

Linking the Getty Vocabularies:

The Content Perspective, Including an Update on CONA

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San Francisco

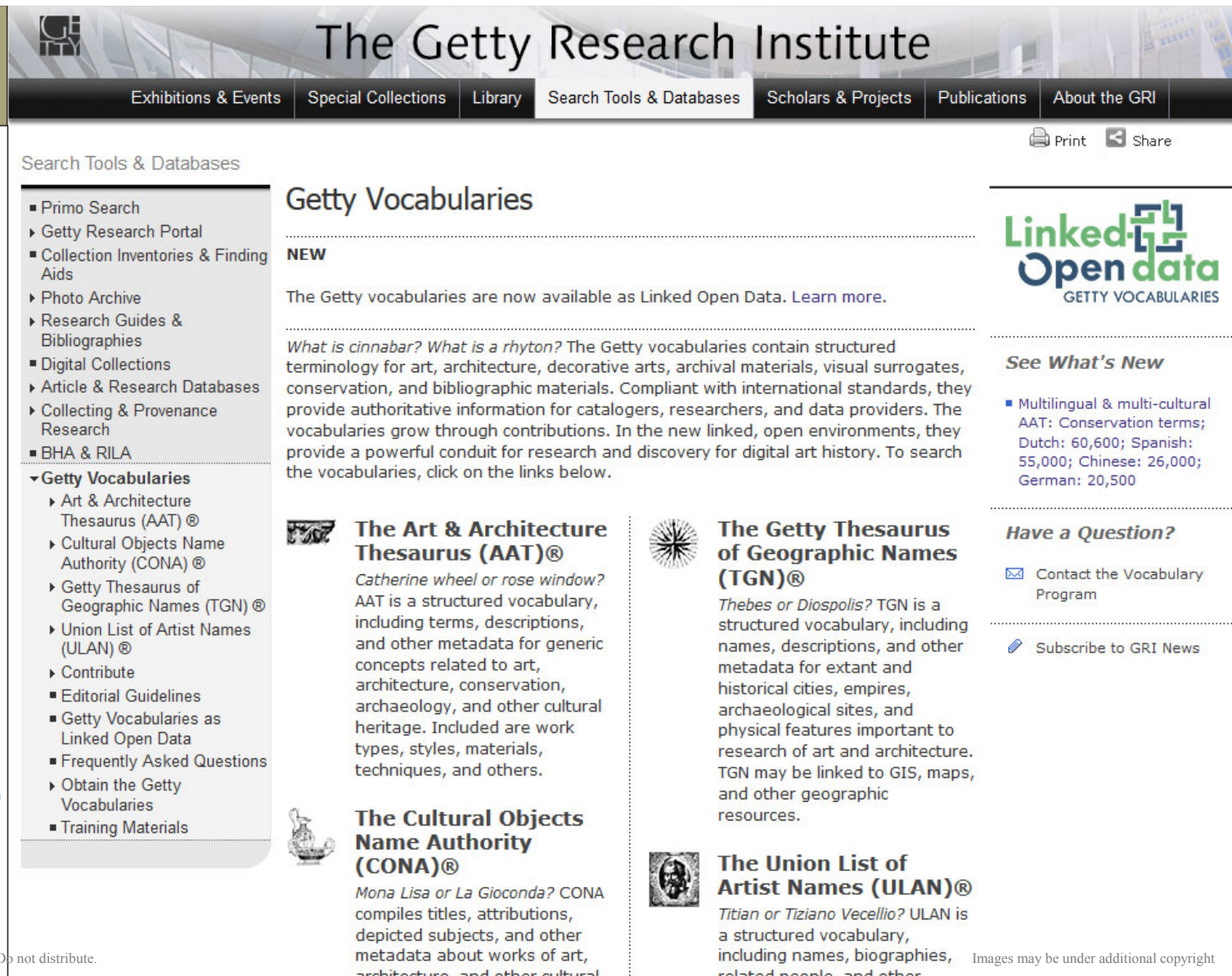
REVISED for GRI: November 2018



Find the Getty Vocab 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>



The screenshot shows the homepage of The Getty Research Institute. The header includes the GRI logo and navigation links: Exhibitions & Events, Special Collections, Library, Search Tools & Databases, Scholars & Projects, Publications, and About the GRI. A 'Print' and 'Share' button are also present.

The main content area is titled 'Search Tools & Databases' and features a sidebar with a list of resources: Primo Search, Getty Research Portal, Collection Inventories & Finding Aids, Photo Archive, Research Guides & Bibliographies, Digital Collections, Article & Research Databases, Collecting & Provenance Research, BHA & RILA, and a section for 'Getty Vocabularies'. The 'Getty Vocabularies' section lists: Art & Architecture Thesaurus (AAT)®, Cultural Objects Name Authority (CONA)®, Getty Thesaurus of Geographic Names (TGN)®, Union List of Artist Names (ULAN)®, Contribute, Editorial Guidelines, Getty Vocabularies as Linked Open Data, Frequently Asked Questions, Obtain the Getty Vocabularies, and Training Materials.

The main content area is titled 'Getty Vocabularies' and includes a 'NEW' section stating: 'The Getty vocabularies are now available as Linked Open Data. [Learn more.](#)' Below this, a paragraph explains: 'What is cinnabar? What is a rhyton? The Getty 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 vocabularies grow through contributions. In the new linked, open environments, they provide a powerful conduit for research and discovery for digital art history. To search the vocabularies, click on the links below.'

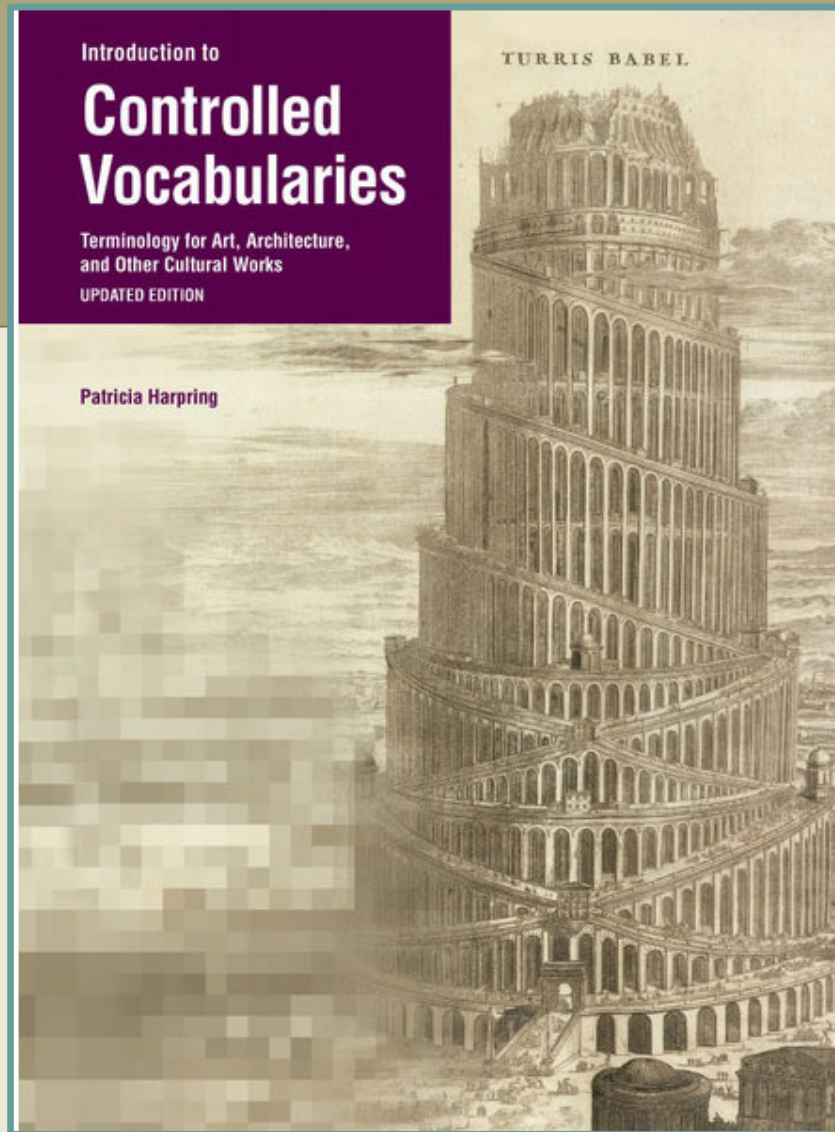
Three vocabulary sections are highlighted with icons:

- The Art & Architecture Thesaurus (AAT)®**: Icon of a wheel. Description: 'Catherine wheel or rose window? AAT is a structured vocabulary, including terms, descriptions, and other metadata for generic concepts related to art, architecture, conservation, archaeology, and other cultural heritage. Included are work types, styles, materials, techniques, and others.'
- The Getty Thesaurus of Geographic Names (TGN)®**: Icon of a compass rose. Description: 'Thebes or Diospolis? TGN is a structured vocabulary, including names, descriptions, and other metadata for extant and historical cities, empires, archaeological sites, and physical features important to research of art and architecture. TGN may be linked to GIS, maps, and other geographic resources.'
- The Union List of Artist Names (ULAN)®**: Icon of a portrait. Description: 'Titian or Tiziano Vecellio? ULAN is a structured vocabulary, including names, biographies, related people, and other...'

