Getty Vocabularies: How They Are Developed and How They Are Used

Patricia Harpring, Managing Editor
Getty Vocabulary Program
Getty Research Institute

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Abstract:
Patricia Harpring is the Managing Editor of the Getty Vocabularies. She will discuss how the Getty Vocabularies are developed and used. Included will be discussion of local vocabularies and contributions to the Getty Vocabularies. How do the Vocabularies grow? How are contributors chosen? How are terms chosen?

This paper discusses the development and challenges of using the Getty Vocabularies to enable good documentation, access, and discovery. The target audience for the Getty Vocabularies inhabits in the evolving field of digital art history, although they may be used for related materials as well. The Getty Vocabularies comprise the following resources: Art & Architecture Thesaurus (AAT)®, Getty Thesaurus of Geographic Names (TGN)®, Union List of Artist Names (ULAN)®, Getty Iconography Authority (IA)™, and Cultural Objects Name Authority (CONA)®. The Vocabularies contain structured terminology for art, architecture, decorative arts, archival materials, visual surrogates, conservation, and bibliographic materials. Compliant with international standards, they provide authoritative information for catalogers, researchers, and data providers. The Getty Vocabularies strive to be ever more multilingual, multicultural, and inclusive. In this paper, we will explore the features of the Vocabularies, elements of content and linking, international cooperation in their creation, and the methods of release and implementation of the Getty Vocabularies.

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Find the Getty Vocabs Online

- For information about the Getty vocabularies, see this site
- Search the data, access data releases, how to contribute, editorial guidelines, training materials, news
- Contact us: vocab@getty.edu

http://www.getty.edu/research/tools/vocabularies/index.html
• Informational and training materials are online
• Updated regularly

Indexing Art Information: Using the Getty Vocabularies

Patricia Harpring
Managing Editor, Getty Vocabulary Program
Revised August 2020

4.4.2 Contributing Large Translations

Guidelines for Multilingual Equivalency Work (Patricia Harpring)

Please use the guidelines here with *Introduction to Controlled Vocabularies* (Harpring, Patricia, 2013), and the Editorial Guidelines on this site. The lengthy, comprehensive discussions in these works are not repeated here.

Details of the guidelines here are augmented and revised as necessary over time, typically as new issues arise in translation projects.

For occasional terms in foreign languages rather than large translation projects, see the AAT Editorial Guidelines: Terms: Translating terms.

4.4.2.1 Quick Reference Guide

Below is a brief list of critical guidelines for establishing multilingual equivalences in the AAT.

• As a first step, please fill in the Data Contribution and License
Discovery, Knowledge Creation, and Dissemination
of research and art information: pillars of GRI mission

- How did art historians do research in the past?
- By hand, physical resources and card catalogs, bibliographic indexes such as BHA (Bibliography for the History of Art)
- Printing out, photocopying, taking photos, note taking
- Traveling around the world, many months to find all data

- Needed better methods and tools for research and discovery
- Solutions would also address needs of repositories, other cataloging institutions with mission to disseminate their data
- The Getty Vocabularies, CDWA (Categories for the Description of Works of Art), etc. were developed to allow consistency in cataloging and improvement of retrieval
• Goal = data linked to other data, discoverable –
First = human factor, consensus across different disciplines; repositories (archives, special collections, visual resources, museums, bibliographic, scholars); languages and cultures; current and historical
Where We Are Now

- Now we can begin to find materials for research and discovery online.
- Getty vocabularies have been used for indexing. Now = links are possible via LOD, links to TGN and AAT within ULAN are used.
- 90 sample SPARQL queries, editable.

Find artists who worked in Italy and lived during a given time range but who are not Italian:

Select ULAN records:
- Having event that took place in tgn:1000080 Italy or any of its descendants.
- Birth date between 1250 and 1780.
- Descendants of facet ulan:500000002 "Persons, Artists".
- Not having nationality aat:300111198 Italian or any of its descendants.

- Then use this set of artists to search for works.

-- [still in process, so far not enough works are discoverable]
What Are Getty Vocabularies
Getty Vocabularies: Our History

- The Getty Vocabularies were established to meet the needs of art museum, visual resources, archives, art library communities
- Authoritative vocabularies -- indexing and retrieval of art information, architecture, conservation, archaeology; but not authoritarian = flexibility to achieve buy-in
- Why standards and controlled vocabularies? To make data more consistent, more usable in-house, and in broader environments
- Better able to withstand changes in technology and practices over time
- Greatest investment in cataloging is the human investment, with experts analyzing and recording data -- preserve that investment via standards
- Sources of data? For Getty Vocabularies, core initial data was compiled from existing Getty projects’ data and a few open data resources
- Vocabularies are compiled through contributions from qualified and trained contributors (visual resources collections, museums, art libraries, special coll., bibliographic indexing projects, international translation projects)
- Authoritative -- Contributors and published sources are cited
- Authoritative -- Persistent numeric identifiers for records, terms, and other data; co-referencing to other IDs for the same concept in other resources
 Getty was a trailblazer
  a) committing resources to standards and vocabularies for art information, and 
b) bringing together disparate communities under Getty leadership

  - AAT (Toni Peterson), ULAN and TGN were begun 1980s-1990s (director, Eleanor Fink)
  - Informed by CIHA TAU (Thesaurus Artis Universalis)
  - CONA and IA based on CDWA
  - Getty Vocabulary Program formerly part of the Art History Information Program

 Getty Vocabularies: Our History

Partial group of AHIP staff at new Getty Center, 1997
Getty Vocabularies: Our History

- We continue working with the international community
- E.g., ITWG (International Terminology Working Group), February 2020
- AAT translations, other contributions, implementations of Vocabs
Getty Vocabularies: Based in Standards

Standards for data content and structure
There are several types of controlled vocabularies and related specifications relevant for art and other cultural heritage information

- Subject heading lists
- Controlled lists
- Synonym ring lists
- Authority files
- Taxonomies
- Alphabetic classifications
- **Thesauri**

**Getty Vocabularies are thesauri**
- Ontologies
- Folksonomies
Getty Vocabularies: Based in Standards

- Thesaurus: A semantic network of unique concepts
- Thesauri may be monolingual or multilingual
- Thesauri may have the following three relationships:
  - Equivalence Relationships
  - Hierarchical Relationships
  - Associative Relationships

```
Objects Facet
.... Furnishings and Equipment
........ Containers
............ <culinary containers>
............... <vessels for serving / consuming food>
............... rhyta
............... rhyton
............... rhytons
............... rhea
............... rheon
............... rheons
............... ritón
............... ῥυτόν
............... rhūtón
............... 萊坦酒杯

stirrup cups
coaching glasses
hunting glasses

sturzbechers
Sturzbecher
stortebekers

distinguished
from

hierarchical

equivalence

associative
```
 Getty Vocabularies: Based in Standards

- Compliant with national (NISO) and international (ISO) standards for thesaurus construction:
- Getty Vocabularies are compliant with / map to other standards:
  - CDWA (Categories for the Description of Works of Art)
  - CCO (Cataloging Cultural Objects)
  - VRA Core (Visual Resources Association core categories)
  - LIDO (Lightweight Information Describing Objects)
- Editorial rules based on common practice, reflect best practice

