

# Taking scholarly note-taking to the Web

Michael Buckland  
University of California, Berkeley

Ryan Shaw  
University of North Carolina at Chapel Hill

the past

1. Documentary editing
2. Current state of Editors' Notes

3. Roadmap: exploiting linked data
4. Roadmap: hibernating scholarship

the future

# Documentary editing

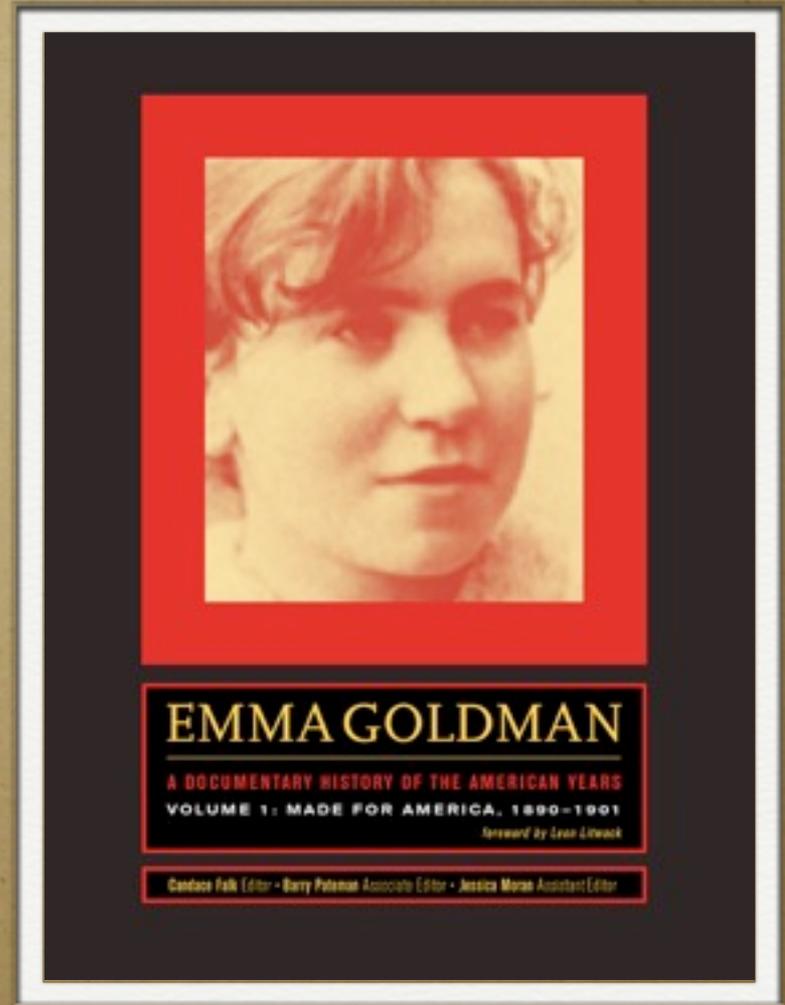
- Editors prepare collections of documents: letters, articles, diaries, essays, etc.
- Printed volumes provide **context** for better understanding subjects' experiences and general milieu through footnotes, images, chronologies, articles

# Documentary editing: workflow

1. Gather documents
2. Contextualize select items
3. Publish final product
4. Repeat as funding allows

Case study:

Emma  
Goldman  
Papers



**To WALTER CHANNING**

*New York, 18 October 1902*

DEAR SIR

I am in receipt of your note of the 18th inst. and in reply would like to say this, I do not know whether Czolgogz<sup>1</sup> was an Anarchist, nor have I the right to say that he was not. I have not known him sufficiently to be acquainted with his political Views. In fact no one has, including Mr Isaak and Mr Shilling<sup>2</sup> and if they have expressed opinions either for or against his being an Anarchist they have done an injustice to the young man, who died such a brave death, as you and you, dear Sir will be guilty of the same offence if you attempt to prove that Czolgogz was not or was an Anarchist. No one can with certainty say, that the man was an Anarchist, since he was but little known, and since he has never proff made a public statement to that affect. Still less can one prove that he was not one; there is nothing in his act by which one can deny him the right of being an Anarchist. It is true, the Philosophy of Anarchy does not teach Invasion, but it does teach self defence, and Czolgogz's act was an act of self-defence and nothing else. You may question this, since Czolgogz was not personally attack by McKinley, quite true, but Czolgogz belonged to the Oppressed, to the Exploited and Disinherited Millions, who lead a life of darkness and despaire owing to those, of whom McKinley was one, therefore he was personally attacked by the ex President, or rather he was one of the Victims of the McKinley regime and those McKinley catered to. The act of Czolgogz may have been impractical or inopportune, I will not argue this point now, but I insist it had nothing unanarchistic about it, since, as I said before Anarchism claims the right of Defence against Invasion and Aggression of every shape and form and no one, who has his eyes open will and can deny that those in Power are the Invadors, and McKinley certainly was one of them. I send you with this, 2 Articles<sup>3</sup>