On the right side, there is a 'Linked-Open data' logo with the text 'GETTY VOCABULARIES'. Below it, a section titled 'See What's New' lists: 'Multilingual & multi-cultural AAT: Conservation terms; Dutch: 60,600; Spanish: 55,000; Chinese: 26,000; German: 20,500'. At the bottom right, a 'Have a Question?' section includes links to 'Contact the Vocabulary Program' and 'Subscribe to GRI News'.

Introduction to Controlled Vocabularies

- For information about controlled vocabularies
- Author:
Patricia Harpring
- Series Editor:
Murtha Baca



The Way We Were
Where We Are Now

• Introduction

The Way We Were

Finding information
by hand

Researching art, architecture, cultural heritage

- 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, etc. were developed to allow consistency in cataloging and improvement of retrieval

My box of research materials for one project



MAKING RELATIONSHIPS LINKING

LINKS

- **Goal = data linked to other data, discoverable** –
First = human factor, links/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
LINK **tgn:1000080** Italy or any of its descendants
Birth date between 1250 and 1780

Hier. Link in TGN
Descendants of facet **ulan:500000002** **LINK**
"Persons, Artists"
Not having nationality **aat:300111198** Italian or any of its descendants **LINK**

- Then use this set of artists to search for works

A few decades have passed ...
Using Linked Open Data

Getty Vocabularies are LINK-able

Data in standard formats that allow linking

ULAN

Getty Vocabularies: LOD SPARQL Queries Any Search... Search Brief

Possessions)

4.20 Places Nearby Each Other

5 ULAN-Specific Queries

5.1 Agents by Type

5.2 Associative Relations of Agent

5.3 Female Artists

5.4 Female Artists as a Hobby

5.5 Native American Painters

5.6 Names of Native American Painters

5.7 Architects Born in the 14th or 15th Century

5.8 Indian and Pakistani Architectural Groups

5.9 Non-Italians Who Worked in Italy

5.10 Artists Associated to a Given Patron or his Family

5.11 German, Dutch, Flemish printmakers, listed with their teachers

5.12 Artists Whose Identity May be Associated or Confused With Another

5.13 Ordered Hierarchy of Given Subject

5.14 Ancient Artists or Groups by Nationality

5.15 Art Repositories in the USA by State

5.16 Popes and Their Reigns

5.17 Pope Reign Durations

5.18 Life Events

5.19 Artists with Name, Bio, Nationality, Type

6 Language Queries

6.1 Scientific Names by Language

6.2 Scientific Names not in English and Latin

6.3 Find Terms by Language Tag

6.4 Languages and ISO Codes

6.5 Language URLs

```
select ?x ?name ?bio ?birth {
  {select distinct ?x
   {?x
    foaf:focus/bio:event/(schema:location[(schema:location/gvp:broaderExtended)) tgn:1000080-place}}
   ?x gvp:prefLabelGVP/xl:literalForm ?name;
    foaf:focus/gvp:biographyPreferred [
      schema:description ?bio;
      gvp:estStart ?birth].
   filter ("1250"^^xsd:gYear <= ?birth && ?birth <=
    "1780"^^xsd:gYear)
   filter exists {?x gvp:broaderExtended ?facet.
    filter (?facet in (ulan:500000003,
    ulan:500000002))}
   filter not exists {
    ?x
    foaf:focus/(schema:nationality[(schema:nationality/gvp:broaderExtended)) aat:300111198}}
```

LINK – [this is coming, as of now not enough works are discoverable]

What is Linked Open Data (LOD)?

```
{  "Subject": {    "type": "uri",    "value": "http://vocab.getty.edu/aat/300198841"  },  "Predicate": {    "type": "uri",    "value": "http://www.w3.org/2000/01/rdf-schema#label"  },  "Object": {    "xml:lang": "el-latn",    "type": "literal",    "value": "rhyta"  } }, {  "Subject": {    "type": "uri",    "value": "http://vocab.getty.edu/aat/300198841"  },  "Predicate": {    "type": "uri",    "value": "http://www.w3.org/2000/01/rdf-schema#label"  },  "Object": {    "xml:lang": "es",    "type": "literal",    "value": "rhyta"  } }, {  "Subject": {    "type": "uri",    "value": "http://vocab.getty.edu/aat/300198841"  },  "Predicate": {    "type": "uri",    "value": "http://www.w3.org/2000/01/rdf-schema#label"  },  "Object": {    "xml:lang": "en",    "type": "literal",    "value": "rhyton"  } }, {  "Subject": {    "type": "uri",    "value": "http://vocab.getty.edu/aat/300198841"  },  "Predicate":
```

The AAT, TGN, and ULAN are now available as LOD

They are published under the Open Data Commons Attribution License (ODC-By) 1.0

- When data is linked and open, it means that data is structured and published according to the principles of Linked Data = both interlinked and made openly accessible and shareable on Semantic Web
- Goal = allow data from different resources to be interconnected and queried

Basics of LOD

What is Linked Open Data (LOD)?

- Universal Resource Identifier (URI) - an ASCII string used to identify things on the Semantic Web
<http://vocab.getty.edu/aat/300198841>

- URIs are linked to each other through triples composed of subject-predicate-object relationships
<aat:300198841> <gvp:aat2100_distinguished_from> <aat:300197140>

Unique,
persistent IDs
are critical



subject

rhyta

predicate

– [are] distinguished from –

object

stirrup cups



- The definitions of data elements and links are described by ontologies
<http://www.w3.org/2004/02/skos/core#>
<http://www.w3.org/ns/prov#>
<http://purl.org/dc/elements/1.1/>
- Data is delivered to a requesting agent through a standard triple serialization using HTTP
RDF/XML, Notation-3 (N3), Turtle, N-Triples, RDFa, JSON, JSON-LD

Scope of Each
Getty Vocabulary

User Statistics

- Context of
the Getty Vocabularies

Context of the Getty vocabularies

Getty processes contributions

- The Getty vocabularies comply with standards for thesaurus construction (NISO and ISO)
- Grow through contributions from the user community
- Compiled and disseminated by the Getty Vocabulary Program (GVP) and Getty Digital
- Released in online search (refreshed every month), XML, Relational Tables, Web Services, JSON, RDF, N3/Turtle, N-Triples; analysis going on now for other formats

Batch loading of data

*From various contributors,
In our prescribed format*

Processing Data

*Global edits, VCS system,
Merging, editing/adding info
Moving/adding links*

Releasing Data

*Release
formats
Web, LOD,
XML, Rel Tables*

Context of the Getty vocabularies

Getty processes contributions

- 300 contributing institutions to the Getty vocabularies
www.getty.edu/research/tools/vocabularies/contributors.html

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	
Brief Name	Full Name
A	
* AS-Academia Sinica	Academia Sinica (Academia Sinica; Nankang, Taiwan)
AAM	Ackland Art Museum (Chapel Hill, North Carolina)
AKAG	Albright-Knox Art Gallery (Buffalo, New York)
AC	Allegheny College (Allegheny, Pennsylvania)
...	...

Batch loading of data

From various contributors,
In our prescribed format



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Moving/adding links

Releasing Data

Release
formats
Web, LOD,
XML, Rel Tables



Context of the Getty vocabularies

Getty processes contributions

- Valued as authorities =
 1. quality is reliable (compiled by experts and sources are cited)
 2. the data is linkable
- Use of Getty vocabularies = very high for the domain
- Online search page = around 100,000 searches / month, top resources at Getty Research Institute (GRI)
- Linked Open Data (LOD), typical month in 2018 = over 1,000,000 records (92.95 GB of data)
- Implemented in collection management systems and Web sites around the world, new implementations

Batch loading of data

*From various contributors,
In our prescribed format*

Processing Data

*Global edits, VCS system,
Merging, editing/adding info
Moving/adding links*

Releasing Data

*Release
formats
Web, LOD,
XML, Rel Tables*

How are the Getty vocabs used?

