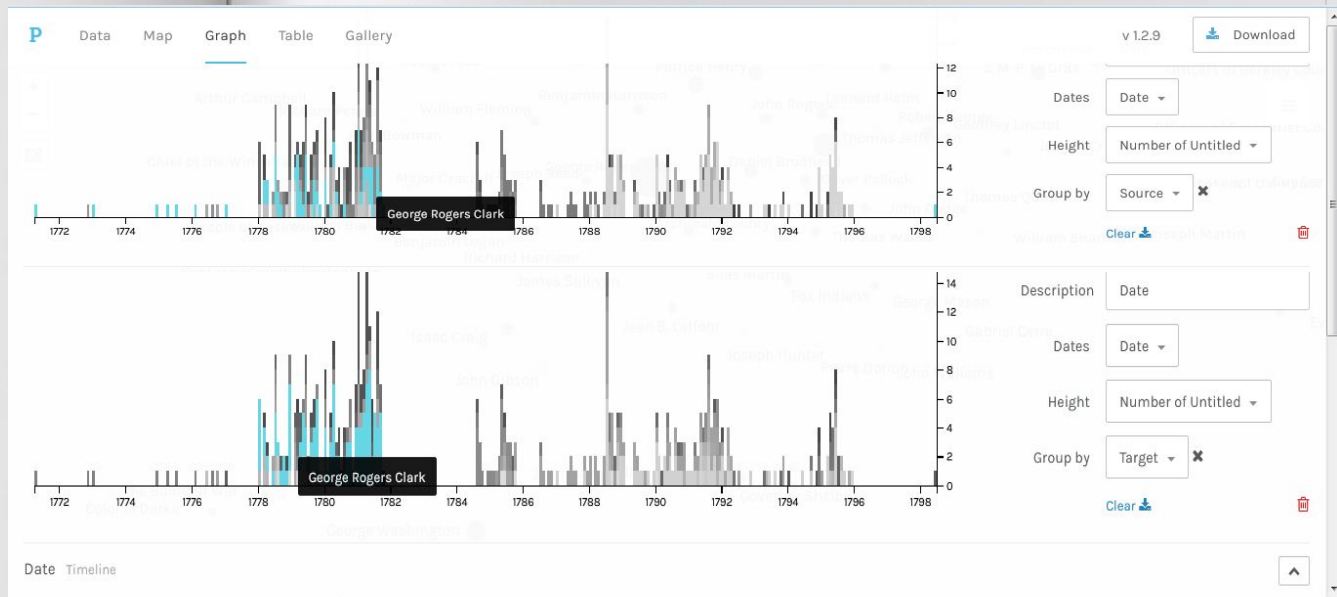
What do the Highlights mean?
How might adjusting the size aid interpretation?

Timeline!



