

The Tools of DH

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Workshop slides

adapted from Mary

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GO TO:

<https://tinyurl.com/y8w2uo74>



What is GCDI?

Graduate Center Digital Initiatives offers different types of *support for digital scholarship* such as evening **workshops**, afternoon and evening **office hours** and **working groups** based around common tools or data sources, special **events** such as our annual Digital Showcase and Sound Series, and **online resources**.

Whether you have participated in our workshops before or your idea of the perfect software is a paperback edition, there is something for you! Our offerings are open to scholars at all levels of digital experience and at all stages of graduate research. Whether you are digitally driven, curious, or defiant, we are prepared to help.

Tool:

A device or implement, especially one held in the hand, used to carry out a particular function.

[in computing]

A piece of software that carries out a particular function, typically creating or modifying another program.
(Oxford English Dictionary)

DH (Digital Humanities):

An area of scholarly activity at the intersection of computing or digital technologies and the disciplines of the humanities...

DH brings digital tools and methods to the study of the humanities with the recognition that the printed word is no longer the main medium for knowledge production and distribution.

Provides new ways of doing computationally engaged research, teaching, and publishing (Wikipedia).

Workshop Goals

We will:

- **consider** what types of project, research, and work are included in the digital humanities,
- **create** a working resource for our own tools of digital humanities,
- **explore** a wide range of methods for research (and project) development.

Digital Humanities projects use...

digital methods of research

that engage **humanities topics** in their materials

and/or

interpret the results of digital tools from a **humanities** lens

Things to do with DH

- Create community
- Theorize, critique, comment
- Utilize existing platforms
- Develop platforms
- Produce data
- Process data
- Communicate your research in a digital environment
- Collect, curate, and display digital materials

And more...

Collaborative Research

Community is fundamental to DH.

So... introduce yourself to the person next to you:

Name

CUNY affiliation? Let us know if you are with Praxis or Social Media Fellows!

Interested in what digital projects or research topics?

...and then you'll introduce this person to us!



FIRST THINGS FIRST:

ZOTERO

We're covering a lot, and this will make it easy to save URLs, citations, and get your research going.

All these steps work on your own laptop, too.

Work with your partner to make progress together!

Desktop application and Connector (browser extension)

(or MacOS or Windows, depending on your computer)

1. Go to: <https://www.zotero.org/> and click:

Zotero 5.0 for **Linux**
32-bit

Your personal research assistant

Download

2. Then click:

Zotero Connector

Save to Zotero from your browser

Install Chrome Connector

3. Install Zotero in your applications.



Make Your Account

Success! You Installed Zotero!

New to Zotero? Read the [Quick Start Guide](#) and learn about everything you can do with Zotero.

Register to Take Full Advantage of Zotero

If you haven't already created a Zotero account, please take a few moments to register now. It's a *free* way to [sync and access your library from anywhere](#), and it lets you join [groups](#) and [back up your all your attached files](#).