LINKS to vocabs

- Used for cataloging and for retrieval
- Fields controlled by Getty vocabularies

AAT record

Fields controlled by vocabs

[Semantic View](#) ([JSON](#), [RDF](#), [N3/Turtle](#), [N-Triples](#))

ID: 300011443

Page Link: <http://vocab.getty.edu/page/aat/300011443>

 **marble (rock)** (metamorphic rock, rock (inorganic material)) ... Materials (hierar

Catalog Level item

Classification sculpture | antiquities

Work Type statuette **AAT**

Titles Female Figure of the Kilia Type
Female Figure (Star Gazer)

Creator unknown Anatolian **ULAN**

Creation Date 2800/2200 BCE

Style/period: Chalcolithic

General Subject human figures

Specific Subject fertility | human female

Current Location J. Paul Getty Museum, Getty Villa
Malibu (Los Angeles, California, USA) **ULAN**
Repository Number 88.AA.122 **TGN**

Dimensions 14.3 cm height (5 5/8 inches)

Mat & Tech carved marble **Index:** marble **AAT**

Style Kilia type

marble (rock) (preferred, C, U, LC, English)
marbles (rocks) (C, U, English, AD, U, N)
marmor (C, U, English, UF, U, N)
大理石 (C, U, Chinese (traditional)-P, D, U, U)
大理岩 (C, U, Chinese (traditional), UF, U, U)
dà lǐ shí (C, U, Chinese (transliterated Har
da li shi (C, U, Chinese (transliterated Pin
ta li shih (C, U, Chinese (transliterated W
marmer (C, U, Dutch-P, D, U, U)
marmerplaat (C, U, Dutch, UF, U, U)
marmerplaten (C, U, Dutch, UF, U, U)
marbre (roche) (C, U, French-P, D, U, N)
marbres (roche) (C, U, French, AD, U, N)
marmo (C, U, Italian-P, D, U, N)
mármol (C, U, Spanish-P, D, U, U)
Marmor (C, U, German-P, D, U, N)

Scope of each Getty vocabulary



AAT
Art & Architecture Thesaurus®

Includes **generic terms**, dates, relationships, sources, and notes for **work types, roles, materials, styles, cultures, techniques, and other concepts**

Five Getty vocabularies

Sample record

AAT_ID: 300011329

Terms:

bas-reliefs (pref, en, fr)

bas-relief (en, fr)

low reliefs (en)

bas-reliëfs (nl)

bassorilievo (it)

bajos relieves (es)

Flachreliefs (de)

淺浮雕 (雕塑)(zh; Chinese traditional)

qiǎn fú diāo (Chinese (transliterated Hanyu Pinyin))

qian fu diao (Chinese (transliterated Pinyin without tones))

ch'ien fu tiao (Chinese (transliterated Wade-Giles))

Hierarchical Relationships

Objects Facet

.. Visual and Verbal Communication

.... Visual Works

..... <visual works by material or technique>

..... sculpture (visual works)

..... <sculpture by technique>

..... reliefs (sculptures)

..... bas-reliefs (sculpture)

Associative Relationships

produced by ...

bas-relief (technique) [300053623]

distinguished from ...

high reliefs (sculpture) [300184782]

Scope Notes:

- Refers to works executed in relatively shallow relief. (en)
- Beeldhouwwerken uitgevoerd in relatief laag reliëf. (nl)
- Úse se para obras ejecutadas en relieve relativamente superficial. (es)
- 指浮雕圖案較淺的作品。 (zh)
- Bezeichnet eine Arbeit, die in relativ flachem Relief ausgeführt ist. (de)

Contributors: AS-Academia Sinica, CDBP-DIBAM, GCI, ICCD, IfM-SMB-PK, RKD, AAT-Ned, VP

Sources: AATA database (2002-) 120890; Avery Index (1963-); Grove Art Online; Oxford English Dictionary; Lucie-Smith, Thames & Hudson Dictionary of Art Terms (2006); Ching, Dictionario Visual de Arquitectura (1997); Preble and Preble, Artforms (1989); RIBA, Architectural Keywords (1982); Van Dale groot woordenboek (1994); IfM Berlin; TAA database (2000-); AAT-Ned (1994-)



Scope of each Getty vocabulary



TGN

*Getty Thesaurus of
Geographic Names®*

Focuses on places relevant to **art, architecture**, and related disciplines, recording names, relationships, place types, dates, notes, and coordinates for **current and historical cities, nations, empires, archaeological sites, lost settlements, and physical features**

Is a thesaurus, but through LOD
TGN may be linked to
GIS and maps

Sample record

TGN_ID: 300011329

Names:

Siena (pref, en,it,de,nl,fr,es)

Sienna (en, it)

Sienne (fr)

Σιένα (el)

锡耶纳 (zh)

Сиена (ru)

סיינה (he)

シエーナ (ja)

Sienese (en,adj)

Senae (historical, la)

Saena Julia (historical, la)

Sena (historical, Etruscan)

Hierarchical Rels. (*polyhierarchical*)

World (facet)
.. Europe (continent)
... Italy (nation)
.... Tuscany (region)
..... Siena (province)
..... Siena (inhabited place)

World (facet)
.. Europe (continent)
... Italian Peninsula (peninsula)
.... Etruria (former confederation)
..... Siena (inhabited place)
Historical: Late Etruscan

Associative Rels

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

Place Types

inhabited place
(flourished by 6th century BCE)
city
archiepiscopal see
commune (administrative) since 1125
cultural center
university center
world heritage site

Lat: 43 19 07 N (43.3180)

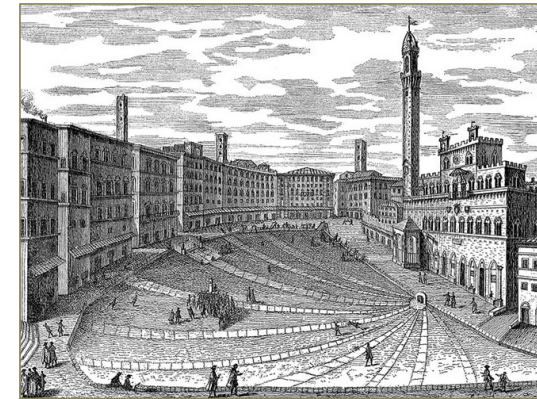
Long: 011 19 50 E (11.3300)

Elevation: 1056.430 feet (322.0000 meters)

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 ...

Contributors: BHA, FDA, GRLPSC, VP

Sources: *Annuario Generale* (1980); *Canby, Historic Places* (2007) 2/861; *Dizionario Corografico Toscana* (1977) 1508; *Library of Congress Subject Headings* (2002-); *Milanesi, Storia dell'Arte Senese* (1969) *passim*; *NGA/NIMA database* (2003-) -129709; *TCI: Toscana* (1984) 479 ff; *Times Atlas of the World* (1992) 183; *UNESCO World Heritage Centre [online]* (1992-) accessed 20 July 2010; *Webster's Geographical Dictionary* (2007) 1114



Scope of each Getty vocabulary



ULAN

Union List of Artist Names®

Includes names, relationships,
notes, sources, and
biographical information for
**artists, architects, firms,
studios, repositories,
patrons, sitters, and other
individuals and corporate
bodies, both named and
anonymous**

Sample record

ULAN_ID: 500014514

Names:

Gaudí, Antoni (ca,es,en,fr,it)

Antoni Gaudí

Cornet, Antoni Gaudí

Cornet, Antonio Gaudí y

Gaudí, Antoni

Gaudí i Cornet, Antonio

Gaudí Jornet, Antoni

Gaudí y Cornet, Antoni

Gaudí Jornet, Antoni

Gaudi, Antoni

Gaudi, Antonio

גאודי, אנטוני (he)

安东尼·高迪 (zh)

Contributors:

VP,JPGM,Avery,FRICK, WCI,Prov,GRLPSC,BHA,CCA

Sources: Avery Authority files (1963-); Avery Index to Architectural Periodicals (1963-); Grove Art artist database (1989-); Grove Dictionary of Art online (1999-2002) accessed 13 August 2003; Harald Szeemann papers, Finding Aid, GRI Special Collections (2011-); Library of Congress Authorities database (n.d.) n 79079077

Nationalities:

Spanish (pref)

Catalan

Roles:

AAT

artist (pref)

architect

landscape architect

furniture designer

Gender: male

Birth and Death Places:

TGN

Born: Reus (Tarragona province, Catalonia, Spain))
(inhab place)

Died: Barcelona (Barcelona province, Catalonia, Spain)
(inhab place)

Associative Relationships:

collaborated with Torres-García, Joaquín (Uruguayan painter and theorist, 1874-1949) 1903-1904 [500031259]

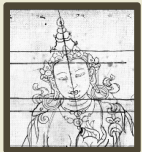
worked with ... Martorell y Montells, Joan (Spanish architect, 1833-1906) [500072753]

student of Sala Cortes, Emilio (Spanish architect, active late 19th century) [500287019]



LINKS

Scope of each Getty vocabulary



IA

Getty Iconography Authority

New resource that focuses on subjects and topics relevant to art, architecture, and related disciplines

Includes multilingual and multicultural proper names, relationships, and dates for **iconographical narratives, religious or fictional characters, themes, historical events, and named literary works and performing arts**

Sample record

IA_ID: 1000085

Names:

Avalokiteshvara (en)

Avalokiteśvara (en)

Avalokitesvara (en)

अवलोकितेश्वर (sa)

ཐུན་རས་གཟིགས་ (bo)

Spyan ras gzigs (Tibetan transliterated)

AAT links

role/characteristic is ... bodhisattva

symbolic attribute is ... lotus

culture/religion is ... Mahayana (Buddhism)

culture/religion is ... Theravada (Buddhism)

AAT
TGN
ULAN
CONA

Hierarchical Relationships

Top of the IA hierarchies

Legend, Religion, Mythology

Buddhist iconography

Buddhist characters

Avalokiteshvara (Buddhist iconography)

LINKS

Associative Relationships

associated with Krishna (Hindu deity)

counterpart is Guanyin (Buddhist bodhisattva)

counterpart is Tara (Hindu-Buddhist deity)

has as manifestation Amoghapaśa (Buddhist character)

author of Great Compassion Mantra (incantation, Buddhist, translated 7th/8th century)

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 & sources

[VP,Rijksmuseum] Encyclopedia Britannica Online (2002-); Bowker, Oxford Dictionary of World Religions (1997); Huntington, Art of Ancient India (1985); **LC:** LC control no.: sh 85010492

LINKS to other resources: LOC, Iconclass

Scope of each Getty vocabulary



CONA

Cultural Objects Name
Authority®

Compiles titles/names and
other information for works of
art, architecture, and other
cultural works, **current and
historical, documented as
items or in groups, whether
works are extant, destroyed,
or never built**