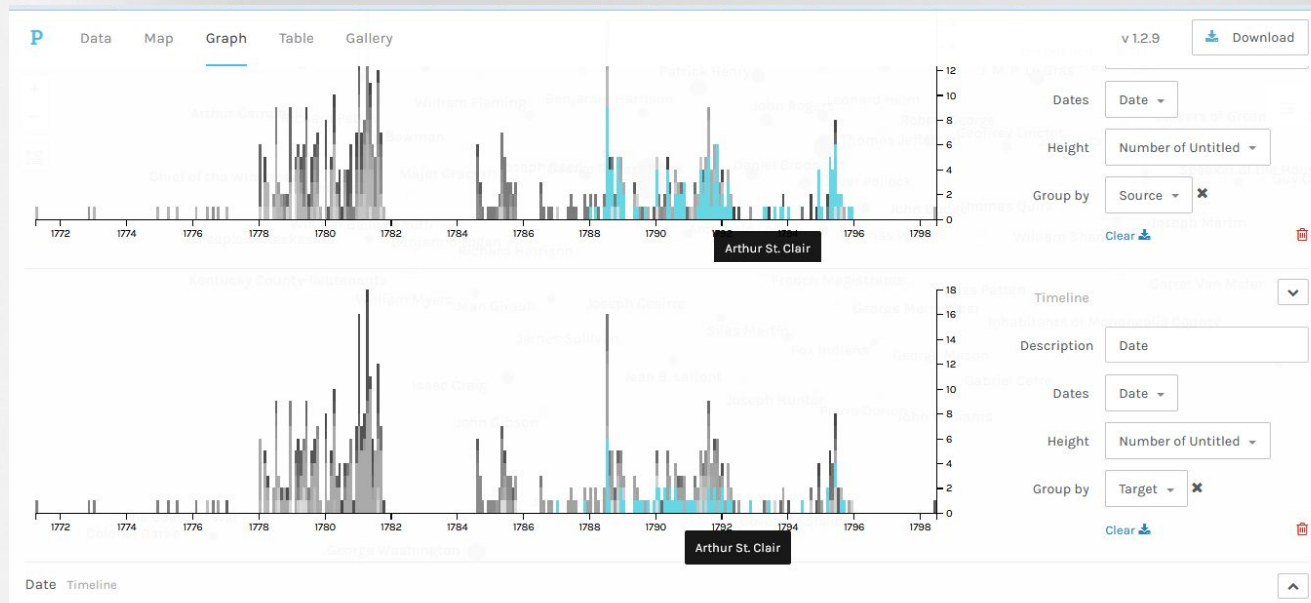


Next, try moving your mouse over the timeline.
Why might there have been a gap in Jefferson's correspondence?

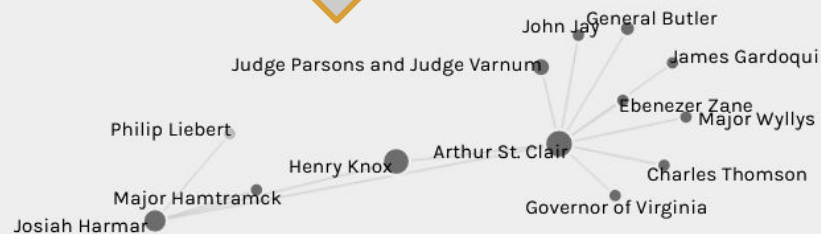
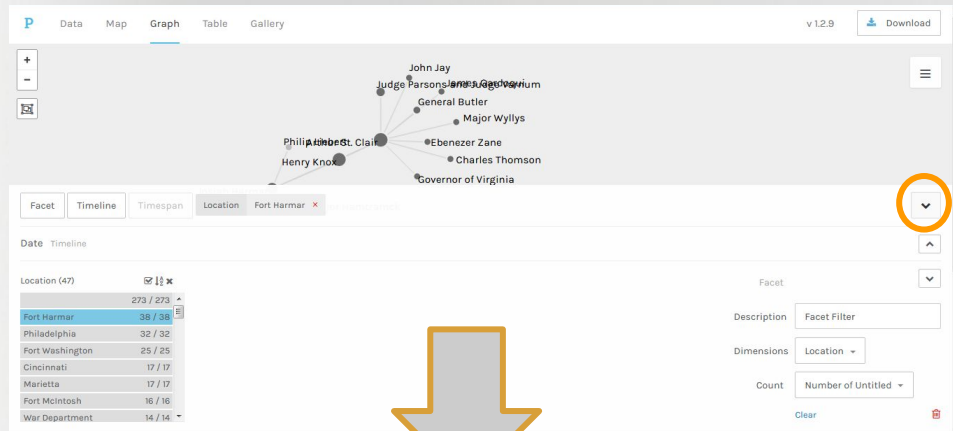


*Click **Timeline** again to stack two on top of each other.*

By taking a screenshot of each timeline with GRC selected, we can compare how many letters he sent and received over time.