1. Leon Czolgosz, who assassinated President McKinley at the world's fair in Buffalo in September 1901, was judged sane before his trial by three psychiatrists for the prosecution and two psychiatrists for the defense. Later, Tufts University Medical School psychiatrist Walter Channing assessed Czolgosz as mentally unstable, based strictly on the assassin's personal history, in a October 1902 article published in the *American Journal of Insanity*.
2. Cleveland anarchist Emil Schilling had been Czolgosz's first contact in the anarchist movement in May 1901, lending him reading materials and answering his questions. According to Schilling they were estranged even before Czolgosz's arrival in Chicago. Abe Isaak, editor of *Free Society*, introduced Czolgosz to EG in Chicago; Isaak found Czolgosz's behavior suspicious.







|  | Size     | Type                    | Date Modified       |
|--|----------|-------------------------|---------------------|
| es                                     | 30 items | folder                  | 2011-11-07 10:11:13 |
| alia                                   | 6 items  | folder                  | 2010-09-27 13:50:28 |
| illy Sunday Bio.wpd                    | 19.2 kB  | WordPerfect document    | 2003-02-13 10:00:36 |
| rosser2.wpd                            | 34.8 kB  | WordPerfect document    | 2003-04-24 12:07:34 |
| rosser.wpd                             | 21.7 kB  | WordPerfect document    | 2003-04-01 16:47:58 |
| ible of Political Prisoners.wpd        | 135.0 kB | WordPerfect document    | 2006-08-02 13:28:48 |
| he Dominant Idea by De Cleyre          | 59.8 kB  | WordPerfect document    | 2004-01-08 10:59:00 |
| omen Political Prisoners               | 4.3 kB   | WordPerfect document    | 2003-07-31 11:28:40 |
|  | 6 items  | folder                  | 2010-09-27 13:50:27 |
| uford Deportee Bios.doc                | 49.2 kB  | Microsoft Word Document | 2008-05-01 20:29:14 |
| uford info request.doc                 | 22.0 kB  | Microsoft Word Document | 2003-04-23 13:24:52 |
| uford leads.doc                        | 22.5 kB  | Microsoft Word Document | 2003-04-15 13:40:16 |
| ssengers on the Buford.doc             | 82.9 kB  | Microsoft Word Document | 2003-11-06 09:44:16 |
| rovincetownplayersChron.wpd            | 13.8 kB  | WordPerfect document    | 2003-12-11 14:53:58 |
| WRD0000.tmp                            | 33.3 kB  | Microsoft Word Document | 2003-03-12 13:32:34 |
| tany                                   | 3 items  | folder                  | 2011-10-14 15:33:20 |
| ol                                     | 13 items | folder                  | 2011-10-14 15:43:55 |
| merican Consular Practice.wpd          | 11.2 kB  | WordPerfect document    | 2004-12-07 11:02:32 |
| chofen.wpd                             | 9.6 kB   | WordPerfect document    | 2004-09-10 12:15:30 |
| stleton notes.wpd                      | 22.3 kB  | WordPerfect document    | 2004-04-13 11:48:54 |
| izenship.wpd                           | 11.5 kB  | WordPerfect document    | 2003-04-15 10:42:42 |
| ora Bennett Stephenson.doc             | 20.0 kB  | Microsoft Word Document | 2004-10-04 11:32:48 |
| arle IMDB.wpd                          | 54.7 kB  | WordPerfect document    | 2004-03-29 15:00:50 |
| erdinand P Earle Notes.wpd             | 16.6 kB  | WordPerfect document    | 2004-04-01 13:02:42 |
| ehill notes.wpd                        | 2.4 kB   | WordPerfect document    | 2004-04-22 12:11:28 |
| agull Notes.wpd                        | 5.7 kB   | WordPerfect document    | 2004-04-05 13:48:12 |
| he Blast.doc                           | 22.0 kB  | Microsoft Word Document | 2003-03-05 15:14:12 |
| hat I believe versus Anarchism.wpd     | 4.3 kB   | WordPerfect document    | 2003-02-05 14:14:20 |
| hat I believe versus other sources.wpd | 3.3 kB   | WordPerfect document    | 2003-02-12 13:52:40 |
| IBVSOTH.WPD                            | 4.9 kB   | WordPerfect document    | 2003-02-12 15:51:20 |
| stie                                   | 4 items  | folder                  | 2010-09-27 13:50:26 |
| stina                                  | 3 items  | folder                  | 2010-09-27 13:50:26 |