Your username

Profile URL: <https://www.zotero.org/>

Letter, numbers, spaces

Email

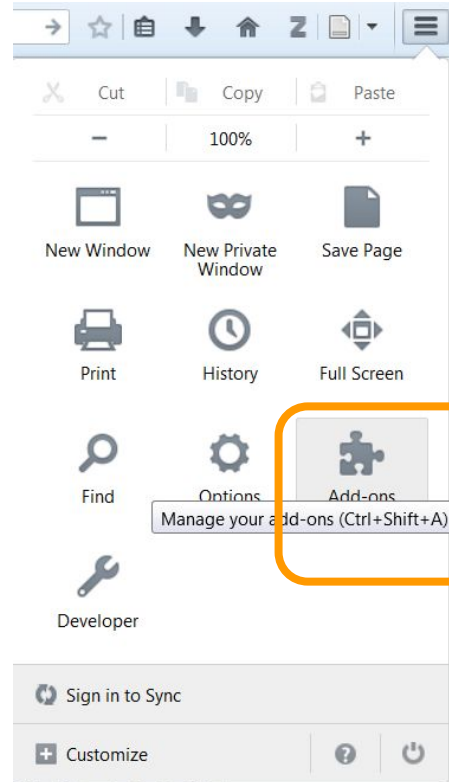
We won't tell anyone

Confirm Email

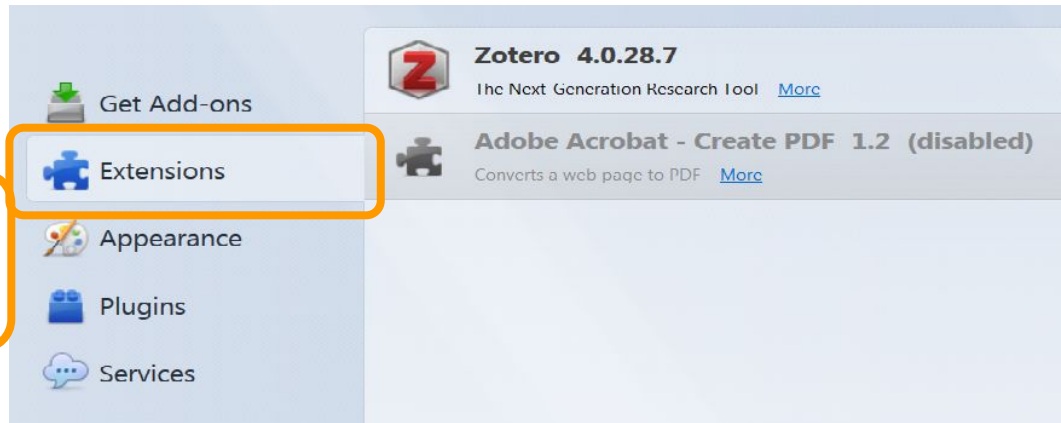
Password

At least 6 characters

Enable the Extension



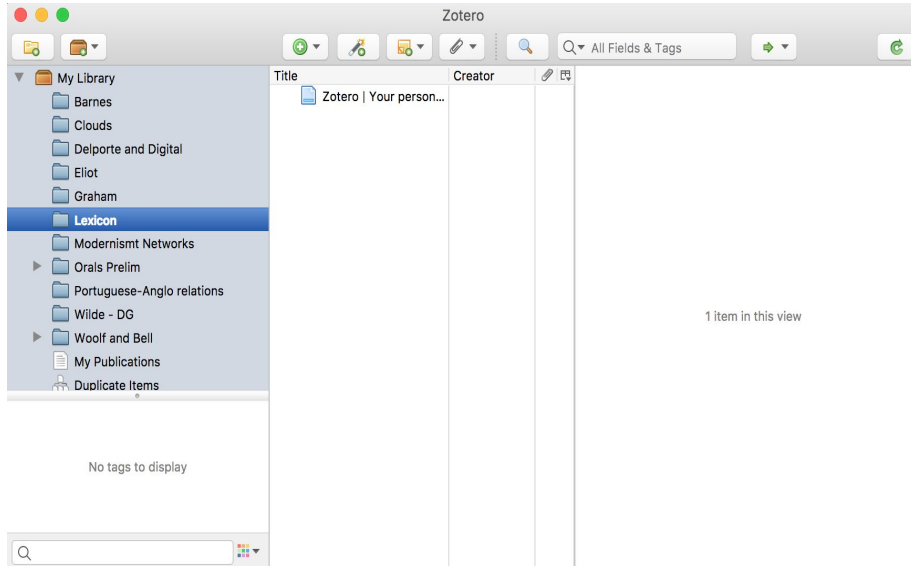
Go to the upper right hand corner of Firefox to “Add-ons,” or “Tools/More Tools”, then enable Zotero in “Extensions.”