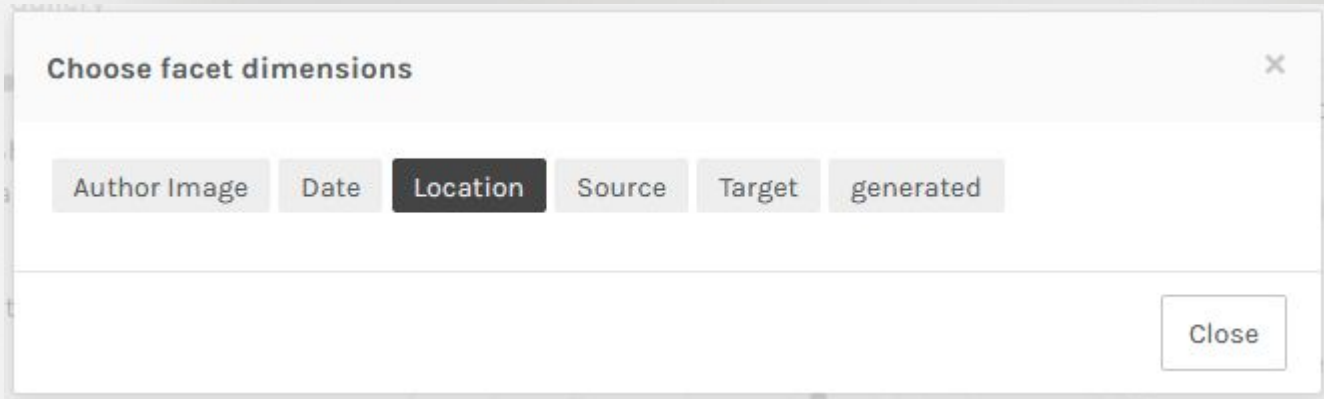
*Why might Arthur St. Clair have sent more letters than he received?
Or, why might the record show more letters sent?*



Facet Timeline Timespan Location Fort Harmer x

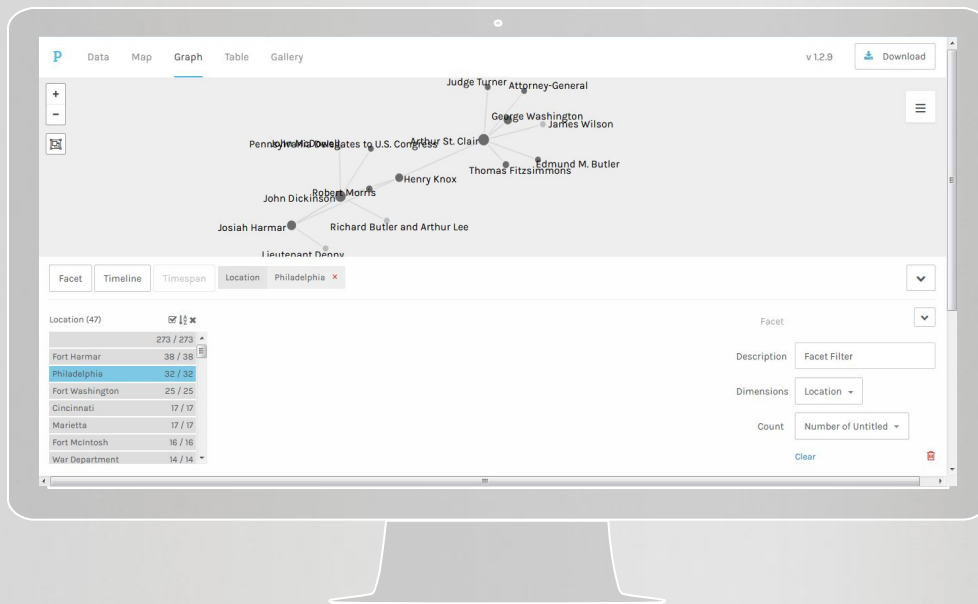
The down arrow  minimizes the Facet and Timeline views.