Metadata Standards Crosswalk

<table>
<thead>
<tr>
<th>CDWA</th>
<th>CCO</th>
<th>CONA</th>
<th>CIDOC CRM [coming soon]</th>
<th>LIDO [coming soon]</th>
<th>CDWA Lite</th>
<th>VRA Core</th>
<th>MARC/AACR [RDF coming soon]</th>
<th>MOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. OBJECT/ WORK (core)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1. Catalog Level (core)</td>
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<td>&lt;cdwalite: recordType&gt;</td>
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<tr>
<td>1.2. Object/Work Type (core)</td>
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<td>&lt;cdwalite: objectWorkType&gt;</td>
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<td>&lt;vra: work or &lt;vra: collection&gt;</td>
<td></td>
</tr>
</tbody>
</table>
Getty Vocabularies: Based in Standards

Data releases
- Contributed data is compiled, merged, edited, and published by the Getty; refreshed monthly
- Open Data Commons Attribution License (ODC-By) v1.0
- Allows sharing, creation, adaptation of data with attribution

- Data is made available in various ways, standards, conventions for markup and for linked structured data
  - Web services APIs
  - Relational tables and XML format (may be eventually discontinued)
  - Linked Open Data: structured and published, openly accessible and shareable on the Semantic Web: JSON, RDF, N3/Turtle, N-Triples formats
Scope of Getty Vocabularies

The mission of the Getty Vocabulary Program (GVP) is to produce rich, structured, authoritative vocabularies, in compliance with international standards, that provide a powerful conduit for inter-related, linked, and meaningful research, discovery, and understanding of the visual arts and their various histories, in collaboration with the international community, and utilizing training and outreach to inform the field.

A primary goal of the Getty Vocabulary Program is to broaden and enrich the scope and coverage of the Getty Vocabularies to become ever more multilingual, multicultural, inclusive, and representative of the subjects and priorities of the GRI, the Getty, and global art history.
How Getty Vocabularies are used

Catalog Level: item
Classification: paintings
Work Type:
  painting (visual work) [AAT 300033618]
  scroll painting [AAT 300033666]

Title: Scene of Early Spring
Type: repository
Lang.: English
Title: 宋郭熙早春圖 軸
Type: repository
Lang.: Chinese

Creator Display: Guo Xi, Song Dynasty
  Index: Guo Xi (Chinese painter, 1023 - ca.1085 CE)
    [ULAN 500125758]
  Role: artist
Creation Date: 1072 CE; fifth year of Xining, first era of the Shenzong Emperor, Northern Song Dynasty
  Index: Start Date: 1072
  End Date: 1072
Materials Display: painted scroll
  Index: color (pigment) [AAT 300264870]
  Index: ink [AAT 300015012]
  Index: silk (silkworm material) [AAT 300014072]
  Index: paper (fiber product) [AAT 300014109]
How Getty Vocabularies are used

Catalog Level: item  Classification: paintings
Work Type:
  painting (visual work) [AAT 300033618]
  scroll painting [AAT 300033666]

Title: Scene of Early Spring  Type: repository  Lang.: English
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Creator Display: Guo Xi, Song Dynasty
  Index: Guo Xi (Chinese painter, 1023 - ca. 1085 CE) [ULAN 500125758]
  Role: artist
Creation Date: 1072 CE; fifth year of Xining, fourth era of the Shenzong Emperor, Northern Song Dynasty
  Index: Start Date: 1072  End Date: 1072
Materials Display: painted scroll
  Index: color (pigment) [AAT 300264870]
  Index: ink [AAT 300015012]
  Index: silk (silkworm material) [AAT 300014072]
  Index: paper (fiber product) [AAT 300014109]
Links and relationship types within and between vocabularies were normalized and published when LOD was created.
What is AAT?

AAT, the Art & Architecture Thesaurus®

The AAT is a thesaurus containing **generic terms**, dates, relationships, related to art, architecture, conservation, other cultural heritage

- Used for work types, roles, materials, styles, cultures, techniques, etc.
- Generic terms, not proper names
- Multilingual; large translation projects are underway
- Facets are the upper levels of the AAT structure
- AAT is not organized by subject matter or discipline

**Totals as of 25 Oct 2020**

<table>
<thead>
<tr>
<th>Vocab</th>
<th>Records</th>
<th>Terms</th>
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</thead>
<tbody>
<tr>
<td>AAT</td>
<td>70,959</td>
<td>400,334</td>
</tr>
</tbody>
</table>

Sitterwerk workshop, April 2021: Getty Vocabularies
## Scope of AAT

### Associated Concepts
Terms for all abstract concepts and phenomena that relate to the study and execution of various areas of human thought and activity, including architecture and art in all media, as well as related disciplines. Also covered here are theoretical and critical concerns, ideologies, attitudes, and social or cultural movements

- beauty, balance, connoisseurship, metaphor, socialism

### Physical Attributes
Terms for the perceptible or measurable characteristics of materials and artifacts as well as features of materials and artifacts that are not separable as components. Included are characteristics such as size and shape, chemical properties of materials, qualities of texture and hardness, and features such as surface ornament and

- borders, round, waterlogged, brittleness

### Styles and Periods
The names of art and architecture styles, historical periods, and art movements. Names of peoples, cultures, individuals, and sites are included if they designate distinct styles or periods

- Yoruba, Louis XIV

### Agents
Terms for designations of people, groups of people, and organizations identified by occupation or activity, by physical or mental characteristics, or by social role or condition

- printmakers, landscape architects, corporations, religious orders

Animals will also be included in this facet

### Activities
Terms for areas of endeavor, physical and mental actions, discrete occurrences, systematic sequences of actions, methods employed toward a certain end, and processes occurring in materials or objects. Activities may range from branches of learning and professional fields to specific life events, from mentally executed tasks to processes performed on or with materials and objects, from single physical actions to complex games

- archaeology, engineering, analyzing, contests, exhibitions, running, drawing (image-making), corrosion

### Materials
Terms for physical substances, whether naturally or synthetically derived. These range from specific materials to types of materials designed by their function, such as colorants, and from raw materials to those that have been formed or processed into products that are used in fabricating structures or objects

- iron, clay, adhesive, emulsifier, artificial ivory, millwork

### Objects
Terms for discrete tangible or visible things that are inanimate and produced by human activity; that is, that are either fabricated or given form by human activity. These range, in physical form, from built works to images and written documents. They range in purpose from utilitarian to the aesthetic. Also included are landscape features that provide the context for the built environment

- paintings, amphorae, facades, cathedrals, Brewster chairs, gardens

### Brand Names
Names for materials, processes, and objects having names that are under trademark protection

- Agfacolor (TM) Araldite (TM) Arches paper (R)

---

Sitterwerk workshop, April 2021: Getty Vocabularies
AAT Sample Record

**AAT ID:** 300132869

**Terms:**
- bobbin lace (pref, en) [1000132869]
- bone lace (en) [1000271819]
- cushion lace (en) [1000271820]
- 梭心蕾絲 (zh) [1000556828]
- suo xin lei si (zh) [1000556832]
- kloskant (nl) [1000492226]
- dentelle aux fuseaux (fr) [1000315258]
- encaje de bolillos (es) [1000438964]
- Klöppelspitze (de) [1000589036]
- merletto a tombolo (it) [1000596947]

**Associative Relationships**
- Requires ... lace pillows (<textile fabricating tools and equipment>...Objects Facet) [300132869]