Sample record

CONA ID: 700000141

Titles/Names:

Hagia Sophia (en)
Ayasofya (tr)
Αγία Σοφία (el)
Agia Sofia
Agia Sophia
Haghia Sophia
Sainte-Sophie (fr)
Santa Sofía (es)
Sancta Sophia (la)
Sancta Sapientia (la)
Holy Wisdom (en)
Saint Sophia (en)
圣索菲亚大教堂 (zh)

Catalog Level: item

Work Types:

church (historical) **AAT**
mosque (historical)
museum
basilica

Classification:

architecture

Creation Date:

original structure
dated from 4th
century CE; present
structure built 532-537
CE; rebuilt in 12th
century

Creator Display:

Anthemios of Tralles
(Byzantine, ca. 474-
ca. 534) and Isidoros
of Meletus, the Elder
(Byzantine, active
mid-6th century)



ULAN

LINKS

Locations:

Current: İstanbul (Turkey)

Address Note: 41.008548°N; 28.979938°E

Mat & Tech: system bearing masonry, centralized plan; ashlar and brick;
interior surfaces are sheathed with polychrome marble, porphyry, and
mosaics

Dimensions: central dome: diameter 31 meters (102 feet); height 56 meters
(184 feet)

Styles:

Byzantine | Ottoman

TGN

AAT

General Subject:

architecture **Type:** isness
religion and mythology **Extent:** purpose

Specific Subjects:

Holy Wisdom (Christian allegory)

AAT
TGN
ULAN
CONA
IA

Contributors:

VP; BWR

Sources: Maidstone, Hagia Sophia (1988); Built Works Registry
database (2015-) BWR3782560; Fleming, Penguin Dictionary of
Architecture (1999); Theoharidou, Architecture of Hagia Sophia
(1988); UNESCO World Heritage Centre [online] (1992-) C356

Coordinating Contributed Records

- Linking or Merging?

Relationships and linking are built into and among the Getty vocabularies

Merging data in one record

- 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

LINK back to contributed data

Getty vocabularies merge contributed records

JPGM: tmsid_3041
Guardi, Francesco

Witt: WCI_20934875
Guardi, Francesco

Avery: avery_49856
Guardi, Francesco

BHA: bha_8476
Guardi, Francesco

GRIPA: pa_3074005
Guardi, Francesco

PROV: pr_3074665
Guardi, Francesco



detail of portrait, by Pietro Longhi,
in Ca' Rezzonico, Venice

ULAN_500017409

Names:

Guardi, Francesco
Francesco Guardi
Gardi, Francesco
Garde, Francesco
Gardis, Francesco
François Guardi

Nationalities:

Italian
Venetian

Roles:

artist
painter
landscapist

[Links to images](http://www.getty.edu/art/collection/objects/226156)
<http://www.getty.edu/art/collection/objects/226156>



Relationships and linking are built into and among the Getty vocabularies

Merging data in one record



Getty vocabularies merge
contributed records

ULAN ID	Matching name	Display biography	Roles (AAT-controlled)	Nationality (AAT-controlled)	Estimated birth date	Estimated death date
500017409	Guardi, Francesco	Venetian painter, 1712-1793	artist painter landscapist	Venetian Italian	1712	1793
500312969	Guardi, Francesco	Italian noble, born 1514	<u>noble</u>	Italian	<u>1514</u>	<u>1614</u>
500412666	Guardi, Francesco	Italian artist, ca. 1712-1793	artist	Italian	1707	1793

- Candidates for merging
- Automatically merged or rejected for merging
- Possible but not enough firm data = passed to human editors
- Long experience in perfecting algorithms → Reconciliation tools are under development by Getty Digital

A name matches exactly; role matches; a nationality matches; dates within range?

ULAN record is a merged, homogenous entity




Union List of Artist Names® Online Full Record Display


[New Search](#)

[Previous Page](#)

[Help](#)

Click the  icon to view the hierarchy.

[Semantic View](#) ([JSON](#), [JSONLD](#), [RDF](#), [N3/Turtle](#), [N-Triples](#)) [Represent](#)

 **Guardi, Francesco** (Italian painter, 1712-1793)

Note: Venetian painter, during the first half of his career he was active on decorations and church paintings; later became vedutista (view painter) of Venetian urban life.

Names:

Guardi, Francesco ([preferred](#), [V](#), [index](#), [LC](#))

Francesco Guardi ([V](#), [display](#))

Gardi, Francesco ([V](#))

Garde, Francesco ([V](#))

Gardis, Francesco ([V](#))

Gauda, Francesco ([V](#))

Guada, Francesco ([V](#))

Guarde, Francesco ([V](#))

Guardet, Francesco ([V](#))

Gvardi, Franchesko ([V](#))

Guardi, François ([V](#))

Guardi, Francisco ([V](#))

Contributors

AVERY, BHA, GRISC, GRL, GRLPA, PROV, VP, WCI, WCP, WL-Courtauld

Sources

Avery Authority files (1963-)

Harald Szeemann papers, Finding Aid, GRI Special Collections (2011-)

J. Paul Getty Museum, collections online (2000-)

Library of Congress Authorities database (n.d.) **n 50074509**

M. Knoedler & Co. records, Finding Aid, GRI Special Collections (2012-)

Provenance Index Databases, Authority file (1985-)

RILA/BHA (1975-2000)

Witt Library, Authority files



Attribution to contributor and source is maintained, but merged, unified, and "preferred" is flagged

ULAN record is a merged, homogenous entity



Union List of Artist Names® Online Full Record Display

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Click the icon to view the hierarchy.

[Semantic View](#) ([JSON](#), [JSONLD](#), [RDF](#), [N3/Turtle](#), [N-Triples](#)) [Representations](#)

Guardi, Francesco (Italian painter, 1712-1793)

Note: Venetian painter, during the first half of his career he painted architectural decorations and church paintings; later became a vedutista (view painter) of Venetian urban life.

Names:

Guardi, Francesco ([preferred](#), [V](#), [index](#), [LC](#))

Francesco Guardi ([V](#), [display](#))

Gardi, Francesco ([V](#))

Garde, Francesco ([V](#))

Gardis, Francesco ([V](#))

Gauda, Francesco ([V](#))

Guada, Francesco ([V](#))

Guarde, Francesco ([V](#))

Guardet, Francesco ([V](#))

Gvardi, Franchesko ([V](#))

Guardi, François ([V](#))

Guardi, Francisco ([V](#))

Contributors

AVERY, BHA, C

WL-Courtauld

Sources

Avery Authority

Harald Szeem

Collections (20

J. Paul Getty M

Library of Con

M. Knoedler &

Collections (20

Provenance In

RILA/BHA (197

Witt Library, A

Nationalities:

Italian ([preferred](#))

Venetian

Roles:

artist ([preferred](#))

painter

landscapist

Gender: male

Birth and Death Places:

Born: [Venice \(Venezia province, Veneto, Italy\) \(inhabited place\)](#)

Died: [Venice \(Venezia province, Veneto, Italy\) \(inhabited place\)](#)

Related People or Corporate Bodies:

member of [Guardi family](#)

(Italian painters, active 18th century) [500060865]

parent of [Guardi, Giacomo](#)

(Italian painter, 1764-1835) [500023608]

sibling by marriage (in-law) of [Tiepolo, Giovanni Battista](#)

(Venetian painter, 1696-1770)

[500018523]

Cecilia Guardi married Tiepolo in 1719

sibling of [Guardi, Antonio](#)

(Italian painter, 1699-1760) [500025094]

sibling of [Guardi, Niccolò](#)

(Italian painter, 1715-1785) [500029088]



Attribution to contributor and source is maintained, but merged, unified, and "preferred" is flagged

ULAN record is a merged, homogenous entity



Union List of Artist Names® Online Full Record Display

[New Search](#)

[Previous Page](#)

Click the icon to view the hierarchy.

[Semantic View](#) ([JSON](#), [JSONLD](#), [RDF](#), [N3/Turtle](#), [N-Triples](#)) [Represent](#)

Guardi, Francesco (Italian painter, 1712-1793)

Note: Venetian painter, during the first half of his career on decorations and church paintings; later became vedutista (view painter) of Venetian urban life.

Names:

Guardi, Francesco ([preferred](#), [V](#), [index](#), [LC](#))
Francesco Guardi ([V](#), [display](#))
Gardi, Francesco ([V](#))
Garde, Francesco ([V](#))
Gardis, Francesco ([V](#))
Gauda, Francesco ([V](#))
Guada, Francesco ([V](#))
Guarde, Francesco ([V](#))
Guardet, Francesco ([V](#))
Gvardi, Franchesko ([V](#))
Guardi, François ([V](#))
Guardi, Francisco ([V](#))

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Nationalities:

Italian ([preferred](#))
Venetian



Contributors

AVERY, BHA, GRISC, GRL, GRLPA, PROV, VP, WCI, WCP, WL-Courtauld

So

Av

Ha

Co

J. P

Lib

M.