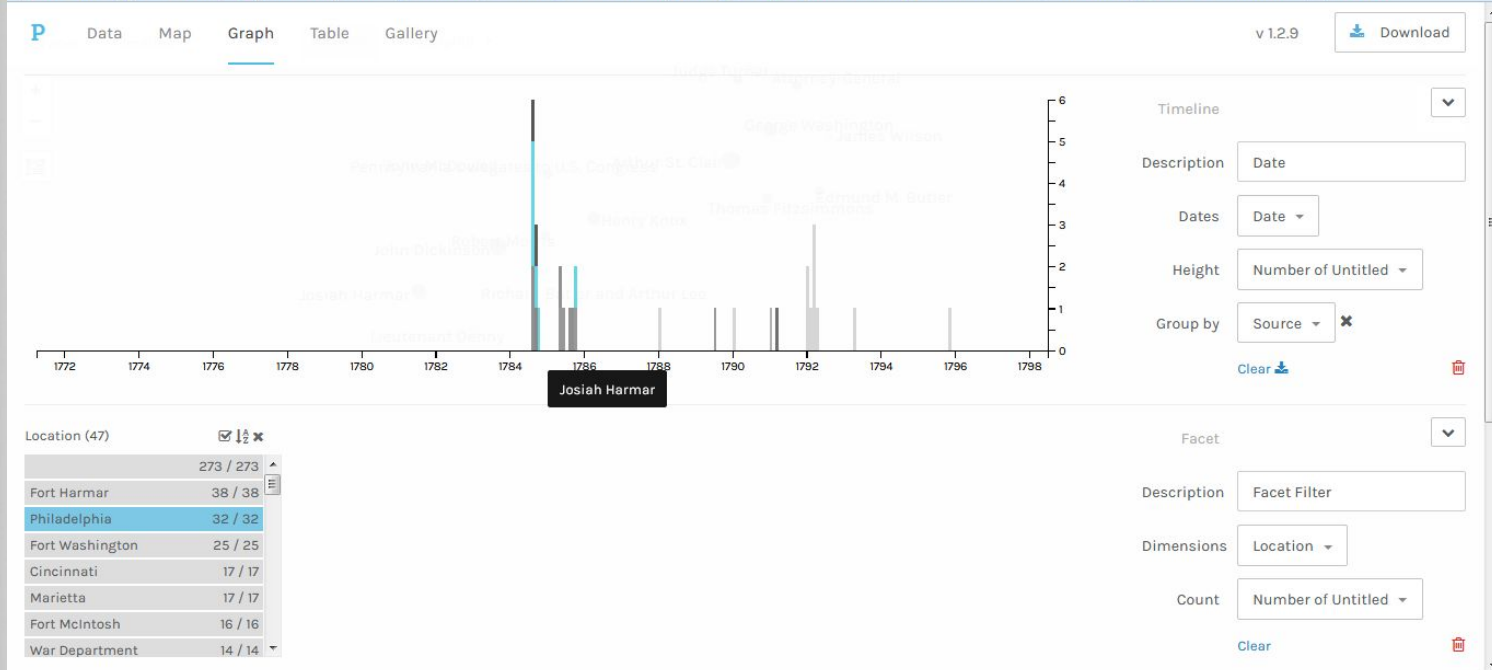
Use Facets to Filter the Data



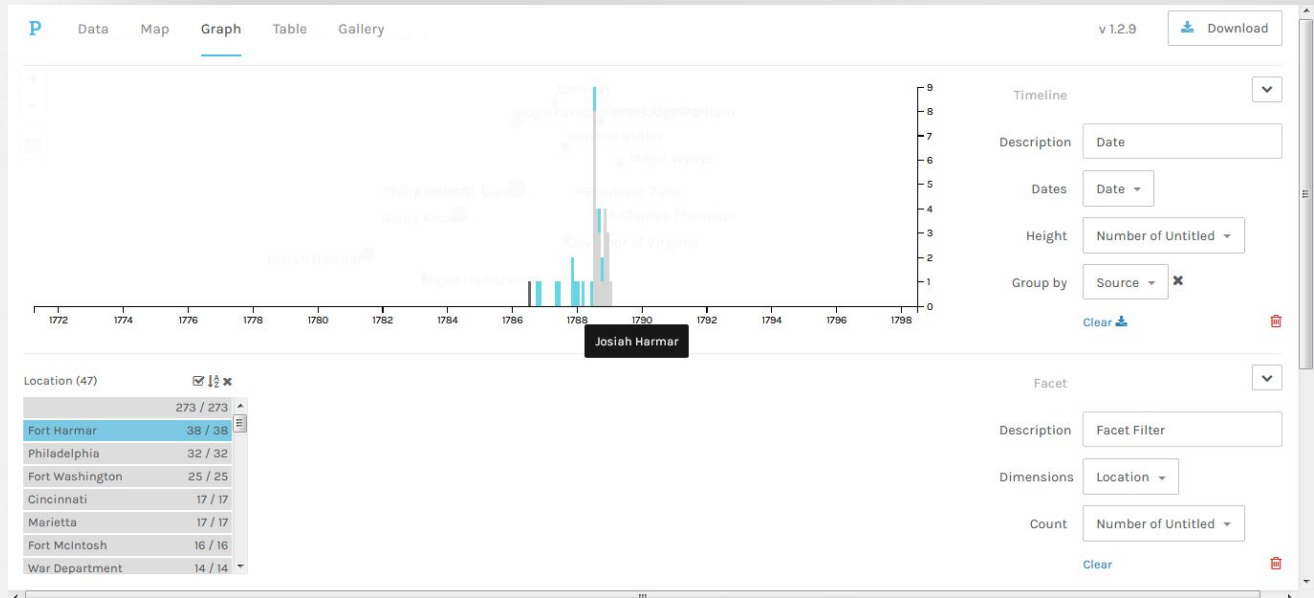
Who was in
Philadelphia?