**Hierarchical Relationships (poly)**
- Objects Facet
- ... Visual & Verbal Communication
- ..... Visual Works
- ......... visual works (works)
- .......... <visual works by material>
- ............ needlework (visual works)
- ............. lace (needlework)
- ................ bobbin lace

**Note:** With "needle lace," one of two primary types of handmade lace. It is characterized by being made by ...

**Chinese (traditional) .....** 與「針織蕾絲（needle lace）」同為主要的手工蕾絲，其特色是以繞繞於線軸或梭心...

**Dutch .....** Een van de twee belangrijkste soorten met de hand vervaardigde kant; ‘naaldkant’ is ...

**German .....** Zusammen mit der "Nadelspitze" eine der wichtigsten...

**Spanish .....** Junto a "encaje a aguja", uno de los dos tipos principales de ...

**Contributors:** VP, CHIN, AS, RKD, IfM-SMB-PK, CDPB-DIBAM

**Sources:** Earnshaw, Clabburn, Needleworker's Dictionary (1976); Identification of Lace, 2d ed. (1984); Ginsburg, Illustrated History of Textiles (1991)
Contributors are cited

- Getty Conservation Institute (Los Angeles, California)
- Academia Sinica (Nankang, Taiwan)
- Netherlands Institute for Art History (RKD: Bureau AAT) (The Hague, The Netherlands)
- Centro de Documentación de Bienes Patrimoniales (Dirección de Bibliotecas, Archivos y Museos) (Santiago, Chile)
- Staatliche Museen zu Berlin Preussischer Kulturbesitz (Berlin, Germany)

[Canadian Heritage Information Network (CHIN) (Gatineau, Quebec, Canada), Istituto Centrale per il Catalogo e la Documentazione (Rome, Italy)(ICCD)] and other contributors of partial translations; future translations in French, Italian, Portuguese, other languages
- Sub-facets (called “hierarchies”) establish the context of the term
- Guide terms in angled brackets

**Title:** [Woman in silk robe]
- Artist/Maker: Unknown
- Place: United States (Place Created)
- Date: about 1920 - 1940
- Medium: Gelatin silver print
- Location: J. Paul Getty Museum (Los Angeles)
- Object Number: 2009.141.278
- Dimensions: 10.6 × 6 cm (4 3/16 × 2 3/8 in.)
- Copyright: Status undetermined
- Credit Line: Gift of Sharon and Michael Blasgen and Michael Wilson
Title: [Woman in silk robe]
Artist/Maker: Unknown
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Copyright: Status undetermined
Credit Line: Gift of Sharon and Michael Blasgen and Michael Wilson

| Terms                                      | Language       | AAT subject_id | View of the terms for a concept in AAT record
|--------------------------------------------|----------------|----------------|----------------------------------------------------------------------------------|
| gelatin silver prints                      | C, U, English-P, D, U, PN | 300128695      | • Terms for a single item, language
| gelatin silver print                       | C, U, English, AD, U, SN   |               | • Some systems or local cataloging rules do not allow linking at the term level
| gelatin prints                             | C, U, English, UF, U, N    |               | Work type:
| gelatin silver photoprints                | C, U, English, UF, U, N    |               | gelatin silver print
| prints, gelatin silver                    | C, U, English, UF, U, N    |               | term_id 1000299396
What is ULAN?

ULAN, the Union List of Artist Names®

ULAN contains **personal names**, relationships, biographical information for artists, architects, firms, studios, repositories, patrons, sitters, both named and anonymous

- For people and corporate bodies associated with the creation and documentation of art, architecture, and in related disciplines
- Includes current and historical associative relationships (e.g., students to teachers; firm and studios to members)

Totals as of 25 Oct 2020

<table>
<thead>
<tr>
<th>Vocab</th>
<th>Records</th>
<th>Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>ULAN</td>
<td>313,260</td>
<td>935,147</td>
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</table>
## Persons, Artists
- Agami, Alyssa (Mexican sculptor, born 1955)
- Abbate, Ercole dell' (Italian painter, 1563/1573-1613)
- Abeyta, Narciso (Native American painter, 1918-1998)
- Ashmolean Master (Early Cycladic sculptor, active 25th century BCE)
- An, Yuan (Chinese architect, active 1404-1420)

## Corporate Bodies
- Abbate family, dell' (Modenese painters, active 16th-17th centuries)
- Abbot Hall Art Gallery (British museum, contemporary)
- Abdullah Freres (Turkish photography and painting studio, 1858-1899)

## Non-Artists
- Aah-Hotep, Queen (Egyptian queen, ca. 1560-1530 BCE)
- Abelard, Peter (French theologian, philosopher, 1079-1142)
- Ancaster, Mary Bertie, Duchess of (English aristocrat, died 1793)

## Unidentified Named People and Firms
- Abady, Sheila (artist)
- Facius, Friedrich Wilhelm (artist, born 1764)

## Unknown by Culture
- unknown Abakwariga (Abakwariga cultural designation)
- unknown Abbevillian (Abbevillian cultural designation)
- unknown Aztec (Aztec cultural designation)
Display bio: (Japanese printmaker, painter, 1760-1849 estimated

**Birth date:** 1760
**Death date:** 1849

**Nationalities:** Japanese (pref)

**Roles:** artist
printmaker
callerger
draftsman
landscapist
marine artist
figure artist
ukiyo-e artist

**Gender:** male

**Birth and Death Places:**
Born: Tokyo (Kanto, Japan)) (inhab place)
Died: Tokyo (Kanto, Japan)) (inhab place)

**Events:**
active: Tokyo (Kanto, Japan)) (inhab place)

**Associative Relationships:**
teacher of  Taito, Katsushika, II
.....(Japanese printmaker, active ca. 1820-1850)
child of  Nakajima Ise
......(Japanese mirror maker, 18th century)
possibly identified with ... Tōshūsai Sharaku
......(Japanese printmaker, active 1794-1795)

**Contributors:**
Avery,GRL,BHA,CCA

**Sources:**
Bowie, Drawings of Hokusai (1964); Grove Dictionary of Art online (1999-2002); Library of Congress Authorities

**Other resources:** LOC

Sitterwerk workshop, April 2021: Getty Vocabularies
Rich data and relationships

- E.g., ULAN, reciprocal relationships teacher/student
  - **1101** person – **teacher of** – person
  - **1102** person – **student of** – person

  Japanese printmaker *Katsushika Hokusai* [was] **teacher of** *Katsushika Taito II*

- As with other relationships in vocabulary records, the relationship may be circumscribed with dates

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<tr>
<th>ID: 500060426</th>
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<td>Relationship Type</td>
<td>Record Type</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1101 - teacher of</td>
<td>Person</td>
</tr>
<tr>
<td>1102 - student of</td>
<td>Person</td>
</tr>
</tbody>
</table>
What is TGN?