Open Zotero

First:

It will be under your applications, and it should look like the window below:



Second:

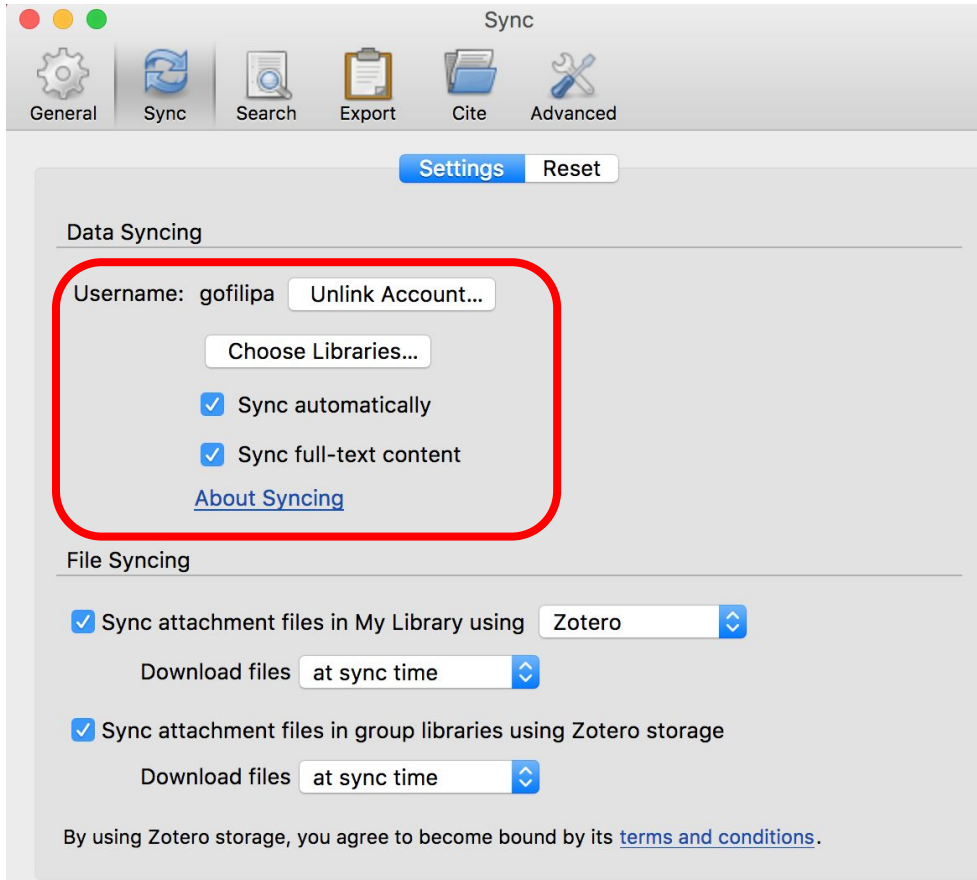
After you restart your browser, you will see the



button in the toolbar, which allows you to **SAVE** that webpage as a citation to Zotero.



Sync Your Account



1. Click on “Preferences” under File when Zotero is open.
2. Go to the “Sync” tab.
3. Fill in the info for the account you just made on Zotero, and close window.

Now you're ready to cite! Icons will appear in browser, click to add them to your library.

Okay, ready?

How are you going to get your data?

What kind of data?

- Audio / Visual
- Web Scraping
- Text Analysis
- Text Encoding
- Geocoding

Where to find it?

- online databases
 - ◆ [NYC Open Data](#) (can visualize here too!)
 - ◆ [DPLA \(Digital Public Library of America\)](#)
 - ◆ [HathiTrust Digital Datasets](#)
- institutional repository/collection
 - ◆ [NYPL Digital Collections](#)
- other suggestions?

Capturing it with: Audio / Visual

Also: **Take a picture // make a recording // parsing**

uses hardware, software, or even programming language to produce audio or visual content, **OR** uses software or programming language to parse audio or visual content into data.

→ [Kelsey Chatlosh's blog post](#) about her GCDI workshop on "Sound"

Tools and Methods:

→ Downloading/Scanning Photographs

- ◆ to gather/produce digital images of analogue/digital content. See [GIMP](#) for photo editing.