"Agnes" selected

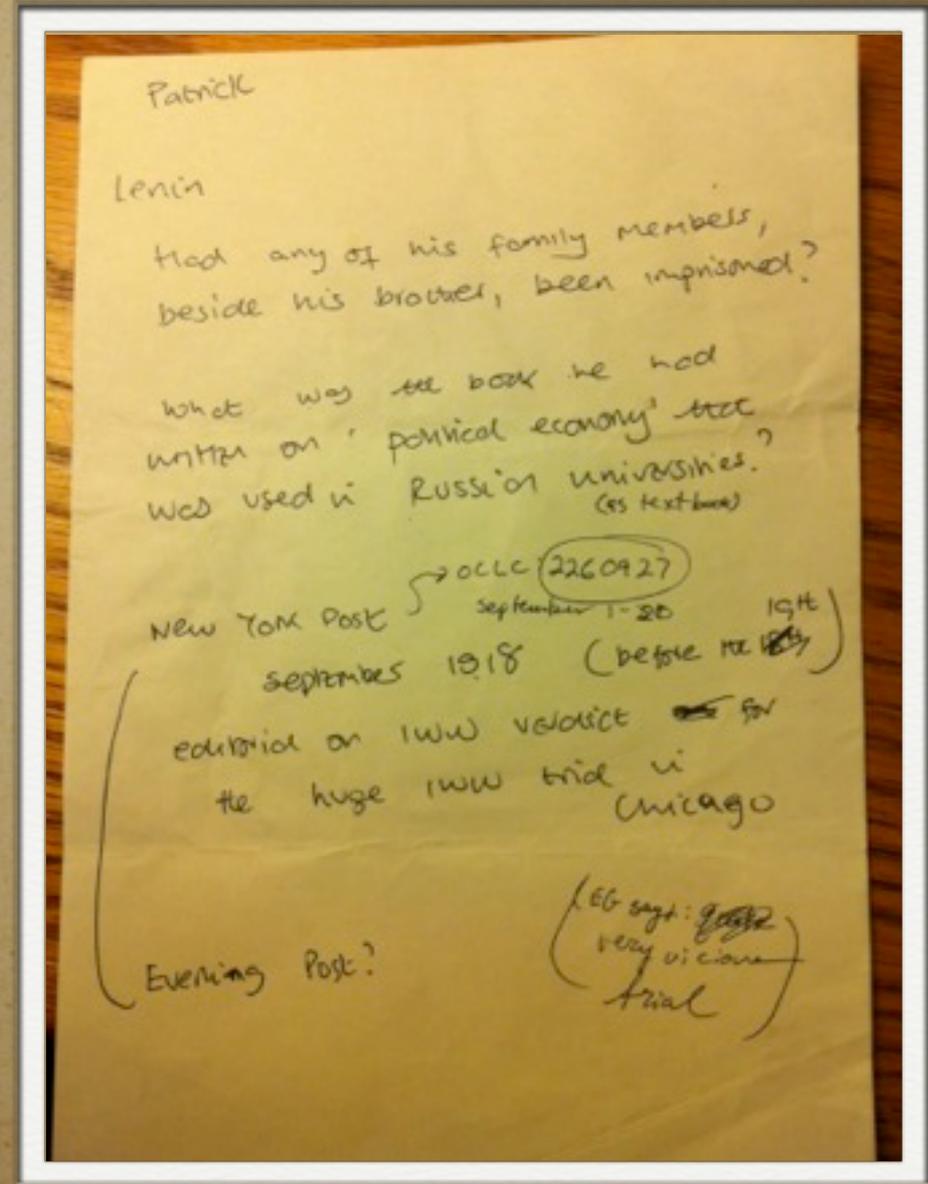
Patrick—

Lenin:

Had any of his family members beside his brother, been imprisoned?

What was the book he had written on 'political economy' that was used in Russian Universities?

New York (Evening?) Post, September 1918 editorial on IWW verdict for the huge IWW trial in Chicago.



Patrick

Lenin

Had any of his family members, beside his brother, been imprisoned?

What was the book he had written on 'political economy' that was used in Russian Universities?  
(as textbook)

New York Post → OCLC 2260927  
September 1-28 1918 (before the trial)

editorial on IWW verdict for the huge IWW trial in Chicago

Evening Post?

(EB says: quite very vicious trial)

Sources consulted,  
notes taken based on  
findings

Notes stored in a  
Word documents?  
Yellow notebook?  
Email?

Negative conclusion  
reached to question,  
but no one will ever  
know

Lenin, Vladimir Ilich [V.I. Ulyanov] (1870-1924) Russian revolutionary leader and founder of the Bolshevik party, a faction of the Russian Social Democratic Labor Party formed in 1903. Lenin grew up east of Moscow in the city of Simbirsk in a relatively wealthy family. When he was a teenager, his brother was executed for his role in plotting to kill Tsar Alexander III. While studying to become a lawyer, Lenin began his involvement in radical and Marxist circles in the late 1880s and 1890s. By the last years of the nineteenth century, he was a prolific writer and published many newspapers and articles encouraging revolution in Russia. To avoid being punished for his activities by the Tsarist police, Lenin spent much of the decades preceding the 1917 Russian revolution in exile in London, Paris, Geneva, Zurich, and other European cities, working with other émigrés to encourage revolution in Russia. After the overthrow of the Tsar in February 1917, Lenin planned his trip back to Russia, arriving in Petrograd in April. His return was controversial because his train from Switzerland was allowed to pass through Germany, one of Russia's enemies in World War I. This fact led many to believe that Lenin was