Do we know
when they
were there?





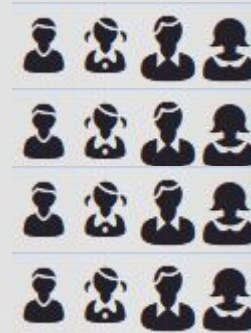
Click on the **Timeline** to find out!



*Click on a new location to add it to the timeline.
Click on a location a 2nd time to remove it.*

Gallery!

*Click on the **Gallery** tab at the top of your screen.*



P

Data

Map

Graph

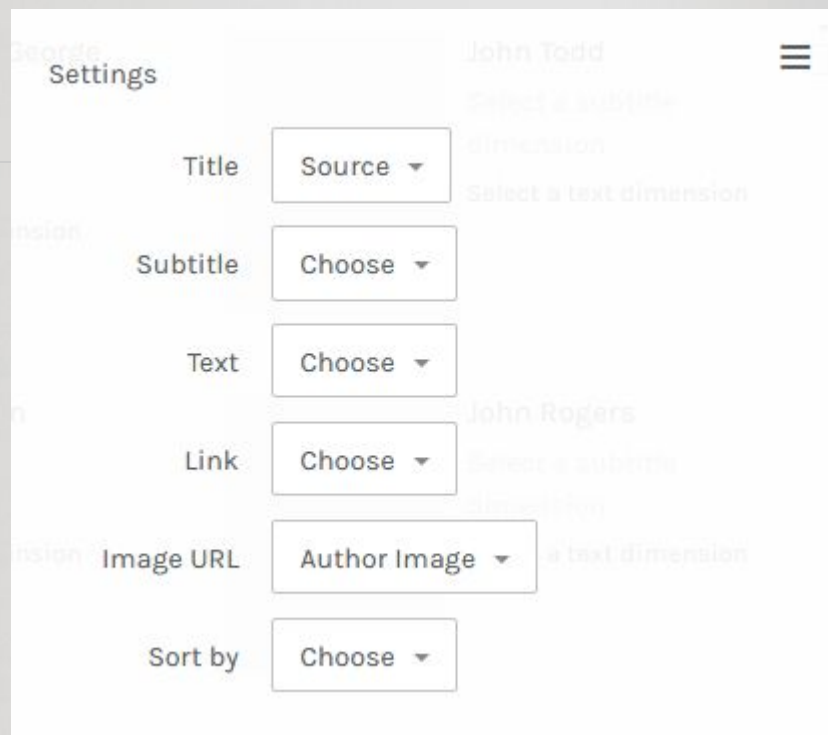
Table

Gallery

Set up:

Choose **Source** for Title.
This name each author.

Choose **Author Image**
for Image URL.