→ Sound Recording and Analysis

- ◆ [Audacity](#)
- ◆ [Oral History Metadata Synchronizer](#)

Sample Project: [ACT UP Oral History](#)

Capturing it with: Web Scrapping

uses programming language to gather specific content from static websites or social media, including image and text.

Useful URLs:

- [Michelle Johnson-McSweeney's Digital Fellows workshop and online tutorial](#)

Tools and Methods:

- **API:** Application Program Interface:
 - ◆ Functions or procedures that allow you to request data from apps
 - ◆ Works with Twitter, Google Maps, Instagram, eBay
- **TAGS:** scraping Twitter to Google Sheets
- **Scrapy:** open source framework for data extraction from websites
- **Ethics of Scrapping**

Sample Project: [No Homophobes](#) (uses scraping to capture homophobic speech on Twitter)

Capturing it with: Text Analysis

Also: [Topic Modeling](#) // [Text Mining](#)

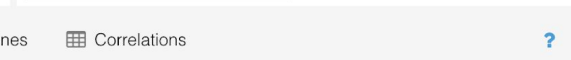
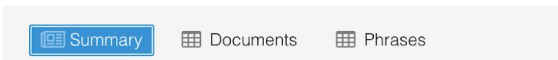
uses programming languages or software to extract the data, using parameters that you set, from a textual corpus.

Useful URLs:

- [Ted Underwood's Seven Ways Humanists use Text Analysis](#)
- Tutorial on [using MALLET for Topic Modeling](#)

Tools and Methods:

- **[MALLET](#)**: Java-based package (cluster of code)
 - ◆ statistical natural language processing, document classification, clustering, topic modeling, information extraction, etc
- **[Python](#)**: multi-use programming language
 - ◆ **[NLTK \(Natural Language Toolkit\)](#)** collection of libraries for text analysis
 - ◆ **[Intro to Python workshop](#)** next week!
- **[Voyant Tools](#)**: web-based text application, copy and paste your text for immediate analysis



Voyant Tools, Stéfan Sinclair & Geoffroy

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Capturing it with: Text Encoding

Also: **Markup**

uses markup language (usually XML) to encode a text for specific details which often have an interpretive element, or for display in online environments.

Useful URLs:

- [“What is XML and Why Should Humanists Care?”](#)
- [Zotero library for TEI tutorials, examples, models, publications](#)
- My own [TEI workshop!](#)

Tools and Methods:

- **XML**: eXtensible Markup Language
 - ◆ HTML’s more flexible cousin, which allows you to write your own tags
 - hence, need for TEI
- **TEI**: Text Encoding Initiative, a standardized system of markup in XML for encoding texts.
 - ◆ archival/museum standard for digital texts
- **Sample Project: Shelley-Godwin Archive**

Chapter 2
Those events which materially influence our fu-
ture destinies are often ^{derive their origin from a} caused by slight or tri-
vial occurrences. ^{statement of the} Strange as the simple fact
may appear my fate had been Chemist Natu-
ral philosophy has is the genius that has
regulated my fate I ^{desire} wish their ^{therefore} in this account
of my early years to state those facts which
led to my ^{first acquisition} pursuit of that science. When
I was eleven years old we all went on a party
of pleasure to ^{the baths near Thonon} Thonon and were confined there
by being obliged by the rain and the inclemen-
cy of the weather obliged us to remain a day
confined to the inn. In this house I chanced
to find a few volumes of the Works of Corne-
lius Agrippa. And I opened it with apathy
the theory that he attempted to demonstrate and the wonderful facts that
light dawned upon my mind and I com-
bouncing with joy I communicated my
discovery to my father. I cannot help here remark-
ing the many opportunities ^{parents possess} parents have
of directing the attention of their pupils to
useful knowledge, which they sitting under
my father looked carefully at the title page
of my book - it said Al. Bombardieri
Agrippa. My dear father do not waste
your time upon this it is said teach-
ing instead of this remark or rather excla-
mation my father had taken the pains to
read I saw that the principles of