# Problems

- Published volumes & necessary work are expensive
- Lack of space for all footnotes
- Much of research done is either glossed over in footnotes or not included at all
  - Fact checking
  - Falsification or dead ends
  - Tangential biographical details
- Preservation & legacy

1. Documentary editing

**2. Current state of Editors' Notes**

3. Roadmap: Exploiting linked data

4. Roadmap: Hibernating scholarship

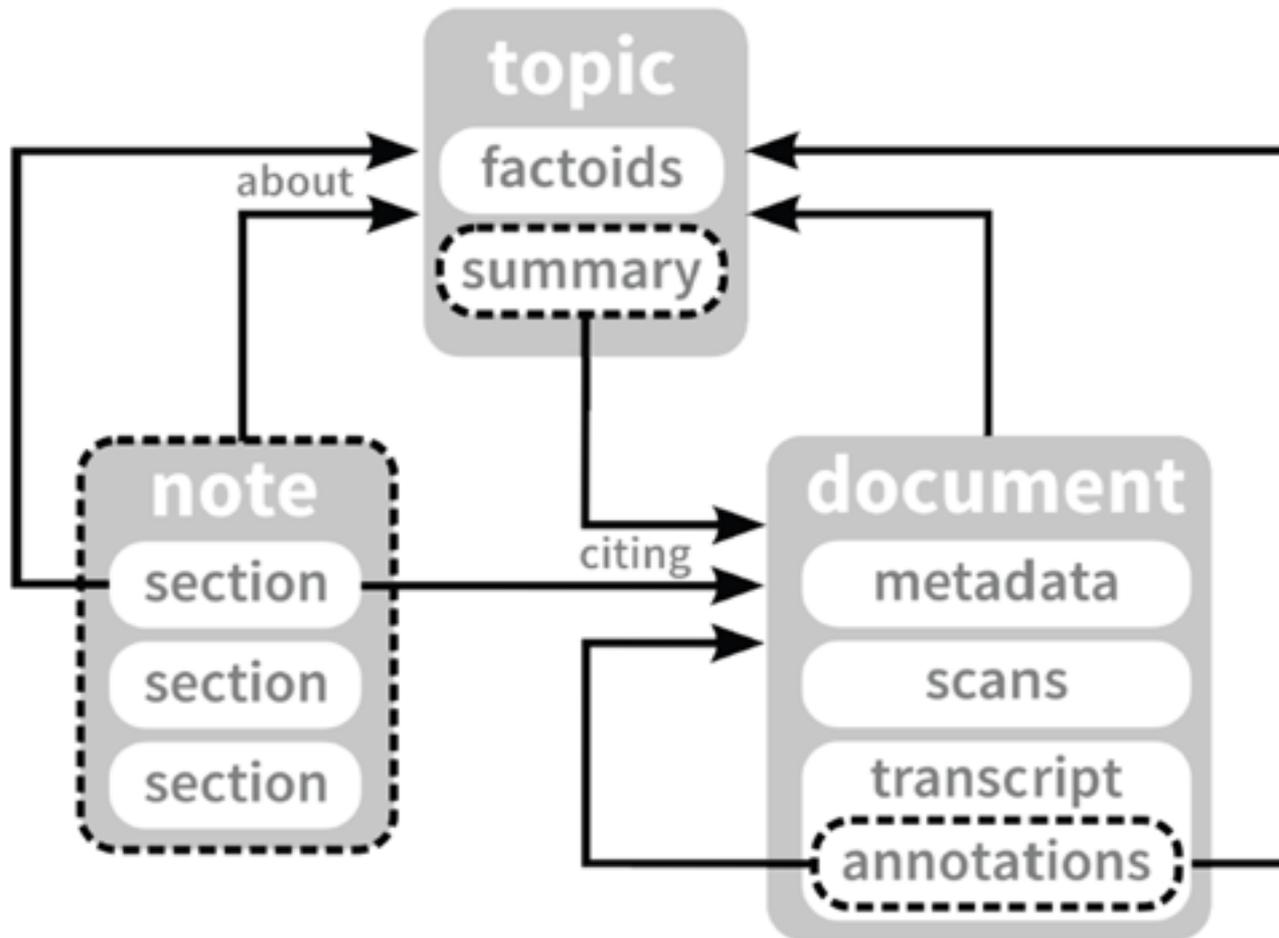
# Editors' Notes

- <http://editorsnotes.org/>  
<http://ecai.org/mellon2010/>
- Finding a safe place for the “debris” of research
- Improving return on investment for documentary editing projects
- Central focus on changing work practices of editors and researchers rather than digitizing what already exists