TGN, Getty Thesaurus of Geographic Names®

TGN contains place names relevant to art, architecture, and related disciplines

- Names, relationships, place types, dates, notes, coordinates
- Scope includes cities, nations, empires, physical features
- Focus on historical, regions, archaeological sites, lost settlements
- Built upon a skeleton of the modern world, but only as much as needed for historical information and cataloging art; not comprehensive
- TGN is a thesaurus compliant with ISO standards
- TGN is not GIS, but may be linked to GIS, maps, etc.
- Co-references other geographic resources

Totals as of 25 Oct 2020

<table>
<thead>
<tr>
<th></th>
<th>Vocab</th>
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<tbody>
<tr>
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<td>4,088,303</td>
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</tr>
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</table>

Sitterwerk workshop, April 2021: Getty Vocabularies
World
....Africa (continent)
........Abyssinia (historical) (general region)
....Aden, Gulf of
........ Egypt (nation)
........... Cairo (governorate)
.................. Cairo (inhabited place)
........................ Old Cairo (quarter) [N]
........................ Shaltout (neighborhood) [N]
....Gonja Kingdom (former nation/state/empire)

Extraterrestrial Places
....Milky Way Galaxy (galaxy)
........Solar System (planetary system)
...........Jupiter (planet)
..................Metis (moon)

• Historical and current world, administrative and physical features in same hierarchy
• Small number of Extraterrestrial Places, as needed by contributors
**TGN Sample Record**

TGN, Getty Thesaurus of Geographic Names®

**TGN ID:** 7011179

**Names:**
- Siena (pref,it,en) [47413]
- Sienna [140808]
- Sienne (fr) [1002860953]
- Σιένα (el) [1002038443]
- 锡耶纳 (zh) [1002038446]
- Сиена (ru) [1002038445]
- シエーナ (ja) [1002038441]
- Sienese (adj) (en) [1159549]

**Date:** Medieval

**Start:** 800  **End:** 1500

**Contributors:**
- VP, BHA, Avery, GRI

**Sources:**
- Annuario Generale (1980);
- NGA/NIMA database (2003-);
- Library of Congress Authorities n 79013822;
- UNESCO World Heritage Centre [online] (1992-);
- VIAF: Virtual International Authority File [online] (2009-);

**VIAF ID:** 239842096 (Geographic)

**Hierarchical Relationships (poly.)**
- World (facet)
  - Europe (continent)
    - Italy (nation)
      - Tuscany (region)
        - Siena (province)
          - Siena (inhabited place)

**Place Types**
- inhabited place
  - **Date:** settled by Etruscans (flourished 6th century BCE)
- city
  - archiepiscopal see
  - commune (administrative)
  - **Date:** since 1125
- cultural center
- university center
- world heritage site

**Linked to other vocabularies, Other resources (LOC, NGA)**

**Note:**
- Siena was founded as an Etruscan hill town; later was the Roman city of Sena Julia (3rd century BCE). It flourished under the Lombard kings (6th century CE) and was Medieval self-governing commune ...

**Location:**
- **Lat:** 43°19’07” N (43.3180)
- **Long:** 011°19’50” E (11.3300)
- **Elevation:** 1056.430 feet (322.0000 meters)

**Date:**
- **settlement:** by Etruscans (flourished 6th century BCE)
- **since:** 1125

**Associative Relationships**
- ally of Pisa (inhabited place) [7006082]
  - Ghibelline allies, 13th-14th centuries

**Sitterwerk workshop, April 2021:** Getty Vocabularies
**Silk Road (road)**

**Note:** Ancient trade route and caravan tract for the exchange of goods and ideas across China, the Middle East, and the West. Originated at Xi'an, followed the Great Wall of China, bypassed the Takla Makan Desert, dimmed the Pamir mountains, crossed Afghanistan, and where merchandise was shipped across the Mediterranean Sea. Few persons travelled along were handled in a staggered progression by middlemen.

**Names:**
- Silk Road (preferred, C,V)
- Silk Route (C,V)
- Great Silk Road (C,V)

**Hierarchical Position:**
- World (facet)
  - Silk Road (road) (P)

**Place Types:**
- road (preferred, H) .......... from ancient times, with some interruptions, until ca. route (H)

**Related geographic places:**
- is location of .... Ak-Beshim .......... (deserted settlement)  
  ......................... [World, Asia, Kyrgyzstan, Chuy] [8711887]
- is location of .... Aleppo .......... (inhabited place)  
  ......................... [World, Asia, Syria, Halab] [7002252]
- is location of .... Almaty .......... (inhabited place)  
  ......................... [World, Asia, Kazakhstan, Almaty] [7011439]
- is location of .... Al-Mawsil .......... (inhabited place)  
  ......................... [World, Asia, Iraq, Ninawá] [7002471]
- is location of .... Andijon .......... (inhabited place)  
  ......................... [World, Asia, Uzbekistan, Andižan province] [1052185]
- is location of .... Anxi .......... (inhabited place)  
  ......................... [World, Asia, China, Gansu province] [7001466]
- is location of .... Ar Raqqah .......... (inhabited place)  

What is IA?

IA, the Getty Iconography Authority™

IA contains **iconography names** describing topics relevant to art, architecture, and related disciplines

- Includes the proper names of subjects not covered by other Getty Vocabularies
- Scope is multicultural and multilingual, grows through contributions
- Includes links to other sources where there is overlap, such as Iconclass and US Library of Congress subject authorities
- The IA is compliant with the Subject Authority of CDWA and CCO (*Categories for the description of Works of Art and Cataloging Cultural Objects*)
- The IA has a thesaural structure; it includes equivalence, associative, and hierarchical relationships
- The IA is linked to the other Getty Vocabularies

**Totals as of 25 Oct 2020**

<table>
<thead>
<tr>
<th>Vocab</th>
<th>Records</th>
<th>Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>1,968</td>
<td>5,527</td>
</tr>
</tbody>
</table>
Scope of IA

Religion, Mythology, Legend
....Buddhist Iconography
........Buddhist allegory, symbolism, theme
........Buddhist characters
........Buddhist legendary places
........Buddhist narratives
............Four Encounters (Buddhist narrative)

Literature and Performing Arts
....Literary characters
........Beatrice (Italian literary character, Dante, ca. 1293)

Named Events
....Ancient history (Egyptian, Greek, Roman, other western)
........Battle of Salamis (Greek history, 480 BCE)

Miscellaneous Topics
....Miscellaneous Legendary Places
........Cockaigne (legendary place, medieval western)
### IA Sample Record

**IA, the Getty Iconography Authority™**

**IA ID** 901000085

**Names**
- Avalokiteśvara (en) [5000191]
- Avalokitesvara [5001067]
- Avalokitesvara [5003150]
- अवलोकितेश्वर (sa) [5001068]
- छुम्ब रस शितिङ्ग (bo) [5002308]
- Spyan ras gzigs [5002309]

**Hierarchical Relationships**
- Top of the IA hierarchies
  - Legend, Religion, Mythology
    - Buddhist iconography
    - Buddhist characters
    - Avalokiteshvara (Buddhist iconography)

**AAT links**
- role/characteristic is ... bodhisattva
- symbolic attribute is ... lotus
- culture/religion is ... Mahayana (Buddhism)
- culture/religion is ... Theravada (Buddhism)

**Associative Relationships**
- associated with .... Krishna (Hindu iconography)
- counterpart is .... Guanyin (Buddhist iconography)

**Note**
The bodhisattva of infinite compassion and mercy; embodies the compassion of all Buddhas. This bodhisattva is portrayed in different cultures as either female or male…

**Contributors**
- VP, BHA

**Sources**
- Bowker, Oxford Dictionary of World Religions (1997); Huntington, Art of Ancient India (1985); Encyclopedia Britannica Online (2002-);

**LC: LC control no.:**
- sh 85010492

**Note**
The bodhisattva of infinite compassion and mercy; embodies the compassion of all Buddhas. This bodhisattva is portrayed in different cultures as either female or male…