Co

Pro

RI

Wi

List/Hierarchical Position:



.... [Persons, Artists](#)



..... [Guardi, Francesco](#) ([I](#))

Biographies

(Venetian painter, 1712-1793) [[VP Preferred](#)]
(Venetian painter, 1712-1793) [[BHA](#)]
(Italian painter, ca. 1712-1793) [[GRIPA](#)]
(Italian painter, ca. 1712-1793) [[PROV](#)]
(Italian artist, 18th century) [[WCP](#)]
(Italian artist, 18th century) [[WCI](#)]
(Italian artist, 1712-1793) [[WL-Courtauld](#)]
(Italian painter, 1712-1793) [[AVERY](#)]
(artist, 1712-1793) [[GRL](#)]

Attribution to contributor and source is maintained, but merged, unified, and "preferred" is flagged

[Inhabited place](#)
[Inhabited place](#)

) [500060865]

08]

[Battista](#)

, 1696-1770)

married Tiepolo in 1719

88]

LINK back to contributed data

Example of a “clustered” display with separate entities

Guardi, Francesco, 1712-1793                                               

Equivalence
Relationships

Hierarchical
Relationships

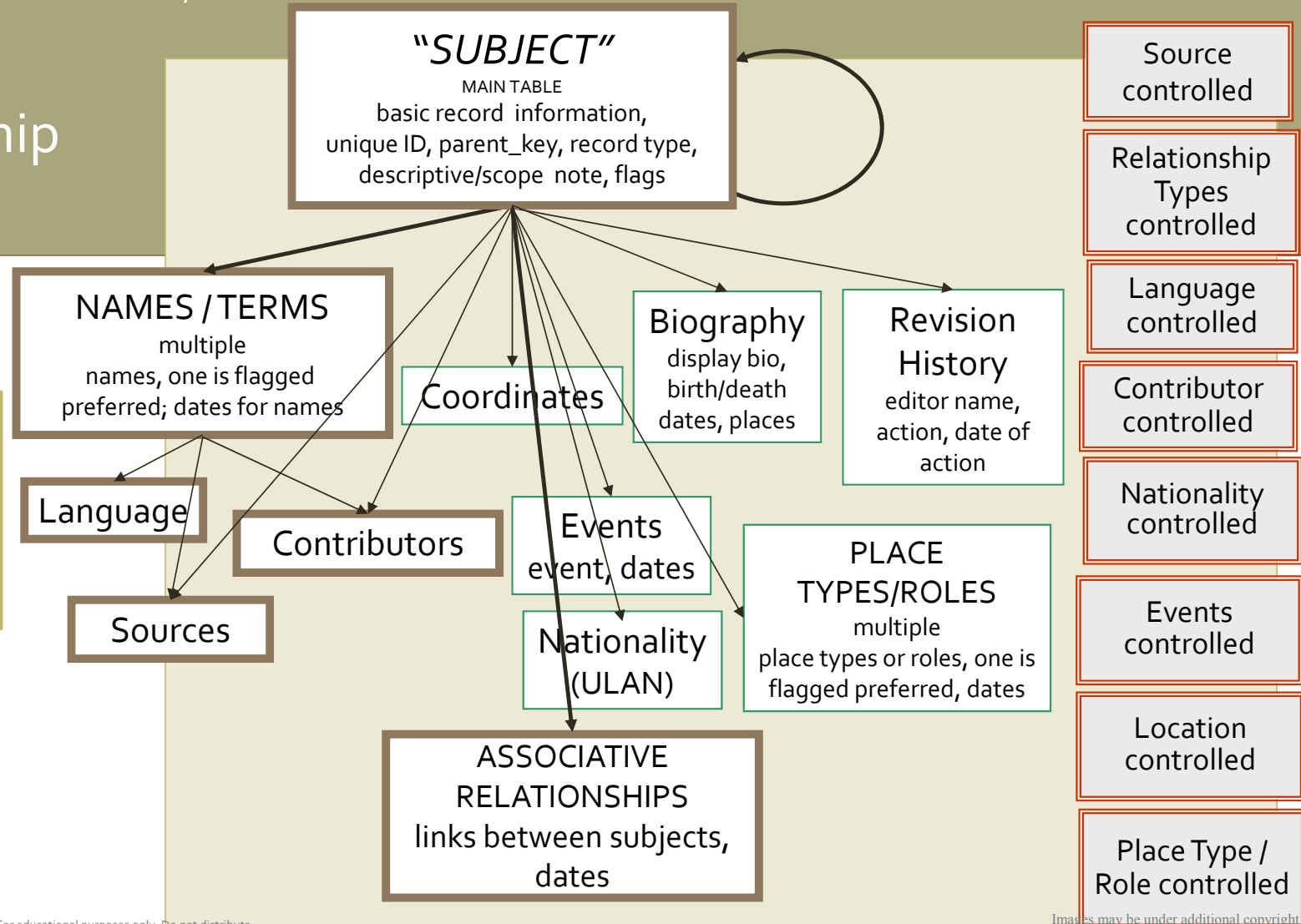
Associative
Relationships

- Links within a Vocabulary:
Thesaural Relationships

Relationships and linking are built into Getty vocabularies

simplified Entity Relationship Diagram

- All 5 vocabularies have same core structure
- Tables then added for specific fields



Relationships and linking are built into Getty vocabularies

The Getty Vocabularies Are Thesauri

- 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

LINKS via thesaurus

AAT

hierarchical

Objects Facet

.. Built Environment
.... Single Built Works
..... <single built works by function>
..... monuments
..... memorial arches
..... triumphal arches

associative

triumphal processions
triumphal procession
Triumphzug
procession triomphale
processione trionfale
procesion triunfal

locus/setting for

triumphal arches
triumphal arch
凱旋門 (紀念性拱門)
kǎi xuán mén
triomfbogen
Triumphbögen
archi trionfali
arcos de triunfo

equivalence



Relationships and linking are built into Getty vocabularies

Equivalence Relationship

Terms are synonyms

- Links between terms in one record
- *true synonymy*, so meanings are identical or as nearly identical as possible (re. parts of speech, etc.)
- Precision in indexing and retrieval
- Links facilitated by unique IDs

AAT_ID: 300132869

Terms:

- triumphal arches [1000007003] **Qual:** (memorial arches)
Pref: pref **Type:** D **Lang:** (en) **Con.:** FDA, GCI, VP
- triumphal arch [1000290974] **Qual:** (memorial arch)
Type: ALT **Lang:** (en) **Con.:** FDA, VP
- 凱旋門 **Qual:** (紀念性拱門) [1000545314]
Type: D **Lang:** (zh, Chinese (traditional)) **Con.:** AS
- kǎi xuán mén [1000545316] **Lang:** (zh, Chinese (transliterated Hanyu Pinyin))
Con.: AS
- kai xuan men [1000545315] **Lang:** (zh, Chinese (transliterated Pinyin without

AAT_ID: 300132869

Terms:

LINKS between terms

- triumphal arches [1000007003] **Qual:** (memorial arches)
Pref: pref **Type:** D **Lang:** (en) **Con.:** FDA, GCI, VP
- triumphal arch [1000290974] **Qual:** (memorial arch)
Type: ALT **Lang:** (en) **Con.:** FDA, VP
- 凱旋門 **Qual:** (紀念性拱門) [1000545314]
Type: D **Lang:** (zh, Chinese (traditional)) **Con.:** AS

- arco de triunfo [1000415272] **Lang:** (es) **Con.:** CDBP-SNPC
- arcs de triomphe [1000777382] **Type:** D **Lang:** (fr) **Con.:** AAT-AD
- arc de triomphe [1000777381] **Lang:** (fr) **Con.:** AAT-AD

Relationships and linking are built into Getty vocabularies

Equivalence Relationship

Terms carry additional data

- Information associated with the terms allow for linking and classification

AAT_ID and Term IDs (linkable)

Term

Term type (D,ALT, UF)

Qualifier

Language

Contributor

Sources

Term preferences: for record, contributor, language, source

AAT_ID: 300132869

Terms:

- triumphal arches [1000007003] **Qual:** (memorial arches)
Pref: pref **Type:** D **Lang:** (en) **Con.:** FDA, GCI, VP
- triumphal arch [1000290974] **Qual:** (memorial arch)
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AAT_ID: 300132869

Terms:

LINKS between terms

- triumphal arches [1000007003] **Qual:** (memorial arches)
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- 凱旋門 **Qual:** (紀念性拱門) [1000545314]
Type: D **Lang:** (zh, Chinese (traditional)) **Con.:** AS

- arco de triunfo [1000415272] **Lang:** (es) **Con.:** CDBP-DIBAM
- arcs de triomphe [1000777382] **Type:** D **Lang:** (fr) **Con.:** AAT-AD
- arc de triomphe [1000777381] **Lang:** (fr) **Con.:** AAT-AD

Relationships and linking are built into Getty vocabularies

Equivalence Relationship

Terms carry additional data

LINKS to other resources

- Linkable to outside resources
- Reference to the resource is provided

AAT_ID: 300132869

Terms:

- triumphal arches [1000007003] Qual: (memorial arches)
Pref: pref Type: D Lang: (en) Con.: FDA, GCI, VP
- triumphal arch [1000290974] Qual: (memorial arch)
Type: ALT Lang: (en) Con.: FDA, VP
- 凱旋門 Qual: (紀念性拱門) [1000545314]
Type: D Lang: (zh, Chinese (traditional)) Con.: AS
- kǎi xuán mén
- kai xuan men

Sources:

- AATA database (2008-) 129984 checked 26 January 2012
- Brilliant, Roman Art (1974) index
- Candidate term Candidate term - ADAG - 10/1985
- Copplestone, ed., World Architecture (1966) glossary
- Harris, Illustrated Dictionary of Historic Architecture (2013)
- Library of Congress Authorities online (2002-) sh 85006535

AAT ID: 300132869

Terms:

- triumphal arches [1000007003] Qual: (memorial arch)
Pref: pref Type: D Lang: (en) Con.: FDA, GCI, VP
- triumphal arches [1000007003] Qual: (memorial arch)
Type: ALT Lang: (en) Con.: FDA, VP
- 凱旋門 Qual: (紀念性拱門) [1000545314]
Type: D Lang: (zh, Chinese (traditional)) Con.: AS

- arco de triunfo [1000415272] Lang: (es) Con.: CDBP-DIBAM
- arcs de triomphe [1000777382] Type: D Lang: (fr) Con.: AAT-AD
- arc de triomphe [1000777381] Lang: (fr) Con.: AAT-AD

Relationships and linking are built into Getty vocabularies

Equivalence Relationship

LOD = How to expedite publication of less than optimal data?

