**Network Analysis**

An approach often used in sociology, **network analysis** examines connections between **nodes** (people, events, movements etc.) and **edges (**the elements, relationships, connections) that bind them.

Chris Warren, Daniel Shore, Jessica Otis: [Six Degrees of Francis Bacon](http://sixdegreesoffrancisbacon.com)

Chronicle of Higher Education: [Who Does your College Think Its Peers Are?](http://chronicle.com/interactives/peers-network)

[Connect the Dots](https://databasic.io/en/connectthedots/) – Upload a CSV to automatically generate basic network graph

[Palladio](http://hdlab.stanford.edu/palladio/) – web-based tool that allows for quick data visualization

[Cytoscape](http://www.cytoscape.org)—free downloadable software for creating complex network graphs.

[Gephi](http://www.gephi.org) – Gephi is a free, software for network analysis, slightly higher learning curve than Cytoscape.

**Sample Assignment: Discover Networks of Relationships with Palladio**

1. Discover how authors of a journal issue are related
2. Create a Google Sheet for the class to collaboratively work on and define the columns
	* 1. E.g. Name|Topic|Gender|Area
3. Have students fill in each column for their assigned authors
4. Once complete copy the contents of the sheet and paste it into [Palladio](http://hdlab.stanford.edu/palladio/)
5. Go to graph
	1. select the column you would like to be the source (the central idea of the graph)
	2. select the column you would like to be the target (the spokes coming from the source)
6. What do you see?
	1. Does the graph look like you thought it would?
	2. Is there anything you notice that is surprising?
7. Discussion or 2 page paper: What new narrative could you tell from this graph? What new questions would you ask?

[Student created network analysis](https://mina-loy.com/maps/loys-social-network/) (built in Cytoscape)

Time: If an exploratory exercise one session will work. This assignment can also be used to determine final paper topics.

**Corpus Analysis**

Reading a large text or collection of texts from a macro level (**distant reading**) to look for patterns in language or content across this **corpus** of text. This method often uses statistical analyses including **topic modeling** and finding **co-locations** of words.

Mark Algee-Hewitt [The Performance of Character](http://markalgeehewitt.org/index.php/main-page/projects/the-performance-of-character/)

Micki Kaufman [Quantifying Kissenger](http://www.quantifyingkissinger.com)

New York Times [Cliches of ESPN](http://www.nytimes.com/interactive/2012/02/04/sports/football/a-compilation-of-sportscenter-cliches.html)

[Voyant Tools](http://voyant-tools.org/) - Free web-based text analysis tool. Can do KWIC analysis, word clouds, co

-locations of terms and several visualizations

[Topic Modelling Tool](http://nlp.stanford.edu/software/tmt/tmt-0.4/) - Natural Language Processing command line tool from Stanford

[R](https://www.r-bloggers.com/intro-to-text-analysis-with-r/) - Statistics programming language. Requires some familiarity with programming.

**Sample assignment: Find Patterns in Text using Voyant**

1. Build your corpus
	1. Collect Plain txt files of books/articles/playbills/government documents etc
		1. Can be done ahead of time or have students choose their own texts
2. Upload your files to Voyant
	1. hit shift and select all the txt files hit upload
3. What do you see?
	1. What are the correlations between words or phrases?
		1. Use Links
		2. Use correlation
	2. What can you learn about the documents from a distance?
		1. Are some more relevant than others to your research question?
4. Revisit #2 with class
	1. How can this graph be used as evidence in a larger argument?
	2. What can you ask that you couldn’t know from simply reading all of these docs?

Time: One class session if material is collected ahead of time. Can be exploratory one-off or a method to help generate paper topics.

**Mapping**

Using mapping technology to extract and analyze spatial data from primary sources. This process can include **georeferencing** historic maps and creating map based visualizations.

Vincent Brown: [Jamaica Slave Revolt](http://revolt.axismaps.com/map/)

Mitch Fraas: [Mapping the State of the Union](http://www.theatlantic.com/politics/archive/2015/01/mapping-the-state-of-the-union/384576/)

Scott Nesbit and Ed Ayers: [Visualizing Emancipation](http://dsl.richmond.edu/emancipation/)

[We Mapped It So You Don’t Have to](https://crln.acrl.org/index.php/crlnews/article/view/16772/18314) - Round up of digital mapping programs

[KnightLab StoryMap](https://storymap.knightlab.com/) - Creates dynamic map that shows movement across time and space. Free web-based

[Carto](https://carto.com/) – Free with advanced features availabl that include analysis and animated map tools

[QGIS –](http://www.qgis.org/en/site/) Open source version of ESRI’s ArcGIS.