**Contributors**
- VP, BHA

**Sources**
- Bowker, Oxford Dictionary of World Religions (1997); Huntington, Art of Ancient India (1985); Encyclopedia Britannica Online (2002-);

**LC: LC control no.:**
- sh 85010492
What is CONA?

CONA, Cultural Objects Name Authority®

CONA compiles *titles/names* with other metadata for works of art, architecture, and other cultural works

- For works current and historical, documented as items or in groups, whether extant, destroyed, or never built
- May be used to record works depicted in visual surrogates, architecture, multiples (prints), and for other purposes

Totals as of 25 Oct 2020

<table>
<thead>
<tr>
<th>Vocab</th>
<th>Records</th>
<th>Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONA</td>
<td>6,763</td>
<td>13,431</td>
</tr>
</tbody>
</table>
Scope of CONA

Built Works

*Abbotsford House* (country house; designed by William Atkinson, (British architect, ca. 1773-1…; constructed 1817-1819, 1822-1825; Melrose (Scottish Borders, Scotland, UK)…

*Attagudi (Siva temple)* (temple (building); patron: Ganapatideva; unknown Telingana; first quarter of 13th century, Chandravalli (Karnātaka, India) …)

Movable Works

*Abraham Lincoln and His Second Son Thomas (Tad)* (albumen print; Alexander Gardner (American, born Scotland, 1821 - 1882) (Am…; April 9, 1865; J. Paul Getty Museum at the Getty Center (Los Angeles, Los A…; 85.XM.285)

*Boy with a Dragon* (sculpture (visual works); Gian Lorenzo Bernini (Italian, 1598 - 1680); about 1617; J. Paul Getty Museum at the Getty Center (Los Angeles, Los A…; 87.SA.42)

Visual Surrogates

*Foto arte minore / Max Hutzel* (collection (object grouping)); photographers: Max Hutzel and Roberto Sigismondi; 1960-1990); Getty Research Institute (Los Angeles…

Conceptual Works

*Adam and Eve* (multiples); engraving (print); Albrecht Dürer (German painter, printmaker, 1471-1528); 1504; (Conceptual Works)
## CONA Sample Record

**CONA, Cultural Objects Name Authority®**

<table>
<thead>
<tr>
<th>Catalog Level:</th>
<th>item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Types:</td>
<td>building complex temple</td>
</tr>
<tr>
<td>Classification:</td>
<td>architecture</td>
</tr>
<tr>
<td>Creator Display:</td>
<td>first built by Ming Chengzu (1360-1424); extended by Ming Shizong (1507-1567); renovated by Qianlong (1711-1799)</td>
</tr>
<tr>
<td>Locations:</td>
<td>current Beijing (Beijing Shi (municipality), China)</td>
</tr>
<tr>
<td>Address Note:</td>
<td>Address: 39°57′05″N 116°24′36″E</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>entire complex: 237 hectares</td>
</tr>
<tr>
<td>Mat &amp; Tech:</td>
<td>wood and stone wood AAT 300011914; stone AAT 300011176</td>
</tr>
<tr>
<td>Style:</td>
<td>Chinese [AAT 300018322]</td>
</tr>
<tr>
<td>General Subject:</td>
<td>architecture Type: isness religion and mythology Extent: purpose</td>
</tr>
<tr>
<td>Contributers:</td>
<td>JPGM VP GRISC BHA BWR</td>
</tr>
</tbody>
</table>

**CONA ID: 700002923**

**Titles/Names:**
- Temple of Heaven (en) [1000016889]
- Tian Tan (zh-tr) [1000016890]
- T’ien-t’an (zh-trl) [1000019041]
- Tiantan [1000016892]
- Temple du Ciel (fr) [1000019264]
- Templo del Cielo (es) [1000019265]
- Himmelstempel (de) [1000019266]
- 天壇 (zh) [1000016894]
- 天坛 (zh) [1000016893]
- 천단 (ko) [1000019043]
### Scope of CONA

Recording information about lost works

**CONA ID** 700009685  **Class:** architecture  
**Work Type:** storehouse  **Work Type:** destroyed work

**Title:** Totocalco  **Title:** Totocalli

**Creator:** unknown Aztec; under Montezuma II

**Dimensions:** unavailable  **Materials:** masonry construction

**Current Location:** Mexico City (Mexico)  19 26 06 N, 99 07 53 W

**Location:** Sacred Precinct (Tenochtitlan, Mexico) Type: former

**Date:** 15th century

**Related Work:** distinguished from Totocalco (aviary)

**General Subject:** architecture  **Type:** isness

**Note:** Storehouse in 16th-century Tenochtitlan (now Mexico City). Totocalco and Totocalli were terms used interchangeably in different sources to refer to one of two places, the first was a storehouse to the east of the main temple precinct where Mexico precious goods were kept, while the other was housed birds of the realm.

**Contributors:** FloCo VP

**Sources:** GRI, FloCo terminology (2019-); Sahagún, Historia general (1989) v3:1189; Simeón, Diccionario nahuatl (1992) v13:49

---

**What is the Florentine Codex Initiative?**


**Florentine Codex, Book 12, Ch 18, Folio 28 recto, 1577**

**Tenochtitlan, map published in Nuremberg in 1524**

Sitterwerk workshop, April 2021: Getty Vocabularies
Recording information about lost works

- Reconstructed disassembled works, components held in different repositories or locations
- Common with manuscripts, paintings, sculpture, architecture
- May be varying opinions on reconstructions

CONA ID 700009486 Proposed reconstruction of fragments of Masaccio's Pisan altarpiece (after C. Gardner von Teuffel 1977).
Scope of CONA

• House is depicted in a drawing by the architect and a photograph by Julius Shulman

• Also for linking visual surrogates to the works depicted

Cona record for the house
CONA ID 700000090
Classification architecture
Work Type: house
Title: Case Study House No. 21
Title: Bailey House  Title: CSH #21
Creator: architect: Pierre Koenig
Creation Date: 1956-1958; renovated 1998
Dimensions: 1 story, 1320 square feet, 4 rooms and 2 baths, on a 110 x 160 foot lot
Mat & Tech: steel frame and flat roof deck
Current Location: Los Angeles (California, USA)  Address Note:
34.116664 -118.391623; 038 Wonderland Park Avenue, Hollywood Hills, Los Angeles, 90046

Linking to works depicted in other works

• House is depicted in a drawing by the architect and a photograph by Julius Shulman

• Also for linking visual surrogates to the works depicted

Cona record for the house
CONA ID 700000090
Classification architecture
Work Type: house
Title: Case Study House No. 21
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Sitterwerk workshop, April 2021: Getty Vocabularies
Scope of CONA

**Conceptual works, multiples, series of works**

- Single print cataloged as an item
- Print at a museum or special collection is cataloged as an item
- Unique physical item = linked to conceptual record
Conceptual works, multiples, series of works

--- series ---

Unique physical item → conceptual record for print → a series
Guidelines for Contributions

- Editorial Guidelines
- e.g., for Preferred Term
- DEAI Issues
Complying with standards and rules in creating vocabularies

Editorial rules are drawn from common practice, represent best practice

How to choose the Preferred term?

