Place-Based Discovery:
Broadening Access with Geolocation

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Why place-based discovery?

- Geospatial data is increasingly used to find information of all kinds.
- Locational data enriches scholarship and facilitates connections to other item formats and disciplines.
- Library and museum collections can be more accessible with the inclusion of geographic terms, which have not traditionally been incorporated in cataloging and metadata standards.
- Built works frequently have identical names. Locational information serves to disambiguate St. Paul’s in Rome from St. Paul’s in New York.
Place-based digital projects at Avery Library

- Biggert Architectural Vignettes
- New York Real Estate Brochure Collection
- Seymour B. Durst Old York Library
- Built Works Registry
<table>
<thead>
<tr>
<th><strong>NEIGHBORHOOD</strong></th>
<th>Morningside Heights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BOROUGH</strong></td>
<td>Manhattan</td>
</tr>
<tr>
<td><strong>CITY</strong></td>
<td>New York</td>
</tr>
<tr>
<td><strong>ADDRESS</strong></td>
<td>Broadway between 114th Street and 121st Street</td>
</tr>
<tr>
<td><strong>COORDINATES</strong></td>
<td>40.80723257,-73.96139575</td>
</tr>
</tbody>
</table>

**Built Works Registry**

- **BWR3773826**
  - BWR ID
- **Avery Hall**
  - BWR Name
- **Columbia University**
  - Larger Entity
- **McKim, Mead & White | Nygren, Tenney & Ohmea.**
  - Creator
- **New York, New York, United States**
  - Location
- **40.8080556**
  - Latitude
- **-73.9613809**
  - Longitude
Durst and BWR: critical differences

**Durst**
- New York City-centric
- Finite historical assemblage of printed material collected by Seymour B. Durst
- Newly added geographic terms and geospatial data deepen access to collection’s 40,000 items

**BWR**
- Global: 190 countries
- Tool created to add precision to other collections using metadata from existing bibliographic and image records
- Disambiguates 70,000 built works from one another using name, location and unique ID
Personal library of published and archival materials about New York City and its history. Comprised of historic photographs, postcards, maps, pamphlets, newspapers, books, and memorabilia.

- Book-like materials: 10,000
- Visual materials: 19,500
- Maps: 700
- Ephemeral materials: 750
The Seymour B. Durst Old York Library collection at the Avery Architectural & Fine Arts Library consists of more than 40,000 objects including historic photographs, maps, pamphlets, postcards, books, and New York City memorabilia from the 18th century to the 1980s. Learn More »
Geographic enhancement

- Item examined to identify significant geographic terms:
  - buildings
  - street addresses
  - intersections
  - neighborhoods
  - boroughs
  - cities
  - landforms

- Assigned free-text locational data to collection items
- Assigned authoritative geographic subject terms
- Derived geo-coordinates
Durst geolocation strategy

- Eliminate true and near duplicate terms
- Separate terms into 3 categories: exact street address, intersection, notable place
- Query NYC Developer Portal using the Geoclient API
- Data retrieved included neighborhood, borough, latitude/longitude
- Problematic terms researched by Durst Curator
- Use of MyGeoPosition.com for terms not retrieved by NYC Developer Portal
- All data mapped to modern locations
Discovery: mapping interface
Discovery: neighborhood facet

Columbia University Libraries/Information Services

Neighborhood

- Todt Hill-Emerson Hill-Heartland Village-Lighthouse Hill
- Brooklyn Heights-Cobble Hill
- Manhattanville
- Charleston-Richmond Valley-Tottenville
- East Harlem North
- Fort Greene
- Morrisania-Melrose
- Washington Heights
- Chelsea
- Hamilton Heights
- Marble Hill-Inwood
- Clinton Hill
- East Harlem
- East Harlem South
- Financial District
- Flatbush
- Harlem
- Kew Garden Hills
- Middle Village
- North Corona
The Bar Gallagher's Steak House Helen Gallagher, Directress

Title: The Bar Gallagher's Steak House Helen Gallagher, Directress

NEIGHBORHOOD
Midtown-Midtown South
BOROUGH
Manhattan
CITY
New York
ADDRESS
228 West 52nd Street
COORDINATES
40.762910440904186,-73.96371953833687
Built Works Registry (BWR)

builtworksregistry.org
## BWR: the problem

**Building name**
- Falling Water or *Fallingwater*
- *Kaufmann* or Kauffman House
- Edgar J. Kaufmann Sr. Residence or Kaufmann Desert House?