# Design principles

- Minimal amount of “friction” for researchers
- Flexibility for different work habits
- Consistency in data models
- Existing technology wherever possible
- Adherence to web standards

original editorial content



Data model

# Documents

Zotero for  
document metadata

High quality,  
zoomable scans

Transcripts in  
HTML with  
interface to  
annotate passages  
of text

The image shows a screenshot of the Zotero 'Add document' form. The form is titled 'Add document' and features a text area at the top containing the text 'Emma Goldman to Alexander Berkman, December 12, 1915, reel 4, Emma Goldr'. Below the text area are two buttons labeled 'B' and 'I'. The form is organized into a table with the following fields:

| Item type   | Letter            |
|-------------|-------------------|
| Title       |                   |
| Author      | Goldman           |
| Recipient   | <u>Berkman</u>    |
| Abstract    |                   |
| Type        |                   |
| Date        | December 12, 1915 |
| Language    |                   |
| Short Title |                   |

At the bottom of the form, there is a small text snippet: "HELEN KELLER FINDS DEFENSE PLANS BAD: The New York Times, December 26".

# Topics

Primary method  
of indexing items

Classified by type

Interface for  
clustering and  
merging

### Change topic

Name

Type

Related topics

Lenin, Vladimir Ilich (1870-1924)

Article

**B** **I** **P** **H1** **H2** **H3**

Russian author, lawyer, crime reporter, editor, and photographer. All articles about the purgative power of World War I. By summer of the Destruction. "Although Andreyev's articles addressed international v the war was to eradicate an evil, he rejected the Brest-Litovsk pea pamphlet in early 1919 entitled S.O.S. (ed. Russian Libera! Comm world to organize themselves and break Bolshevik power. In S.O.S. emphasizes his belief in the "nobility" of the people. Andreyev inter suddenly of a brain hemorrhage. His works include: The Seven Who

**Citations**

Carr, E. H. A History of Soviet Russia. London: Macmillan, 196

# Notes

- Most difficult part of the project
- Notes are messy, and purposefully so
- How to model something so chaotic & idiosyncratic?
- Goals: Easy to use; flexible but consistent

# Notes

Description

Status: Open, closed, hibernating

Assigned users

Sections

Citation with optional notes

Stored as HTML

Revision history

## Sanger and the Third ICPP

Unlike the coverage in secondary sources, planning on the Third ICPP started far earlier than De See Watumull and the Third ICPP and British and Third ICPP for more. Focus in these notes is

Add section:

 Sanger, Margaret, letter to Katharine Dexter McCormick, Jan. 8, 1951 [MSM S33:712]

 Sanger, Margaret letter to Pearl S. Buck, Jan. 9, 1951 [MSM S33:717]

**B** *I* **P** **H1** **H2** **H3**   

Notes that if they had been able to keep the East-West going, it would have made a great contribution and blundering, not only in Washington but wherever our leaders are, and of course most frightful civic affairs given to military leaders. We seem to learn nothing from history and one would think make our military leaders hesitant to build up a powerful military organization. Germany did so on their knees."

"There is a possibility of our having a population Conference in the Orient somewhere in 1952 from India recently tells me many of the 65 clinics that I organized in 1936 are still going. It will be the health groups to that information as well as supplies will not have to be limited to people in ahead and I am so happy to feel well again."

 Sanger, Margaret letter to Eleanor C. Jenkins, Jan. 9, 1951 [MSM S33:719]

 Bush, Dorothy letter to Margaret Sanger, Jan. 21, 1951 [MSM S33:768]

# Examples

- Aftermath of Sanger's trip to India
- Test Cases during Reconstruction
- "Address at the Kate Richards O'Hare Testimonial Dinner"

# What changed for researchers?

Free text



Structured blocks

Implicit people,  
places, events



Explicit linkable  
entities

Filing cabinets



Open access

# Benefits

- Connections linking topics are freed from the minds of editors & researchers and indexed for anyone to see
- Standardized records of work can easily be revisited from within a project or from outside
- New way of seeing the outer edges of humanities research
- Evidence of intense, often messy, scholarship behind concise, clean footnotes

# Open source

- <https://github.com/editorsnotes>
- Django web framework
- PostgreSQL database
- Haystack for full-text searching
- Zotero for document description
- Google Refine for duplicate detection
- Mozilla Persona for ID management

1. Documentary editing

2. Current state of Editors' Notes

**3. Roadmap: exploiting linked data**

4. Roadmap: hibernating scholarship

# Desired enhancements

- Better sorting, filtering and aggregating of notes
- Improved naming control and discoverability
- Temporal, geospatial, and relational visualization

# Adding structured data

- 3 approaches:
  - Schema-based authoring
  - Automatic extraction
  - Human-in-the-loop reconciliation