LINKS – when to ignore them

- Authoritativeness of the Getty vocabularies is warranted by their accuracy and basis in scholarship
- Flag **Rembrandt van Rijn** = Preferred = most commonly used names in published, scholarly or expert resources
- Also include common names, historical names, nicknames, common published misspellings, signatures, etc. = variant names
- Usually avoid unique misspellings or unique archival variants
- However, for Provenance Index LOD, experimented with the *Local Use* flag, names may be ignored by other implementers
- Names found in a unique inventory or sales catalog
- But not a scalable solution; better to retain a local authority and contribute to ULAN the names useful to a broader community

Rheinbrand (LU,U)
Rhembrant (LU,U)
Rhembrant van Rhyn (LU,U)
Rhembrant Van-Rhyn (LU,U)
Rhynbrandt (LU,U)
Rienbraut (LU,U)

Rimbrans (LU,U)
Rimbrant (LU,U)
Rimbrant Van-Rhein (LU,U)
Rinbrant (LU,U)
Rinbraut (LU,U)
Rinebrand (LU,U)
Riombrach (LU,U)

LU = Local Use

Rinbraut (LU,U)
Rinebrand (LU,U)
Riombrach (LU,U)
R. Rhyn (LU,U)
R. van Ryn (LU,U)
Rymbrand (LU,U)
Rymbrandt (LU,U)
Rymbrand Van Ryn (LU,U)
Rymbrant (LU,U)
Rymbrants (LU,U)
Rymbrants Van Ryn (LU,U)
Rynbrandt (LU,U)
Rynbrand van Ryn (LU,U)
Van Rhyn Rembrant (LU,U)
Van-Ryn, dit Rembrandt (LU,U)
Van-Ryn Rembrandt (LU,U)
Van-Ryn Rembrant Fiammingo (LU,U)
V. Rembrants (LU,U)
Wan Rhin, o Rembrandt (LU,U)

ULAN



Relationships and linking are built into Getty vocabularies

Hierarchical Relationship

What are types of hierarchical relationships?

- Hierarchical relationships = broader and narrower (parent/child) relationships between two entities in a thesaurus; 3 types of relationships
- **genus/species** = AAT *triumphal arches* is a **type of** *memorial arches*
- **whole/part** = TGN
Machupicchu is **part of** *Cuzco (region)*,
which is **part of** *Peru*
- **instance** = Getty IA
Penance of Indra is
an **instance of**
<*Hindu narratives*>



AAT

Hierarchical Relationships

Objects Facet

- .. Built Environment (hierarchy name) (G)
- Single Built Works (hierarchy name) (G)
- single built works (built environment) (G)
- <single built works by specific type> (G)
- <single built works by function> (G)
- monuments (G)
- <monuments by form> (G)
- memorial arches (G)
- triumphal arches (memorial arches) (G)

LINKS via hierarchy

Relationships and linking are built into Getty vocabularies

Hierarchical Relationship

Using the polyhierarchy for linking

- Links = preferred parents also non-preferred parents
- E.g., linking *triumphal arches* to *p'ai-lous* as siblings under *ceremonial gates*, as well as under *monuments*



In Hanzhong, Shaanxi Province, China



In Munich, Germany

AAT

Hierarchical Relationships (polyhierarchical)

Objects Facet

Built Environment (hierarchy name)

Single Built Works (hierarchy name)

single built works (built environment)

<single built works by specific type>

<single built works by function>

gate structures

ceremonial gates

hongsalmuns

p'ai-lous

propylaea

toranas

torii

triumphal arches (memorial arches) [N]

LINKS via hierarchy

Relationships and linking are built into Getty vocabularies

Hierarchical Relationship

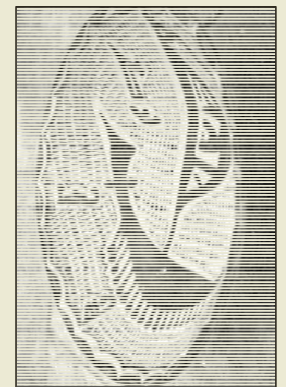
LOD= How to expedite publication of less than optimal data in hierarchy?

- Linking: How to allow publication of data not fully resolved?
- Due to incomplete information for cataloger or state of scholarship
- E.g., hierarchical levels where specific applicable level is not known placed under broader context, *lost & found*
- E.g., *Abaskūn*, a trading port city on the Caspian Sea, 9th-century literary sources = located within area of modern-day Iran – scholars don't know which province

LINKS – hierarchy for uncertain data

TGN

.... [World](#) (facet)
..... [Asia](#) (continent)
..... [Iran](#) (nation)
..... [<lost & found/Iran>](#) (miscellaneous)
..... [Abaskūn](#) (lost settlement)



Relationships and linking are built into Getty vocabularies

Hierarchical Relationship

How to expedite publication of less than optimal data in hierarchy?

LINKS – hierarchy for uncertain data

ULAN

- *Unidentified named* ... levels used in ULAN and CONA for entities not yet identified
- E.g., ULAN, people and firms contributed by Provenance Index, Witt, Getty Special Collections finding aids, etc.
- Some may be resolved via research or expert crowd sourcing in future

Top of the ULAN list / hierarchy

.... Unidentified Named People and Firms (ULAN facet)

..... Aalen, V. (unknown artist)

..... Aalst, C.J.K. van, Dr. (Dutch owner, fl. 1917-1953)

..... Aalst, N.J. van (Dutch owner, fl. 1950s-1960s)

..... Aalst, van (Unknown artist, Sale at Dordrecht, 1 November 1802)

..... Aaron (British owner)

..... Aaron et Cie. (French owner, fl. 1960s -1980s)

..... Aav (artist, active 20th century)

..... Aa, van der (Owner)

..... A. Bacon (Unknown artist)

..... Abady, Sheila (artist)

Relationships and linking are built into Getty vocabularies

Associative Relationship

Links between records in one vocabulary

LINKS – identifying type of link

AAT

- Relationships between records closely related conceptually, but not hierarchical
- Relationship type is defined

	activity/ event/ [process/ function,	attributes/ associated	field/discipline [in Activities-	genus/ species [others, Living Organisms]	language [in Assoc Con]	locus/ setting [built work, settlement, feature, Built Environ-ment]	material [Mater- ials]	role [people, organizations in Agents; excluding living organisms]	style/ culture [religio ideology AC]
things ment, also art genres from AC]	2427 things – produced by – activity/event 2428 activity/event – produces – things			2836- 2837 things - [are] derived/made from - genus/species [or its parts] kākaku are derived/made from Phormium tenax (species); ostrich- egg cups are derived/made from Struthio camelus (species) 2852- 2853 genus/species -	2881- 2882 language - [is] reflected in – things Greek (language) is reflected in Greek alphabet; Sanskrit is reflected in Vedas	2208-2209 locus/ setting – locus setting for – things on-demand printing causes/ is required for on-demand publishing; preserving causes/is required for preservation	2501- 2502 things – made of/ require – material obsidian mirrors are made of/require obsidian; ivories (sculptures) are made of/require ivory 2507- 2508 things – produce/ process – material cotton (fiber) is produced/processed by cotton gins; groundwater is produced/processed by waterwells	2321- 2322 things – used by – role violoncellos are used by violoncellists; surveying instruments are used by surveyors 2325- 2326 things – created by – role drawings are created by draftsmen, byages and for additional copyright	2551- things are pr – style Nasca li reflect/ produc [culture reflects by Juda

Relationships and linking are built into Getty vocabularies

Associative Relationship

Links between records in one vocabulary

LINKS – identifying type of link

AAT

2427 things – **produced by** – activity/event
2428 activity/event – **produces** – things

AAT 300007868 suspension bridges

2427 [are] produced by

AAT 300418008 suspension construction (technique)

- In preparation for LOD releases, relationships that had been maintained by hand had to be corrected if logic was off or relationship types incorrect