The screenshot shows a 'Settings' form with the following fields and options:

Field	Selected Option
Title	Source
Subtitle	Choose
Text	Choose
Link	Choose
Image URL	Author Image
Sort by	Choose

P

Data

Map


Graph

Table


Gallery

v 1.2.9


Download



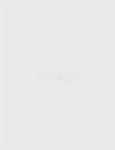
George Rogers Clark
Select a subtitle dimension
Select a text dimension




James Shelby
Select a subtitle dimension
Select a text dimension




Robert Todd
Select a subtitle dimension
Select a text dimension




Benjamin Logan
Select a subtitle dimension
Select a text dimension




Levi Todd
Select a subtitle dimension
Select a text dimension



George Rogers Clark
Select a subtitle dimension
Select a text dimension



George Rogers Clark
Select a subtitle dimension
Select a text dimension



George Rogers Clark
Select a subtitle dimension
Select a text dimension

Choose title (a unique value)

Author Image

Date

Location

Source

Target

generated

Close

Title

Source

Subtitle

Choose

Text

Choose

Link

Choose

Image URL

Author Image

Sort by

Choose



Data

Map

Graph

Table

Gallery

v 1.2.9



Download



Council of Virginia

Select a subtitle dimension

Select a text dimension



Thomas Jefferson

Select a subtitle dimension

Select a text dimension



George Rogers Clark

Select a subtitle dimension

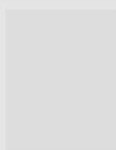
Select a text dimension



George Rogers Clark

Select a subtitle dimension

Select a text dimension



Daniel Brodhead

Select a subtitle dimension

Select a text dimension



Charles Mynn Thruston

Select a subtitle dimension

Select a text dimension



French Magistrates

Select a subtitle dimension

Select a text dimension



Land Grants

Select a subtitle dimension

Select a text dimension



William Shannon

Select a subtitle dimension

Select a text dimension



Thomas Jefferson

Select a subtitle dimension

Select a text dimension



Thomas Jefferson

Select a subtitle dimension

Select a text dimension



Patrick Henry

Select a subtitle dimension

Select a text dimension

Facet

Timeline

Timespan

You have no active filters

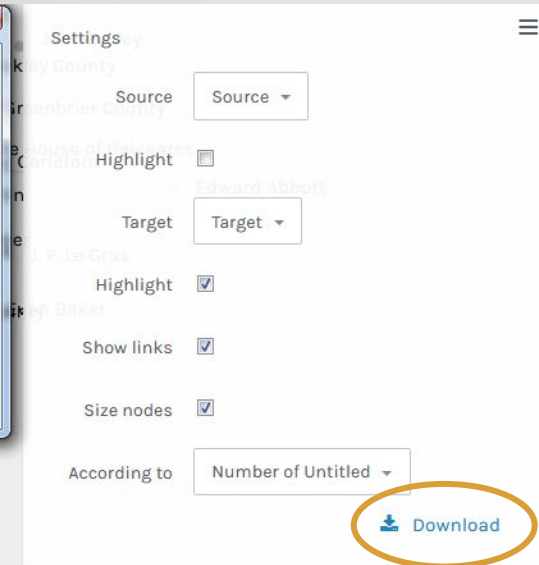
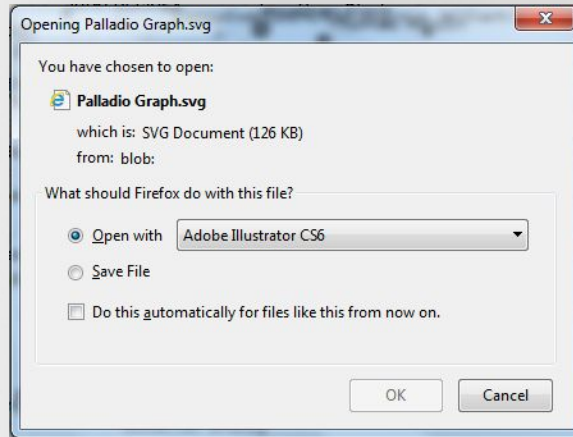
George Rogers Clark