Goldman, Emma, 1869-1940

Goldman, Emma

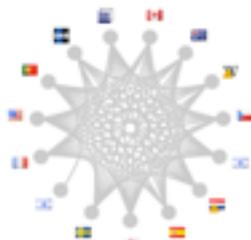
1869-1940 ,nra ,s771a

VIAF ID: 36377930 (Personal)

Permalink: <http://viaf.org/viaf/36377930>

Preferred Forms

- 100 1 0 2a Goldman, Emma
- 100 1 \_ 2a Goldman, Emma, bd. 1869-1940
- 100 1 \_ 2a Goldman, Emma, bd. 1869-1940
- 100 1 \_ 2a Goldman, Emma, bd. 1869-1940
- 100 1 \_ 2a Goldman, Emma
- 100 1 \_ 2a Goldman, Emma, bd. 1869-1940
- 100 1 \_ 2a Goldman, Emma, bd. 1869-1940
- 100 1 \_ 2a Goldman, Emma, bd. 1869-1940



## About: Emma Goldman



An Entity of Type : [agent](#), from Named Graph : <http://dbpedia.org>, within Data Space : [dbpedia.org](http://dbpedia.org)

Emma Goldman (June 27 1869 – May 14, 1940) was an anarchist known for her political activism, writing and speeches. She played a pivotal role in the development of anarchist political philosophy in North America and Europe in the first half of the twentieth century. Born in Kovno in the Russian Empire, Goldman emigrated to the US in 1895 and lived in New York City, where she joined the burgeoning anarchist movement.

| Property                             | Value   |
|--------------------------------------|---|
| <a href="#">dbpedia-owl:abstract</a> | <ul style="list-style-type: none"> <li>Emma Goldman fou una anarquieta coneguda p desenvolupament de la filosofia anarquieta de les feministes en el pensament anarquieta. D'origen part del creixent moviment anarquieta després i renom i escriptora de filosofia anarquieta i anti-socials i lluita sindical. Ella i el també escriptor</li> </ul> |

Home About Search

## Emma, 1869-1940

Henry G. (Henry Garfield), 1881-1970 | Content, Harold A. (1887-1944) | Havel, Hip

Article Related Notes & Queries (2) Related Documents (226)

### Basic Biographical Information

### Sources

- Falk, Candace. "Love, Anarchy, and Emma Goldman." (New York: Holt, Rinehart and Winston, 1984).
- [222] In 1914, Goldman publicized and sold copies of *The Woman Rebel* during her lecture tours.
- [243] In 1916, Goldman was arrested in NYC for lecturing about birth control.
- [245] Given the choice between a fine of \$100 or fifteen days in jail, Goldman opted for the jail time.



## British National Bibliography

At the time, this dataset is not guaranteed to be stable; its contents may change at any time without warning.

### Goldman, Emma, 1869-1940

<http://brbl-dia.library.yale.edu/Person/GoldmanEmma1869-1940>

|             |  |
|-------------|--|
| event       | 1869                                     |
|             | 1940                                     |
| family name | Goldman                                  |
| given name  | Emma                                     |
| has created | A woman without a country / Emma Goldman |
|             | Living my life / Emma Goldman            |



## Personensuche

Informationen zu 480.475 Personen mit Wikipedia-Artikel

Suche  
Vorname  
Runde Geburtstage  
Runde Todestage  
Über diese Seite

### Emma Goldman

US-amerikanische Anarchistin und Friedensaktivistin

**Geboren**  
27. Juni 1869, Kovno (Kaunas)

**Gestorben**  
14. Mai 1940, Toronto

**Alter**  
70j

**Name**  
Goldman, Emma

**Staat**  
 USA

**<sameAs>**  
interlinking the Web of Data

The Web of Data has many equivalent URIs. This service helps you to find co-references between different data sets. Enter a known URI, or use Sindice to search first.

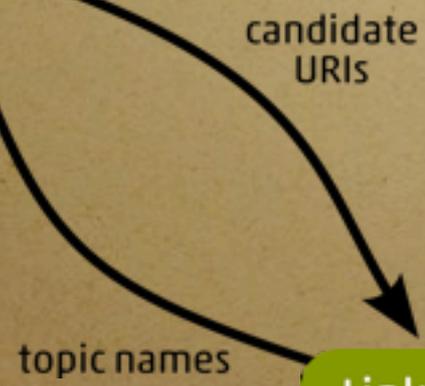
Freebase  
<http://rdf.freebase.com/>

DBpedia  
<http://dbpedia.org/>

Virtual International Authority File  
<http://viaf.org/>

Deutsche Nationalbibliothek  
<http://d-nb.info/>

New York Times  
<http://data.nytimes.com/>



Linked Data Harvester



# Goldman, Emma, 1869-1940

Related topics: Havel, Hippolyte (1869-1950)

Article

Discussion

Related Notes & Queries (1)

Related Documents

Facts

From [VIAF](#) about [Goldman, Emma](#):