**Location**
- *Mill Run* or Bear Run?

**Creator**
- *Frank Lloyd Wright* (or Richard Neutra!)?

<table>
<thead>
<tr>
<th>Title/Name of Building</th>
<th>ARTstor</th>
<th>Avery</th>
<th>Cornell</th>
<th>AVIADOR</th>
<th>Harvard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fallingwater, Edgar J. Kaufmann House, Kaufmann House</td>
<td>Fallingwater (Kaufmann house).</td>
<td>Falling Water, Edgar J. Kaufmann Residence</td>
<td>Fallingwater, Kaufmann House</td>
<td>Fallingwater, Edgar J. Kaufmann House, Kaufmann House</td>
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<td>Mill Run, Pennsylvania, United States</td>
<td>Bear Run (Pennsylvania), United States</td>
<td>Bear Run, PA, United States, North and Central America</td>
<td>Bear Run, (Pa.)</td>
<td>Bear Run, Pennsylvania, United States</td>
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<tr>
<td>Wright, Frank Lloyd</td>
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<td>Wright, Frank Lloyd</td>
<td>Wright, Frank Lloyd</td>
<td>Wright, Frank Lloyd</td>
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</tbody>
</table>

*One record with Ferriss, Hugh*
The solution: a registry

- Normalized built work name
- Locational information for disambiguation
- Unique ID number (functions like ISBN)

- Beyond traditional cataloging, BWR has the potential to be used as metadata in new and unexpected ways.
- Open Buildings, Arches, SAHARA
Seed collections

Ingest individual collections
de-dupe
parse
Map to BWR fields
Merge all collections
de-dupe
enhance

AVIADOR
Videodisc Index

<table>
<thead>
<tr>
<th>Collection</th>
<th>Status</th>
<th>Raw records</th>
<th>Reduced to</th>
<th>%</th>
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<tbody>
<tr>
<td>ARTstor: American Institute of Indian Studies (AII)</td>
<td>Ready for BWR Merge</td>
<td>375361</td>
<td>4571</td>
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<td>ARTstor: Art History Survey Collection</td>
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<td>ARTstor: ART on FILE - Abu Dhabi - Dubai</td>
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<td>1159</td>
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<td>633</td>
<td>64</td>
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<td>827</td>
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<td>2785</td>
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<td>ARTstor: GRI Photo Archive; Julius Shulman</td>
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<td>6188</td>
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<td>0.089</td>
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<tr>
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<td>Can be harvested/evolve; bill investigatory options</td>
<td>7200000</td>
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<tr>
<td>ARTstor: Historic Campus Architecture Collection/HCAP</td>
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<td>4045</td>
<td>1758</td>
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<td>ARTstor: LoC - Carnegie Architecture of the South</td>
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<td>ARTstor: Princeton</td>
<td>Ready for BWR Merge</td>
<td>7731</td>
<td>6214</td>
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<td>ARTstor: Ralph Lieberman</td>
<td>James investigating?</td>
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<td>ARTstor: GIWR project work (perhaps more)</td>
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<td>ARTstor: SAHARA</td>
<td>Ready for BWR Merge</td>
<td>14582</td>
<td>2648</td>
<td>0.182</td>
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<td>ARTstor: UC Berkeley</td>
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<td>ARTstor: UCLA</td>
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<td>ARTstor: UCS Architecture</td>
<td>Ready for BWR Merge</td>
<td>84540</td>
<td>5264</td>
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<td>ARTstor: UI, Bay/Wagner, Mexican Architecture</td>
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<td>5723</td>
<td>451</td>
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<td>ARTstor: UT, Christopher Lang, Central European Architecture</td>
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<td>226</td>
<td>128</td>
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<td>ARTstor: World Monuments Fund</td>
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<td>1946</td>
<td>242</td>
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<tr>
<td>Avery Index 3 Avery datasets (through 1978, no 550k)</td>
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<td>2068365</td>
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<td>Avery Index 3 Avery datasets (1979 forward, with Margaret &amp; Anne processing)</td>
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<td>256593</td>
<td>4952</td>
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<tr>
<td>Avery: AVIADOR, previous work to be redone</td>
<td>Margaret processing</td>
<td>4952</td>
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<td>Avery Drawings &amp; Archives; Mollitor, Neumann</td>
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<td>3293</td>
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<td>Columbia: NYC Landmarks Preservation Commission</td>
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<td>1442</td>
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<td>Cornell</td>
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<td>2301</td>
<td>0.673</td>
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<td>Harvard - Ollivier [3 sets: Fine Arts 1 &amp; 2, Design School]</td>
<td>Ready for BWR Merge</td>
<td>28999</td>
<td>21676</td>
<td>0.747</td>
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<tr>
<td>Key Monuments (Million, created by ARTstor metadata)</td>
<td>No permission to hold</td>
<td>300</td>
<td></td>
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<tr>
<td>Mapping Gothic France <a href="http://mappinggothic.org/">http://mappinggothic.org/</a> Permission pending</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>SAN Archive (small subset of total)</td>
<td>Jones considering whether to use?</td>
<td>10365</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Totals 724228 68260
Talend Open Studio: mapping collections to aggregated fields
Case Study 1: NYC Landmarks Preservation Commission