Relationships and linking are built into Getty vocabularies

Associative Relationship

Links between records in one vocabulary:
Dates of relationship

ULAN

LINKS – DATES for link

- 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



ID: 500060426

Page Link: <http://vocab.getty.edu/page/ulan/500060426>

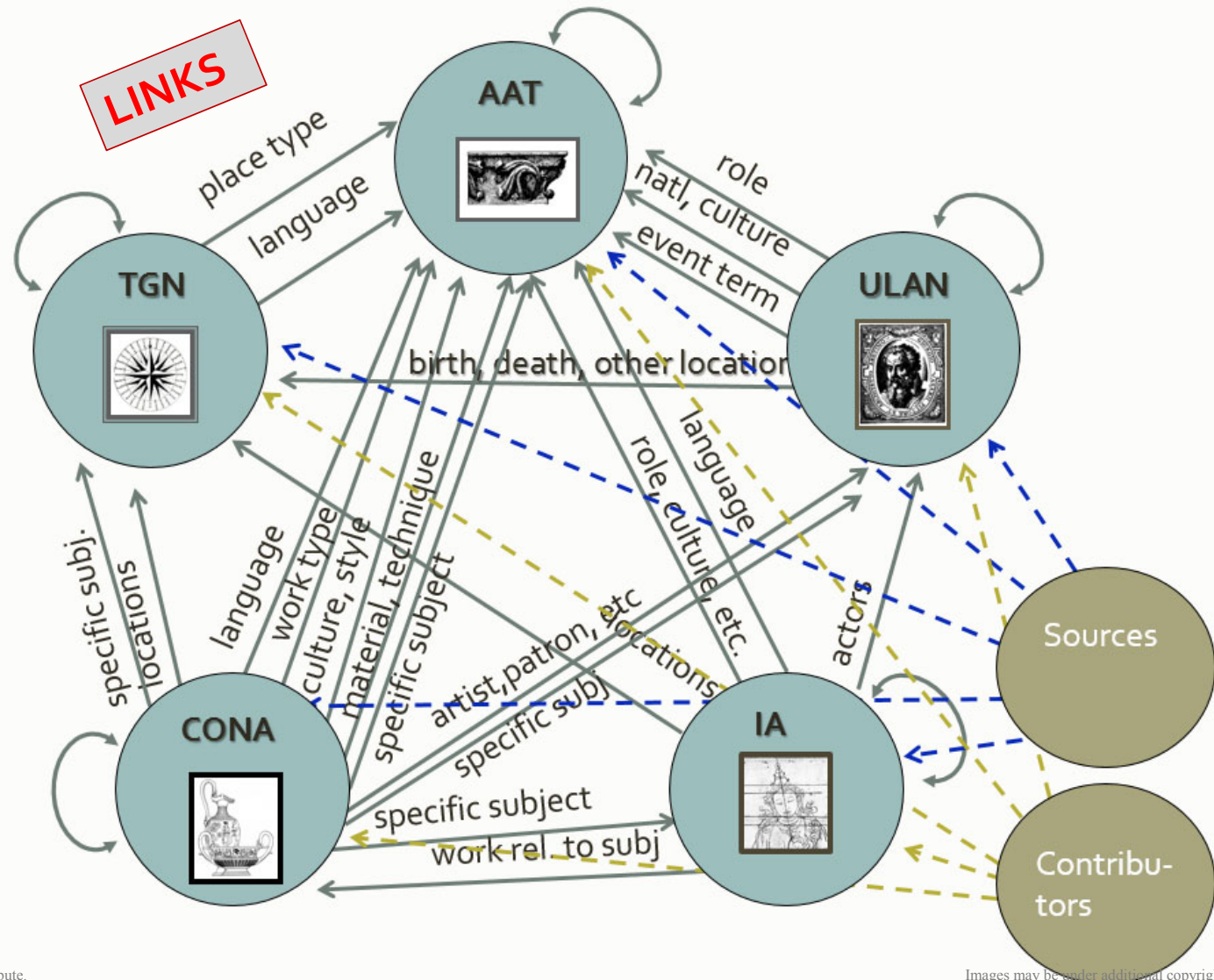
 **Katsushika Hokusai** (Japanese printmaker and painter, 1760-1849)

Relationship Type	Record Type	Name	Display Date	Start	End
1101 - teacher of	Person	Taito, Katsushika, II	ca. 1820-before 1830	1819	1830
1102 - student of	Person	Shunshō, Katsukawa	ca. 1778-1793	1777	1793

The Getty
vocabularies are
linked to each other

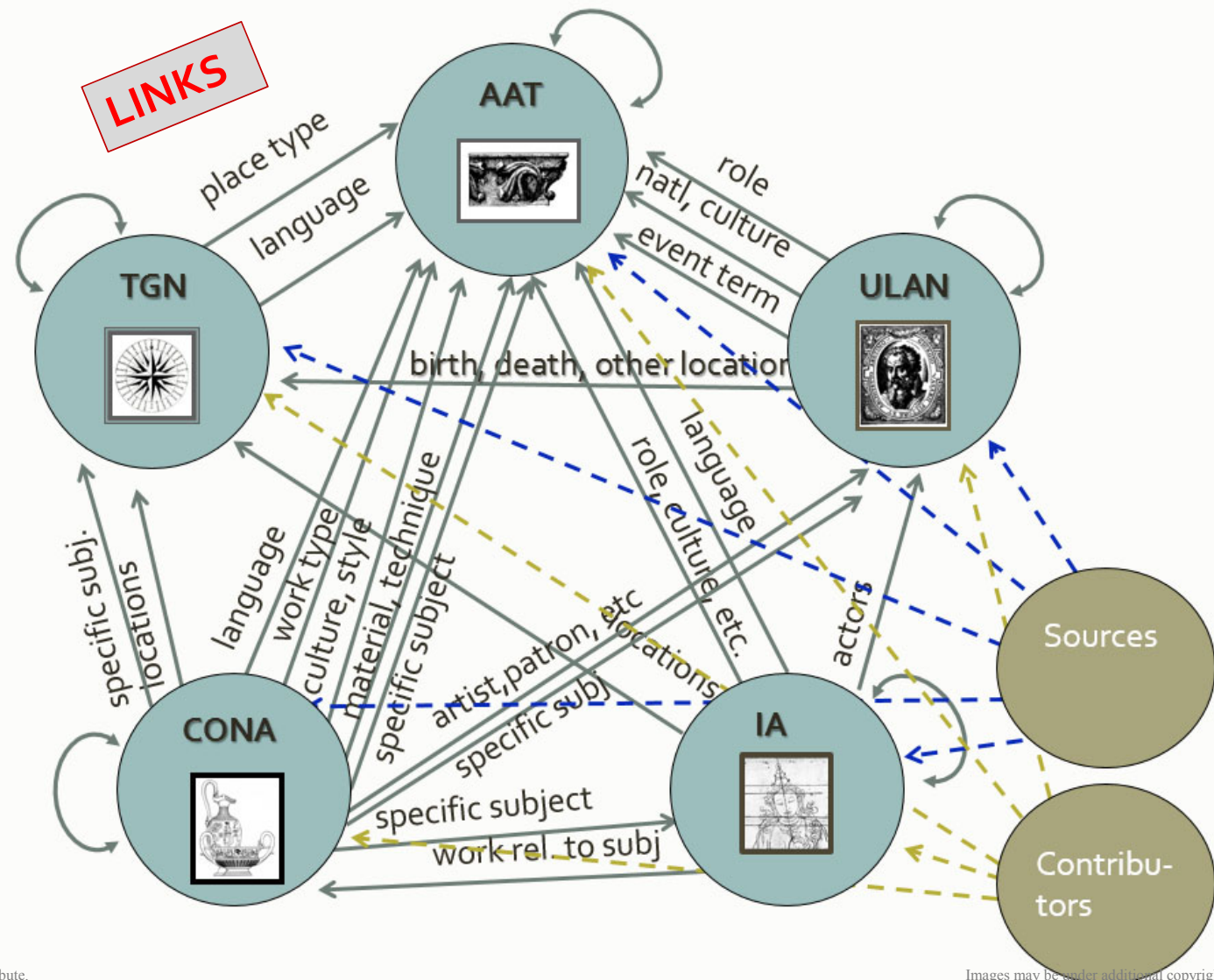
- Links between
Vocabularies

- Certain data within each Getty vocabulary = controlled through links to other vocabularies
- Even before linking between vocabularies was technically practical, fields controlled by extensible lists from other vocabularies



Links between vocabularies

- E.g., **roles** in ULAN (e.g., *artist, watercolorist, portraitist, patron, emperor*) = controlled by *Agents Facet* in AAT
- Going from hand-made lists to LOD required cleaning up inconsistencies



Relationships and linking are built into Getty vocabularies

Links between vocabularies

LINKS – controlled lists → links

TGN

Place Types


Search Method: New Search

Place Type ID	Place Type
84202	section
84203	barriada
84205	bidonville
84211	Chinatown
84214	Bezirk
84215	contrada
84216	sestiere
84217	rione
84218	urban district
84219	urban division
84221	frazione

AAT record

ID: 300108469

Page Link: <http://vocab.getty.edu/page/aat/300108469>

 Chinatowns (neighborhoods, residential)

Note: Chinese sections of large towns or cities

Terms:

Chinatowns (**preferred**, C,U,English-P,D,U)

Chinatown (C,U,LC,English,AD,U,SN)

中國城 (C,U,Chinese (traditional)-P,D,U,U)

唐人街 (C,U,Chinese (traditional),UF,U,U)