[ArcGIS –](http://www.arcgis.com/features/index.html) Proprietary mapping software. The photoshop of mapping tools. Powerful but steep learning curve.

**Sample Assignment: Map an event with KnightLab StoryMap**

1. Find an event or events and assign groups
2. Have each group make an account on [KnightLab StoryMap](https://storymap.knightlab.com/)
3. Each member of the group is responsible for 2 slides
4. Group decides the overall story of the event and where to place each slide on the map.
	1. What does “where” mean?
	2. Why did you choose each place/person?
	3. What did you decide to leave out?
	4. Write a 3-4 page paper describing your decisions
5. Grade is determined by the completion and cohesiveness of the StoryMap

[Student map of revolution in Poland](https://digilab.libs.uga.edu/exhibits/exhibits/show/1989/poland)

Time: 2 sessions with the first identifying the groups and topics and the second for presentation of final results.

**Digital Exhibits**

Using a **content management system** (a system that holds and organizes digital content) to curate, and display research or archival material. Beyond a website, digital exhibits often include a focus on **metadata** and preservation and make an argument about the content.

Diana Taylor, Lorie Novak et al [Dancing with Zapatistas](http://scalar.usc.edu/anvc/dancing-with-the-zapatistas/table-of-contents)

Janneken Smucker & Charlie Hardy [Goin North](https://goinnorth.org)

Elizabeth Maddock Dillon, Ryan Cordell et al [Our Marathon: The Boston Bombing Digital Archive](http://marathon.neu.edu/about)

[Omeka](http://omeka.org/) - Content management system built specifically for academic digital collections. Free, open source. Build and curate digital exhibits using Dublin Core metadata standards

[Scalar](http://scalar.usc.edu/) - Platform out of USC for non-linear storytelling. Free and hosted by USC or can be installed and hosted locally. Great for multi-media components

**Sample Assignment: Create a class museum with Omeka**

1. Create an Omeka site from your class (omeka.org for a free account or your campus install)
2. Have each student collect one item per week (as often as you’d like)
3. Post each item to Omeka as an item with 250 words explaining why the item is important
4. At the end of term have students curate their found items and make an Omeka exhibit
	1. Why did you choose them?
	2. How do you want users to experience them?
	3. How is a digital collection similar to an experience at a physical museum? Different?
	4. Write a 5-7 page paper of how and why you organized it this way

[Student digital exhibit in Omeka](https://digilab.libs.uga.edu/exhibits/exhibits/show/gyotaku)

Time: Best if integrated into course assignments as a whole throughout semester. Exhibit by itself can be done in 1-2 sessions

**General Data Visualization**

[Raw](http://raw.densitydesign.org/) - Offers a selection of graphs from a single spreadsheet upload. Describes types of graphs and parameters for data for each type. Helps explain why and when to use certain graphs

[Databasic](https://databasic.io/en/) - A web based tool with a selection of charts and graphs. Chooses graph based on data structure of uploaded content. Can change output with basic code

[Palladio](http://palladio.designhumanities.org/#/) - Can map data with locations and do network analysis with simple upload

[Datacopia](http://www.datacopia.com/) - upload data sheet and automatically produces a variety of different graphs

[Infogram](https://infogram.com) – Infographic builder

**Sample assignment:** **Data tells many stories using Infogram**

1. Instructor: Find an infographic that has a citation (examples below)
	1. <http://www.entrepreneurssource.com/blog/wp-content/uploads/2014/12/TES-Infographic-LG.jpg>
	2. <https://s1.paultan.org/image/2015/12/Helix-Infographic-Visual-630x1009.jpg>
2. Find original data source
3. Have students explain message and tone of infographic
	1. What elements are successful? Why?
	2. Which parts are least effective? Why?
4. Have students use same data set to create one graph or chart that accurately represents the findings, create another version that purposely misrepresents the same data
5. Make an infographic on Infogram to tell the opposite story

Time: Two sessions. 1 for introducing infographics and discussion of data as a source. Homework to make an alternate infographic. 2 to discuss results.