Chapt. 2

Those events which materially influence our fu-
ture destinies are often ^{derive their origin from a} caused by slight or tri-
vial occurrences. ^{statement of the} Strange as the simple fact

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the theory that he attempted to demonstrate and the wonderful facts that
but continued to read with enthusiasm. A new
^{he relates that soon changed this feeling into} light dawned upon my mind and I com-

bouncing with joy I communicated my
discovery to my father. I cannot help here remark

ing the many opportunities ^{instructors possess} parents have

[illegible]

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  <graphic url="http://shelleygodwinarchive.org/images/ox/ms">  
    <zone type="library"><line>1</line></zone>  
  
    <zone type="main">  
      <handShift medium="pen" new="#mws"/>  
      <line rend="center"><milestone unit="tei:head" spanTo="#">  
        <line>Those events which materially influence our fu</li  
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      <line>ral philosophy <del rend="striketthrough">has</del>  
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        <del rend="striketthrough">pursuit</del>  
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Those events which materially influence our future destinies are often caused by slight or trivial occurrences. Strange as the simple fact may appear my fate had been Chemist Natural philosophy has is the genius that has regulated my fate I wish therefore in this account of my early years to state those facts which led to my love pursuit of that science. When I was eleven years old we all went on a party of pleasure to Thonon and were confined there by the inclemency of the weather obliged us to remain a day confined to the inn. In this house I chanced to find a few volumes of the Works of Cornelius Agrippa. And I opened it with apathy the theory that he attempted to demonstrate and the wonderful facts that but continued to re with enthusiasm. A new light dawned upon my mind and I bounding with joy I communicated my discovery to my father. I cannot help here remarking the many opportunities parents have of directing the attention of their pupils to useful knowledge, which they utterly refuse my father looked carefully at the title page of my book - he and said Mr. Somers Agrippa's My dear Victor do not waste your time upon this it is old trash. If instead of this smooth or rather exclamation my father had taken the pains to peruse the principles of

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instructors possess

ing the many opportunities parents have

Capturing it with: Geocoding/tagging

Geocoding uses software to transform non-coordinate identifiers (such as landmarks) into geospatial coordinates

[**Geotagging** adds GIS metadata to text, image, or other digital content.]

Useful URLs:

- [“Finding the Right Tools for Mapping”](#)
- [Javascripting English Major](#): course on using Leaflet

Tools and Methods:

→ [QGIS](#)

- ◆ free, open-source version of [ArcGIS](#) with many of the same features. Create, edit, visualise, analyse and publish geospatial information.

→ [Leaflet](#)

- ◆ open source Javascript library for adding interactive maps to a webpage, works with mobile.

→ Sample Project: [Mapping Arts, NYC](#) by Data for the Public Good



Mapping Arts NYC is a project that explores the geography and representation of arts and culture in New York City over time. This website represents a work in progress and the culmination of a semester-long effort to tell a story about ten years of the arts in NYC.

The team worked with open data, city agencies, and not for profit organizations to compile, map and visualize up to a decade of data around the changing cultural landscape of New York City. Maps include information about artists and arts firms, federal and state arts funding, donations, capital spending on arts, and other forms of public support for producing and accessing the arts.



Mapping Arts NYC

Click on a zipcode for more information

Neighborhood: North Corona

Zip: 11368

Population: 109,931

Independent Artists: 1

Art Firms: 572

Arts Organizations: 6

Federal Dollars: 679,871

State Dollars: 355,800

Rank: 171

Source: NASAA; State Arts Agency Final Descriptive Reports; US Census Bureau; NYC Open Data; Nexis Uni; IRS 990s; NEA; IMLS



<https://www.redbubble.com/people/shappie112/works/23629197-david-s-pumpkins-any-questions-ii?p=poster>

Analyzing / Displaying Data

Is this a necessary step? Perhaps not always?

*Should we draw a distinction between “**analyze**” and “**display**?” Why or why not?*

~graph / data visualization as argument, demonstration, or image that must be explicated?

Display / Analyze it: Visually

Also: [Data Visualization, Mapping](#)

Maps dataset as a network, graph, or chart.