It is the term most commonly used in the preponderance of current, standard, and authoritative sources

General rules for English, lowercase. For other languages, refer to standard rules for that language

Use the plural for count nouns, that is, for nouns that would be quantified by "how many?" If the preferred term is a plural, make an alternate descriptor in the singular form

- chairs (Record-Preferred, en, Descriptor)
- chair (en, Alternate Descriptor)
- codices (Record-Preferred, en, Descriptor)
- codex (en, Alternate Descriptor)
Complying with standards and rules in creating vocabularies
Editorial rules are drawn from common practice, represent best practice

- Terms must have true synonymy
- If the variant term is not of the same etymological origin, be especially careful
- Indeed, the UFs here are types of gum arabic, not synonyms

**gum arabic** *(preferred, English-P)*
- arabic, gum *(English)*
- babool gum *(English)*
- babul gum *(English)*
- Acacia gum *(English)*
- gomme arabique *(French-P)*
- goma arábiga *(Spanish-P)*

---

**Materials:** watercolor and gum arabic over partial transfer print on vellum

---

Record Type: item
Class: prints and drawings
Work Type: print
Title: Pomegranate with Blue Morpho Butterflies
Creator: Maria Sibylla Merian
Creation Date: ca. 1705
Materials: watercolor and gum arabic over partial transfer print on vellum
Dimensions: 14 5.8 x 11 7/8 inches (37.2 x 30.2 cm)
Subject: animal botanical pomegranate (Punica granatum) Blue Morpho (Morpho menelaus) Banded Sphinx Moth (Eumorph fasciatus)
Description: Pomegranate with Blue Morpho Butterflies and Banded Sphinx Moth Caterpillar (Punica granatum with Morpho menelaus and Eumorph fasciatus).
Relationship Type: part of
Related Work: The Insects of Suriname (plate 0)
Current Location: The Royal Collection (London, England), copyright 2019 Her Majesty Queen Elizabeth II
Complying with standards and rules in creating vocabularies

North American civilization that existed in Arizona, New Mexico, Colorado, and Utah; flourished from the first century CE to around 1300 CE.

Include outdated variant terms

**Ancestral Puebloan** (preferred, C,U, English-P,D,U,A) preferred by
  - Native Americans, and in most common usage
  - Ancestral Pueblo (C,U, English, UF,U,U)
  - Moki (Ancestral Puebloan) (C,U, English, UF,U,U)
  - Moqui (Ancestral Puebloan) (C,U, English, UF,U,U) meaning "the dead," used by the Hopi to identify their ancestors
  - Basketmaker-Pueblo (C,U, English, UF,U,U)
  - Hisatsinom (C,U, English, UF,U,U)
  - Oude Pueblo (C,U, Dutch-P,D,U,U)
  - Pueblo Ancestral (C,U, Spanish-P,D,U,U)
  - cultura Pueblo (C,U, Spanish, AD,U,U)

**Anasazi** (H,U, English, UF,U,U) avoided in modern usage, non-preferred by contemporary Pueblo peoples

- prefer culturally sensitive vs. derogatory
- but include all variant or alternate terms to provide access

Sensitivity to DEAI issues

Diversity, Equity, Accessibility, and Inclusion
Complying with standards and rules in creating vocabularies

- In general: Do not coin a new term by translating from the other language.
- E.g., do not invent a translated English *deceive-the-eye* for the French *trompe-l'oeil*.
- All descriptors in the AAT must have warrant from multiple authorized sources in the language (English).
- Official translating projects may coin terms under certain conditions (see below).

**trompe-l'oeil**  
*(record-preferred, English-P, French-P)*

### Coined Terms and Loan Words

- Loan words are terms borrowed from other languages that have become naturalized in English:
  - *lits à la duchesse*
  - *mihrabs*
  - *sotto in su*
  - *Schnitzaltars*
  - *Rathäuser*
- May be both preferred English and preferred other language (French).

---

John Frederick Peto, *The Poor Man's Store*; 1885, Oil on canvas and panel/wood, Museum of Fine Arts, Boston, Gift of Maxim Karolik for the M. and M. Karolik Collection of American Paintings, 1815–1865, 1962, 35 1/2 x 25 5/8 in. (90.2 x 65.1 cm).
Complying with standards and rules in creating vocabularies

- In AAT, no unbound compound terms, Style – plus – Work Type
- Which will your local system or authorities allow?
- What is your local methodology?

Precoordination or Postcoordination

**precoordination**: Combination of individual concepts into compound or complex terms at the point of data storage, e.g., “Baroque still life”

**postcoordination**: Combination of individual concepts into compound or complex terms at the point of retrieval, e.g., “Baroque” + “still life”
Local authorities coordinated with large vocabularies

- Compound terms are multiple-word terms
- A published vocabulary typically limits inclusion of compound terms, only “unique concepts”
- You may construct additional compound terms in the work record, “precoordination”
- E.g., if you have a red silk and black wool vestment, indexing should bind “red” and “silk” together

When you need compound terms that are not bound in the published authority, construct them locally

Material: red silk
- Using separate fields that are bound, e.g., Material and Color
- Using subfields within a field
- Using local compound terms that bind the two words together
Each term must represent a single concept or unit of thought. A single concept is frequently expressed by a single-word term, but in many cases a multiword term may be required to represent the concept. A multiword term for a concept is called a compound term. A compound term typically has a focus word and one or more modifiers.

- **Examples**
  
<table>
<thead>
<tr>
<th>domes</th>
<th>watercolor</th>
</tr>
</thead>
<tbody>
<tr>
<td>flying buttresses</td>
<td>art historians</td>
</tr>
<tr>
<td>stained glass</td>
<td>High Gothic</td>
</tr>
<tr>
<td>archival quality</td>
<td>Felis domesticus</td>
</tr>
</tbody>
</table>

Too many unnecessary compound terms make the thesaurus cluttered and difficult to use. Do not include “unbound” compound terms.

https://www.getty.edu/research/tools/vocabularies/guidelines/aat_3_3_terms_names.html#3_3_2_5_5

» **When to create a compound term**

Make a compound term when one or more of the following conditions exist:

- When the meaning of the expression cannot be accurately reconstructed from the constituent independent parts, generally because the modifier or the focus term changes its meaning in the compound expression (e.g., High Gothic).
- When the modifier suggests a resemblance, as in a metaphor, to an unrelated thing or event (e.g., rose windows, barrel organs, spade money, saddlebag houses).
- When the modifier defines a specific shape or type of the focus term (e.g., sleigh beds, basket.
Issues and Challenges

Indexing with Vocabularies

Specificity

• **Specificity** refers to the degree of precision or granularity used (e.g., *campanile* rather *tower*)
• However, catalogers should use terms only as specific as warranted by authoritative sources
• With all indexing, it is better to be accurate and broad rather than incorrect and specific

- How precise are your indexing terms?
- “temples” or “wats”
- “photographs” or “daguerreotypes”
- Collection size
- Collection focus
- Expertise of catalogers
- Expertise of users

Sitterwerk workshop, April 2021: Getty Vocabularies
Indexing with Vocabularies

- Index only what is known from authoritative sources
- Broad and accurate is better than specific and wrong
- Common or Scientific?
- May link to scientific or common name, as well as to plurals, singulants, languages as necessary

**General Subjects:** animal, botanical  
**Specific Subjects:** Bombyx mori (species)

---

- **AAT**
  
  - Insecta (class)
  - Lepidoptera (order)
  - Bombycoidea (superfamily)
  - Bombycidae (family)
  - Bombyx (genus)
  - Bombyx mandarina (species)
  - Bombyx mori (species)

---

**Terms/Names**

- Bombyx mori
- silk moth
- ver à soie
- domestic silk moth

---

Sitterwerk workshop, April 2021: Getty Vocabularies
Exhaustivity

- **Exhaustivity** refers to the degree of depth and breadth that the cataloger uses, often expressed by using a larger number of indexing terms or a more detailed description.
- Always include the minimum required “core” fields.
- However, is it useful to index every possible applicable term beyond the core?
- If not, where do you draw the limit? Index the most important or most prevalent characteristics.