**name** [Goldman, Emma](#) ✓ ✕ [Goldman, Emma, 1869-1940](#) ✓ ✕ [Goldmann, Emma, 1869-1940](#) ✓ ✕ [Gol'dman, Emma 1869-1940](#) ✓ ✕ [Goldmann, E. 1869-1940](#) ✓ ✕ [Górudoman, Ema, 1869-1940](#) ✓ ✕ [אמנוע, גאמל'אג](#) ✓ ✕ [המא, גמל'אג](#) ✓ ✕

**date of death** [1940](#) ✓ ✕

**type** [Person](#) ✓ ✕ [Person](#) ✓ ✕

**date of birth** [1869](#) ✓ ✕

From [Freebase](#) about [Emma goldman](#):

**date of death** [1940-05-14](#) ✓ ✕

**series written (or contributed to)** [Emma Goldman: A Documentary History of the American Years](#) ✓ ✕

**country of nationality** [United States of America](#) ✓ ✕

**ethnicity** [Ashkenazi Jews](#) ✓ ✕ [Jewish people](#) ✓ ✕

**cause of death** [Stroke](#) ✓ ✕

# Lessons learned

- Possible to automatically harvest relevant linked data from libraries and other institutions
- Editorial control over the harvested data needs to be better integrated into the note-taking process
- Did not adequately demonstrate the benefits of structured data
- Do not simply aggregate and edit linked data—need to usefully exploit it to researchers' benefit.

# In-process reconciliation

Editors create topics to label and index their notes; later reconciled to external identifiers in a separate batch process.

**Old**



Editors fluidly create, link to, and reconcile topics **within the note-taking process.**

**New**

# Motivating structured data use

enabled storing and editing of structured data, but provided **no incentive for editors** to do this

**Old**



storing and editing structured data  
**immediately enables** sorting and filtering and creating simple visualizations

**New**

# Women Already Voters: Test Cases during Reconstruction

Related topics: Anthony, Susan B. | Burnham, Carrie S. | Chicago, Ill. | Detroit, Mich. | Gardner, Nannette B. | Huntington, Sarah M. T. | Norwalk, Conn. | Philadelphia, Pa. | Rochester, N.Y. | Santa Cruz, Calif. | Spencer, Sara J. | St. Louis, Mo. | Van Valkenburg, Ellen R. | Waite Washington, D.C. | Webster, Sarah E. | Woman Suffrage

Article   Related Notes & Queries (8)   Related Documents (66)

## Filters —

+ Item Type

— Publication Title

+ Author

+ Archive

+ Representations

### Publication Title

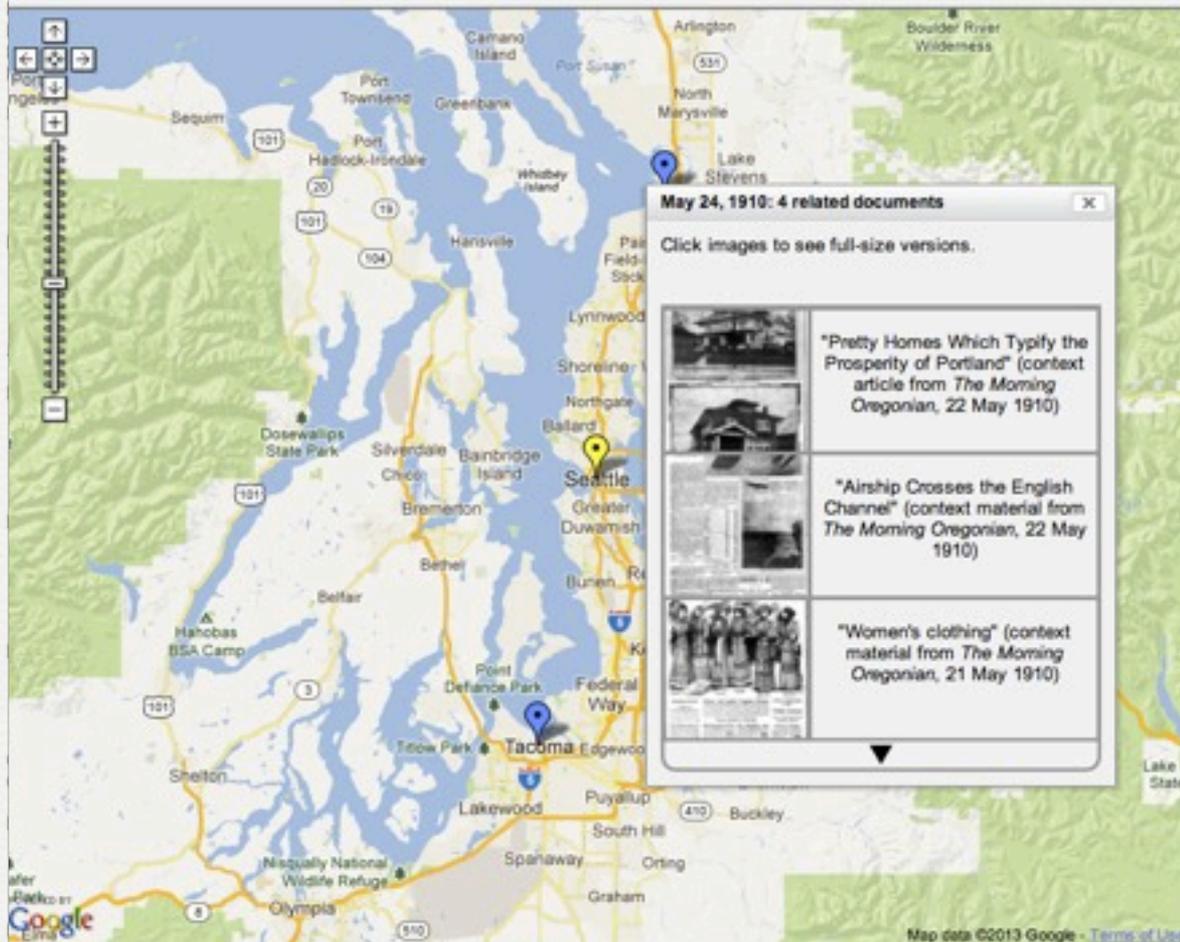
- Revolution (11)
- Woman's Journal (6)
- Chicago Legal News (4)
- Chicago Daily Tribune (3)
- Norwalk Gazette (3)
- Philadelphia Inquirer (3)
- Detroit Tribune (2)
- Albany Law Journal (2)
- New York Times (2)
- Rochester Union & Gazette (1)
- [Philadelphia Press] (1)
- Woman's Journal (1)
- Central Law Journal (1)
- Detroit Advertiser and Tribune (1)
- Santa Cruz Sentinel (1)
- New Northwest (1)
- St. Louis Dispatch (1)