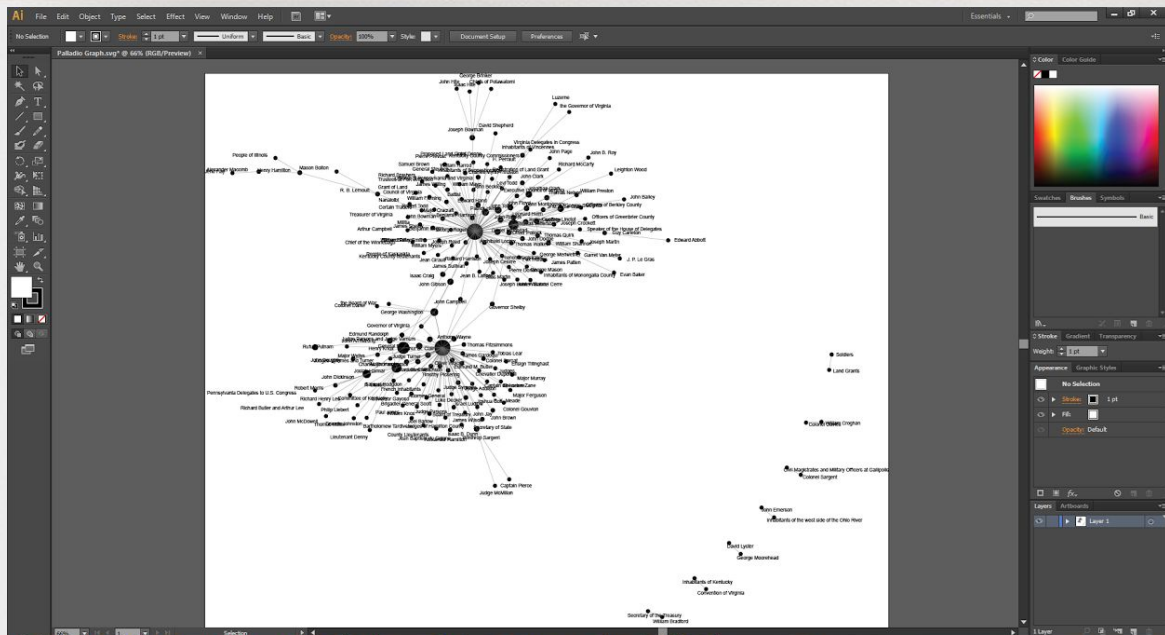
George Rogers Clark

Daniel Brodhead



Export your visualizations using “Download”

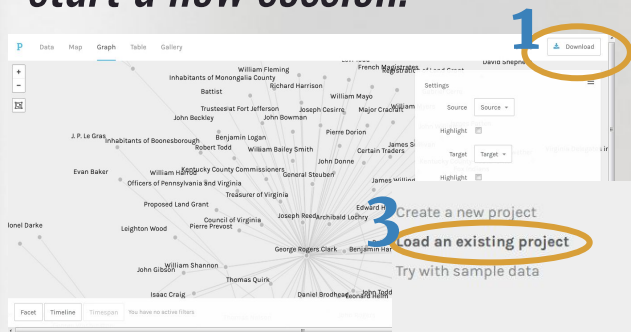




You can open and edit the svg file that Palladio outputs in Adobe Illustrator.

Save your work by downloading a JSON file of your session.

Upload this file in Palladio to keep working on your project when you start a new session.



2. Save the file.

If you already have a Palladio project file (json) you can load one from your computer or a URL.

Upload from your computer

You can load an existing Palladio project by selecting the file from your computer.

Choose a file

Load a remote Palladio file

You can enter the URL of an existing Palladio project file. Please make sure that the server is [CORS-enabled](#).

Load

Additional Resources

Palladio:

- ★ [Stanford's Tutorials on Palladio](#)
- ★ [Miriam Posner's Tutorial](#)
- ★ [Programming Historian Tutorial](#)

Preparing Your Data

- ★ [RegEx for Text Cleaning](#)
- ★ [Palladio Data Formats](#)
- ★ Shawn Graham, Ian Milligan, and Scott Weingart, *Exploring Big Historical Data: The Historian's Macroscopic* (Imperial College Press, 2015), ch. 3.

THANKS!

Any questions?

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[@throughthe_veil](#)

&

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