- How many aspects of a work do you catalog? How many terms do you assign to a work?
- Time limitations
- Focus of the collection
2.1.11 Uncertainty and ambiguity in indexing fields

- **Indexing fields are intended for retrieval.** Any field that contains a controlled number (e.g., Start Date) or values controlled by pick lists (e.g., Preferred flag) or controlled files (e.g., Language) are indexing fields. Consider retrieval issues when you assign terms and values to such fields.

- **When fields do not display to end-users:** Some fields do not display to end-users. For example, the Start Date and End Date do not display to end-users; for these fields, estimate broadly the span of time that is applicable. Estimating too narrowly will result in failed retrieval. However, estimating overly broadly will result in false hits in retrieval.

- **When fields display to end users:** Most fields in the AAT are displayed to end-users. For these fields, do not make wild estimations or guess. However, if a specific value is in question, use a broader value or use both of two possible values, depending upon the circumstances. For example, in the Scope Note, if sources disagree about whether a characteristic developed in 15th-century Bruges or Brussels, you could 1) state that the concept was Flemish (encompassing both Bruges and Brussels), or 2) name both cities, stating that scholars disagree regarding if the concept developed in Bruges or Brussels.

- **Knowable information:** For information that is *knowable* but simply unknown by you, always use a more general term or omit the information. When the lack of knowledge is due to your ignorance regarding the issue, do not use terms such as "probably" or "perhaps" because this implies that scholars are uncertain of this information.

- **Debated information:** For information that is *unknowable* because scholars disagree because the historical or archaeological information is incomplete or interpretation of the information is debated, you may use terms such as "probably" or "perhaps" to
Additional questions

Q: What does it mean to receive someone’s personally ordered papers and how to apply an institutional, global cataloguing information to that?

A: That is outside the scope of the Getty Vocabularies. GRI Special Collections complies with professional archival standards, and we are working across the Getty to incorporate the Getty Vocabularies more into the normal workflow. Currently, we harvest terms they use and add them to the Getty Vocabularies, use these terms on the retrieval end (not so much at the cataloging stage).

Data for same print as parsed in GRI SC DB and in CONA

- Professional standards are important for various disciplines
- Use mapping and cross-referencing, not all use the same

Form/Genre
- Prints -- Low Countries -- 16th century
- Etchings -- Low Countries -- 16th century
- Engravings -- Low Countries -- 16th century
- Scrolls (visual works) -- Low Countries -- 16th century
- Hand coloring

Subjects
- Charles V, Holy Roman Emperor, 1500-1558 -- Coronation
- Clement VII, Pope, 1478-1534
- Coronations -- Italy -- Bologna
- Horse processions -- Italy -- Bologna
- Processions -- Italy -- Bologna
- Festivals -- Italy -- Bologna -- Pictorial works
- Bruning, Engelbertus, printer.

Contributors
- AAT
- LOC

Display Materials: 1 scroll (40 prints): 38 etchings and 2 engravings, hand colored in watercolor, gum arabic.

Sitterwerk workshop, April 2021: Getty Vocabularies
How to Choose Contributors/Contributions

- Working with the community
- Becoming more multicultural, multilingual, diverse
Getty Vocabularies: The Community

• Target audiences are researchers, art museums, special collections, art libraries, and archaeological and conservation projects, although other audiences are frequent users as well
• Developers and information providers
• The researchers themselves are also now users

Contributors to the Getty Vocabularies

• Institutions that catalog or index art, architecture, related disciplines; translation consortia

Users of the Getty Vocabularies

• Catalogers, researchers, vendors (e.g., TMS)
• Examples of users include Europeana, CHIN, American Art Collaborative (AAC), Linked.Art
• Through links or contributions to other resources, e.g., VIAF (Virtual International Authority File)
Contributors to the Getty Vocabularies

https://www.getty.edu/research/tools/vocabularies/contribute.html

- Contributors agree to conditions via online click through
- Proposed contribution is reviewed by governance groups, accepted
- Send sample data, send full data contribution in bulk
- Processed and loaded by Getty
- Published in various formats monthly
### Examples of Contributors to Vocabularies

<table>
<thead>
<tr>
<th>Provenance Index</th>
<th>GRI Photo Archive</th>
<th>Getty</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI Special Collections</td>
<td>GRI Library</td>
<td>Getty Projects</td>
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<td>Canadian Heritage Information Network</td>
<td>Getty Projects</td>
<td>Getty Projects</td>
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<td>Belgian Initiative to Broaden the Network for the French Terminology in Art History Collaborative Vocabulary of Arts and Architecture, Brazil</td>
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<td>Staatliche Museen zu Berlin Preussischer Kulturbesitz</td>
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<td>Avery Architectural &amp; Fine Arts Library</td>
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<td>Frick Art Reference Library</td>
<td>Getty Projects</td>
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<td>Bunting Visual Resources Library, U. of New Mexico</td>
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<tr>
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<td>Getty Projects</td>
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<td>Israel Museum, Jerusalem</td>
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<tr>
<td>Smithsonian National Museum of African Art</td>
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<tr>
<td>Grove Art online</td>
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<tr>
<td>Art repositories</td>
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<tr>
<td>Florentine Codex Initiative (GRI)</td>
<td>Getty Projects</td>
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<tr>
<td>Traditional Chinese Architecture (Vanderbilt, SEU)</td>
<td>Getty Projects</td>
<td>Getty Projects</td>
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</table>

### WHO ARE THE CONTRIBUTORS?
- Getty projects
- Over 300 institutions, consortia, research projects

### HOW IS THE DATA GENERATED?
- Contrib. may research and create original data for the purpose of contribution
  - E.g., translations: Spanish, Dutch, Chinese, German, French, Croatian, Portuguese, Japanese
- Contrib. may map data already collected in the course of their own work
  - E.g., repositories and documentation projects, research projects
- Contributions = 10s of thousands per year
# Examples of Contributors to Vocabularies

The Getty vocabularies grow in part through continued efforts and contributions from the expert user community. Below is a list of contributors to the Getty vocabularies. The list is extensible and subject to frequent updates.