# Sorting & filtering

# Sorting & filtering

- Filter and sort notes not only using the dates of the cited documents (as they currently can), but also using:
  - locations and birth and death dates of the people referenced in the notes
  - locations and dates of existence of the organizations referenced
  - locations and dates of the events referenced

# Light and Shadows: Emma Goldman 1910-1916



Search for a place Emma Goldman visited:

Seattle, Washington

**May 24, 1910**

Emma Goldman lectured on "The Crime and Sufferings of Francis Dummer" at Columbia Lodge Hall, Seattle, Washington. [4 related documents](#)

**May 25, 1910**

Emma Goldman lectured on "White Slave Traffic" at Columbia Lodge Hall, Seattle. [4 related documents](#)

**June 9, 1912**

Emma Goldman began a week long series of lectures on anarchy and socialism in Seattle, Washington. Seattle Times created furor over anarchism: "Will not some patriots save Seattle from the treasonable utterances of Emma Goldman?" 500 veterans of the Spanish War threatened to meet Emma Goldman at the train station and drive her away. Mayor refused requests to prevent Emma Goldman from speaking, but assigned police to her meetings to prevent an outbreak of trouble.

**June 11, 1912**

Emma Goldman scheduled to lecture on "Art and Revolution" at Eiler's Recital Hall, Seattle. [1 related document](#)

**June 12, 1912**

Emma Goldman scheduled to lecture on "Chatecler" at Eiler's Recital Hall, Seattle.

**June 13, 1912**

Emma Goldman scheduled to lecture on "Communism, the Most Practical Basis for Society" at Eiler's Recital Hall, Seattle.

**June 14, 1912**

Emma Goldman scheduled to lecture on "Sex, the Great Element of Creative Work" at Eiler's Recital Hall, Seattle.

**June 15, 1912**

Emma Goldman and Ben Reitman scheduled to lecture on "An

1910 1911 1912 1913 1914 1915 1916 1917



# Visualizing notes

- A note on Dhanvanthi Rama Rau & the Fourth International Conference on Planned Parenthood can become viewable as:
  - a **map** of specific locations in Stockholm and Bombay
  - a **timeline** of dates associated with the conference
  - a **network** of relationships among people and organizations.

# Expected benefits

- Working notes become repurposable
- Working notes become more discoverable
- Shift of focus from one-shot product to continuous data curation process

1. Documentary editing

2. Current state of Editors' Notes

3. Roadmap: exploiting linked data

**4. Roadmap: hibernating scholarship**

# Thank You

We are grateful for funding from:

**The Andrew W. Mellon Foundation**

**Coleman Fung**

Michael Buckland      [buckland@ischool.berkeley.edu](mailto:buckland@ischool.berkeley.edu)

Ryan Shaw              [ryanshaw@unc.edu](mailto:ryanshaw@unc.edu)

Project information    <http://ecai.org/mellon2010/>

Project site            <http://editorsnotes.org/>

Source code            <https://github.com/editorsnotes>