Consider the role of your tools in creating your visual argument, as well as your audience.

Further Reading:

Drucker, Johanna. “[Humanities Approaches to Graphical Display](#).” *DHQ*. 5:1 (2011)

- “Tools carry with them assumptions of knowledge as observer-independent and certain, rather than observer co-dependent and interpretative... we need a humanities approach to the graphical expression of interpretation.”

→ Excel or [Google Sheets](#)

- ◆ can generate most basic graphs and charts

→ [Gephi](#)

- ◆ open-source visualization platform
- ◆ use **Sigma**, a Javascript library, to render results interactively in a web browser.

→ Sample Project: [Quantifying Kissinger](#)

- ◆ computational analysis of the National Security Archive’s Kissinger collection of correspondence.

Quantifying Kissinger:

→ Selected Topics Models:

- ◆ North-South-Thieu-Vietnam
- ◆ Saudi-Arab-Oil-Russians
- ◆ Israel-Asad-Egypt-Syria
- ◆ Don-told
- ◆ Soviet-Dobrynin
- ◆ Southern-Europe
- ◆ Greece-Turkey
- ◆ Nuclear-Weapons
- ◆ Congress-National



[Video of time-lapse version](#)

Display / Analyze it: Narratively

Also: **Digital Collection, Digital Exhibit, Digital Edition, Web Site, or even essay / article!**

Bring disparate digital (or digitized) materials into a cohesive digital resource.

Enable digital communication of ideas between communities for teaching, collaborating, and learning.

Narrative is one of the most powerful and complex tools we have!

→ Omeka

- ◆ open source platform for exhibitions (library, museum, archives, and scholarly collections)
- ◆ Sample Project: [Preserve the Baltimore Uprising](#)
- ◆ Stay tuned for GCDF workshop on Omeka!

→ CMS (Content Management System)

- ◆ [CUNY Academic Commons](#)
 - WordPress-based

→ Manifold

- ◆ open source platform for scholarly publishing. Good for sharing research, teaching, writing in a collaborative environment.



<https://www.redbubble.com/people/shappie112/works/23629197-david-s-pumpkins-any-questions-ii?p=poster>

Reflect + Assess

Take five minutes and

consider a

- method of displaying or analyzing
- specific tool
- example of a visualization project
- or any hyperlink

from the previous slides or your own web browsing

and address any of the following:

What does the method of display/analysis **argue**?

How does it **argue**?

What does the method / tool / project make **invisible**?

Is the method / tool **effective**? Why or why not?

Share your results with your partner and/or the class.

Ready for More? Resources at the GC

[GC Digital Fellows Office Hours](#) (Alternating Mondays (4-6pm) and Wednesdays (5-7pm), in the Digital Scholarship Lab, Room 7414). We always welcome interested and curious folks at any stage of their project

Workshops offered by the [GC Digital Fellows](#), [ITP Program](#), the GC [Library](#), and the [Futures Initiative](#)

[GC Digital Initiatives Website](#) and [GC Events and Workshop Calendar on the Commons](#)

Debrief.

- **developed** a basic context for DH
- **explored** and **critiqued** methods, tools, and resources
- **created** a “toolbox”, a working resource in Zotero

Please take a moment to share your feedback:

cuny.is/gcdievals

And keep in touch!

- Follow GCDI on Twitter: [@cunygcdi](https://twitter.com/cunygcdi)
- Follow the GC Digital Fellows on Twitter: [@digital_fellows](https://twitter.com/digital_fellows)
- Follow the [#digitalGC](#) hashtag on Twitter
- Follow the GC Digital Fellows blog, Tagging the Tower:
digitalfellows.commons.gc.cuny.edu
- Contact the fellows at digitalfellows.commons.gc.cuny.edu/contact-us/
- Drop-in to the Digital Scholarship Lab **Open House** hosted twice per semester, or attend PUG, Events, or Workshops!

The Tools of DH

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Slides:

<https://tinyurl.com/y8w2uo74>