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| GRI Special Collections | Netherlands Institute for Art History (RKD) | Academia Sinica of Taiwan |
| Florentine Codex Initiative | Staatliche Museen zu Berlin | Snite Museum at University of Notre Dame |
| Getty Conservation Institute | Built Works Registry | Israel Museum Jerusalem |
| J. Paul Getty Museum | Österreichische Galerie Belvedere | National Museum of Women in the Arts |
| GRI Library | Museum of Modern Art, NYC | Frick Art Reference Library |
| Collaborative Vocabulary of Arts and Architecture, Brazil | Museu de Arte de São Paulo | Centro de Documentación de Bienes Patrimoniales, Chile |
| Pinacoteca do Estado de São Paulo | Tokyo National Research Institute for Cultural Properties (Tobunken) | Smithsonian Institution National Museum of African Art |
| Canadian Heritage Information Network | Scientific/Academic Library Network Working Group for AAT (Anet) | Belgian Initiative to Broaden the Network for the French Translation of the Art and Architecture Thesaurus (BEINFRAT) |
| Indiana University Visual Resources Center | Grove Art online | Courtauld Institute |
| Istituto Centrale per il Catalogo e la Documentazione, Rome | Réseau canadien d’information sur le patrimoine | Bunting Visual Resources Library at the University of New Mexico |
| European Fashion Heritage Association | Canadian Centre for Architecture | Rijksmuseum in Amsterdam |

Over 300 contributors
Compiled resources = multiple contributors, separate records for same entity

- Published as unified records for end users

- Rather than clustering, Getty vocabularies merge the data into a homogenous whole

- The attribution to the contributor and sources are retained
## Users of the Getty Vocabularies

### Top 15 GRI-wide page views per month

<table>
<thead>
<tr>
<th>No.</th>
<th>Page</th>
<th>Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Vocabs: AAT</strong></td>
<td><strong>16,106</strong></td>
</tr>
<tr>
<td>2</td>
<td><strong>Vocabs: ULAN</strong></td>
<td><strong>11,826</strong></td>
</tr>
<tr>
<td>3</td>
<td><strong>Vocabs: TGN</strong></td>
<td><strong>9,479</strong></td>
</tr>
<tr>
<td>4</td>
<td>GRI landing page</td>
<td>5,676</td>
</tr>
<tr>
<td>5</td>
<td>GRI list of resources</td>
<td>5,171</td>
</tr>
<tr>
<td>6</td>
<td>Exhibition: monumentality</td>
<td>4,273</td>
</tr>
<tr>
<td>7</td>
<td><strong>Vocabs: general information</strong></td>
<td><strong>4,245</strong></td>
</tr>
<tr>
<td>8</td>
<td>Provenance: search</td>
<td>3,895</td>
</tr>
<tr>
<td>9</td>
<td>Library</td>
<td>3,345</td>
</tr>
<tr>
<td>10</td>
<td>Provenance: general information</td>
<td>2,690</td>
</tr>
<tr>
<td>11</td>
<td>BHA (Bibliography for History of Art)</td>
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<tr>
<td>12</td>
<td>Photo Archive</td>
<td>1,759</td>
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<tr>
<td>13</td>
<td>GRI: Digital Collections: Turkey photos</td>
<td>1,673</td>
</tr>
<tr>
<td>14</td>
<td><strong>Vocabs: CONA</strong></td>
<td><strong>1,489</strong></td>
</tr>
<tr>
<td>15</td>
<td><strong>Vocabs: CDWA (cataloging rules for art)</strong></td>
<td><strong>1,143</strong></td>
</tr>
</tbody>
</table>
• Data release files also have high numbers of users
• Relational Tables, XML, APIs
• Example illustrates LOD with very high use for one month
• AAT is also available at satellite sites in Germany, Taiwan, Chile, the Netherlands
• Vocabularies are available in various vendor systems

*Not including robots, worms, or replies with special http address

<table>
<thead>
<tr>
<th>Month</th>
<th>Unique visitors</th>
<th>Number of visits</th>
<th>Pages</th>
<th>Hits</th>
<th>Bandwidth</th>
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<tbody>
<tr>
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<td>5,838</td>
<td>23,282</td>
<td>7,079,022</td>
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<td>4,220,451</td>
<td>4,395,790</td>
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<tr>
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<td>61,111</td>
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<td>Nov 2020</td>
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<td>Dec 2020</td>
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<tr>
<td>Total</td>
<td>44,328</td>
<td>470,162</td>
<td>47,299,141</td>
<td>48,599,211</td>
<td>961.69 GB</td>
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</table>
Procedures for Contributions

- Workflow for contributions
- Workflow for processing
Establish workflow: Your workflow will not be the same as ours

**Workflow for contributions**

- Sign the LOA → approval
- Submit a 1-page proposal
- Submit sample records

Institutions or consortia who wish to contribute will be asked to describe the scope and nature of the proposed contribution. Proposed contributions are authorized by the Getty, based on established criteria for content and format, and according to available resources.
Decision trees are useful.
Enabling contributors to clean their own data

OR = tool for working with messy data: cleaning it; transforming it from one format into another; and extending it with web services and external data

https://www.getty.edu/research/tools/vocabularies/obtain/openrefine.html
<table>
<thead>
<tr>
<th>Artist Name</th>
<th>Birth</th>
<th>Death</th>
<th>Nationality</th>
<th>Gender</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Tamburini</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tamburini, Arnaldo (Italian painter, count, 1843-1901)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Comment on works: genre, Portraits</td>
</tr>
</tbody>
</table>

### Note
- **Tamburini, Arnaldo**
- Italian painter, count (1843-1901)
- Comment on works: genre, Portraits

**Getty Vocabularies**
Getty Vocabularies: the Future
Getty Vocabularies: The Future

• Continued contributions focusing on our core mission
• Multilingual, multicultural, inclusive
• Contributions more targeted vs opportunistic
• Establish clearer criteria for contributions
• Methods to aid contributors in pre-processing, training, tools (e.g., OpenRefine, workshops, tutorials)

• Co-referencing of overlapping, similar resources; multiple IDs
• Publication is Open and Free of charge (LOD, and all formats); relational tables and XML may be discontinued
• Formats for export and integration in other resources
  • Advanced and useful to emerging technology
  • Hope to not exclude users who are not wealthy or without elite technical support
Goals: Increased multilingual, multicultural, inclusive Vocabularies

**Nat./Cultures in ULAN:**
Records total: 313,260
Nat/cultures total linked: 351,773
*a person may have multiple nationalities, cultures*

**Partial list of Nationality/Culture/Ethnicity**
European 212,286
American 55,933
African American 517
Native American, First Nations 4,394
Middle Eastern 12,006
Mexican, Central-South 11,652
African 2,588
Indian subcontinent 1,370
East Asian 6,270
Canadian 4,812
Other 49,945

Status: Current ULAN is heavily European, but our goal is to add more non-Western
Goals: Increased multilingual, multicultural, inclusive Vocabularies

Languages in AAT

136 different languages

No of terms for top 20 languages
English 165,905
Chinese 95,000
Dutch 63,336
Spanish 56,188
German 20,959
French 15,000
Italian 14,444
Latin 2,141
Hebrew 2,000
Portuguese 247
Greek 70
Nahuatl 49
etc.

Number of Terms by Language in AAT

Status: Current AAT is in process of receiving several translations and to become increasingly multilingual

Sitterwerk workshop, April 2021: Getty Vocabularies
Increasing usage around globe

Distribution of users, Vocab online search
149 countries total; top 50 in a year

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<tr>
<th>Country</th>
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<td>United Kingdom</td>
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<td>Thailand</td>
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<tr>
<td>Saudi Arabia</td>
<td>168</td>
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</tbody>
</table>
Linking the Getty Vocabularies

Improving interconnectivity:

Linking Getty Vocabularies to other resources
Thank you.

Patricia Harpring
Managing Editor
Getty Vocabulary Program

pharpring@getty.edu
vocab@getty.edu