- 1248 records
- 1149 street addresses
- ArcGIS /nyc.gov database
- Open Street Map
- no additional mediation
- 80% mapped
Case Study 2: Avery Index to Architectural Periodicals

- 1645 records
- No street addresses
- City – state – country
- Google Earth Pro
- 55-60% mapped
BWR geolocation strategy

Two geo-coding protocols:

- Records with street addresses:
  ArcGIS processing with targeted databases, for built works in US and Canada

- Records with city-country:
  Open Refine Cluster tool used for normalization of city and country names; reconciled normalized names against Freebase databases.

Subsequent mediation by hand using TGN, geonames.org, etc.

Iterative, detail-oriented, time-consuming process

Outcome (builtworksregistry.org) – OpenStreetMap, MapBox
Discovery: named work

3 Results for “lever house”

1. Lever House
   Bunshaft, Gordon (1909-1990), American architect | Skidmore, Owings & Merrill (1926-)
   firm
   390 Park Avenue | Manhattan
   New York, New York, United States
   1950 - 1952
   ID BWR3777729

2. Unilever House
   Stephenson and Turner
   Sydney, Australia
   ID BWR3773012

3. Unilever House
   Lomax-Simpson, James | Burnet, John James
   Blackfriars
   London, England | United Kingdom
   ID BWR3770953
Discovery: individual built work record

BWR3777729
BWR ID

Lever House
BWR Name

Lever Brothers' Building
BWR Variant Name

Bunshaft, Gordon (1909-1990), American, architect | Skidmore, Owings & Merrill (1936-), firm
Creator

1950 - 1952
Date

390 Park Avenue | Manhattan
New York, New York, United States
Location

40.7595125290001
Latitude

-73.97252263
Longitude

Modern | 20th century
Period/Style

office buildings
Work Type
Discovery: common building name

1. Church of Notre Dame
   - Munich, Germany
   - ID: BWR790374

2. Rectory of the Church of Notre Dame
   - 404 West 10th Street, Manhattan
   - New York, New York, United States
   - ID: BWR790375

3. Werribee Clinical School
   - Werribee, Victoria, Australia
   - ID: BWR790366

4. Basilique Notre-Dame de la Paix
   - Yverdon-les-Bains, Vaud, Switzerland
   - 1950 - 2000
   - ID: BWR790376

5. Notre Dame
   - Aix-en-Provence, France
   - ID: BWR790449

6. Notre Dame du Chatel
   - Autun, Saône-et-Loire, France
   - ID: BWR790390

7. Notre Dame des Pommiers
   - Beaurainville, France
   - ID: BWR790397

8. Abbey Church of Notre Dame
   - Bernay, Eure, France
   - 1000 - 1199
   - ID: BWR790374

Abbey Churches

BWN790374
BWR Name
Abbey Church of Notre Dame
BWR Variant Name
1000 - 1199
Location
Bernay, Eure, France
Latitude
49.09
Longitude
0.6
Work Type
Discovery: advanced search
Discovery: part-whole relationship
Place-Based Discovery: Broadening Access with Geolocation

Seymour B. Durst Old York Library

Project Director: Carole Ann Fabian
Sponsor: Old York Library Foundation
Project Manager: Leo Stezano
Project team: Columbia University Libraries
Durst Curator: Chris Sala

Built Works Registry (BWR)

Project Director: Carole Ann Fabian
Sponsor: IMLS National Leadership Grant

Artstor: James Shulman, William Ying
Getty: Murtha Baca, David Farneth
BWR Librarian: Margaret Smithglass