華埠 (C,U,Chinese (traditional),UF,U,U)

zhōng guó chéng (C,U,Chinese (transliteration))

zhong guo cheng (C,U,Chinese (transliteration))

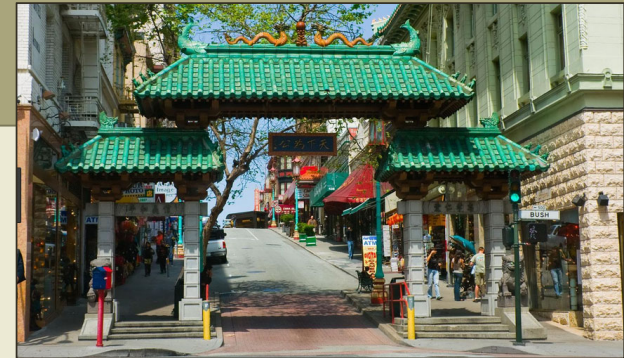
chung kuo ch'eng (C,U,Chinese (transliteration))

chinezewijken (C,U,Dutch-P,D,U,U)

chinezewijk (C,U,Dutch,AD,U,U)

barrios chinos (residentes de ascendencia china)

barrio chino (residentes de ascendencia china)



Relationships and linking are built into Getty vocabularies

Links between vocabularies

LINKS – controlled lists → links

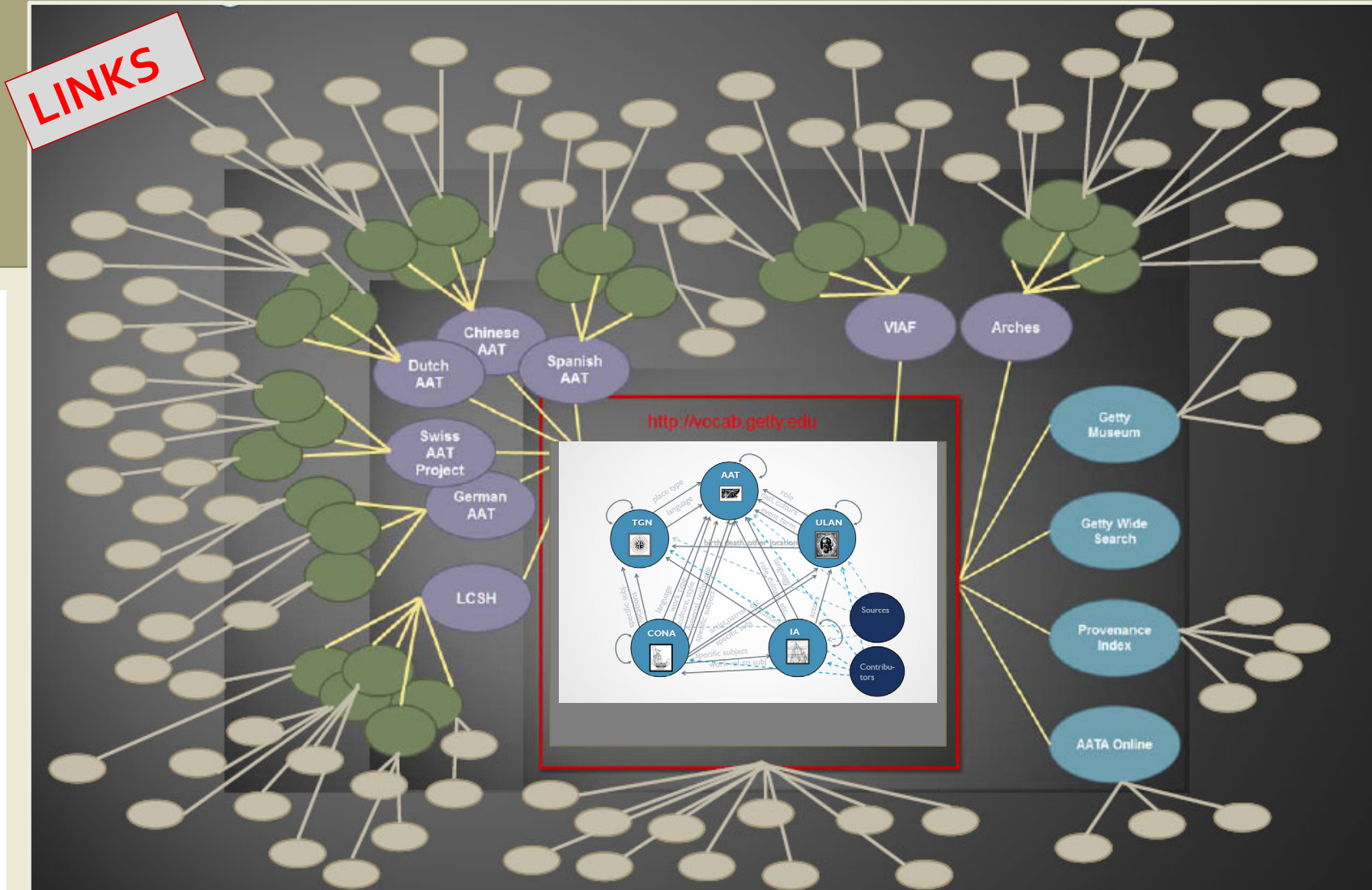
Many links cannot be made automatically

ULAN Nat. term		AAT_ID match	AAT Term_ID	AAT term
901840	Bavarian	300385972	1000568017	Bavarian
901850	Hamburger			
901860	Hessian	false match 300014076	1000014077	hessian (canvas (textile material))
901870	Thuringian	300105675	1000105675	Thuringian
901880	Saxon	300379686	1000540441	Saxon
901890	Wendish	300263656	1000263656	Wendish
901900	Rhenish	no match - - - -		
901910	Frankish	300019478	1000019478	Frankish
901920	Merovingian	→ 300019512	1000019512	Merovingian (Germanic style)
	ambiguous match	→ 300210049	1000210134	Merovingian (scripts)
901950	Carinthian	300385997	1000568044	Carinthian
901960	Pannonian			

Links to outside

Current and Future Goal:

- Relationships from the Getty vocabularies to other resources within the Getty and outside
- E.g., Provenance Index data



Links to outside

LINKS

- Getty vocabularies accessible in other resources
- E.g., AAT in Chile, Netherlands, Taiwan, Germany
- TGN, ULAN, AAT in collections management systems, etc.

The screenshot displays the Getty Art & Architecture Thesaurus (AAT) web interface. At the top, there is a search bar with a 'BUSCAR' button. Below the search bar, there are filters for 'Tipo de término' (Term type) with options: 'Todos' (selected), 'Preferentes' (Preferred), and 'Alternativos' (Alternative). A link for '(+) Búsqueda avanzada' (Advanced search) is also present.

On the right side, there is a section titled 'Tesauro de Arte & Arquitectura' (Art & Architecture Thesaurus) with a description: 'Fue desarrollado por el Getty Research Institute (GRI), un programa operativo de The J. Paul Getty Trust, y traducido en español por el Centro de Documentación de Bienes Patrimoniales.' Below this is the Getty logo and a note: 'AAT es marca registrada de The J. Paul Getty Trust. Esta base de datos es usada bajo licencia del The J. Paul Getty Trust.'

The main content area shows three facets: 'FACETA CONCEPTOS ASOCIADOS' (Facet Associated Concepts) with 'conceptos asociados' (associated concepts), 'FACETA ATRIBUTOS FÍSICOS' (Facet Physical Attributes) with 'atributos y propiedades' (attributes and properties), and 'FACETA ESTILOS Y PERIODOS' (Facet Styles and Periods) with 'estilos y periodos' (styles and periods).

The search results for 'trenzado doble' (warp twining) are displayed. The term is shown in Spanish ('trenzado doble es') and English ('warp twining en'). A red circle highlights the 'GETTY ID: 300228544' in the top right corner of the entry box. Below the term, there is a section titled 'NOTA DE APLICACIÓN' (Application Note) with the text: 'Técnica de tejido de textiles en la cual dos o más extremos de la urdimbre se enrollan entre sí al mismo tiempo que se entrelazan con la trama.' (Textile weaving technique in which two or more ends of the warp are rolled together at the same time that they interlace with the weft). Below this is a section titled 'TÉRMINOS ALTERNATIVOS' (Alternative Terms) with the term 'tapiz' (tapestry). At the bottom, there is a citation: 'Lucie-Smith, Edward, 1997, "Diccionario de Términos de Arte" (Dictionary of Art Terms).

Links to outside

LINKS

- Various institutions have linked to Getty vocabularies
- E.g., Te Papa, MoMA
<https://github.com/MuseumofModernArt/collecton>
Gilcrease Museum
<https://collections.gilcrease.org/object/1526167>



MUSEUM OF
NEW ZEALAND
TE PAPA
TONGAREWA

VISIT

Toro mai

DISCOVER THE COLLECTIONS

Tūhuratia ngā
kohinga

LEARN

Ako

ABOUT

Mo matou

SHOP

Wharehoko

SUPPORT & JOIN

Tautokotia, kuhu
mai

Collections

Browse 800

taonga, photo

objects, and

zoological s

Papa's colle

[About Collec](#)

<textile construction
processes and
techniques>

twining

Category details

Category

twining

Alternative

twined

terms

Source

Art & Architecture Thesaurus

Overview

Textile process involving twisting two or more active strands together as they interlace with another set of strands laid in p



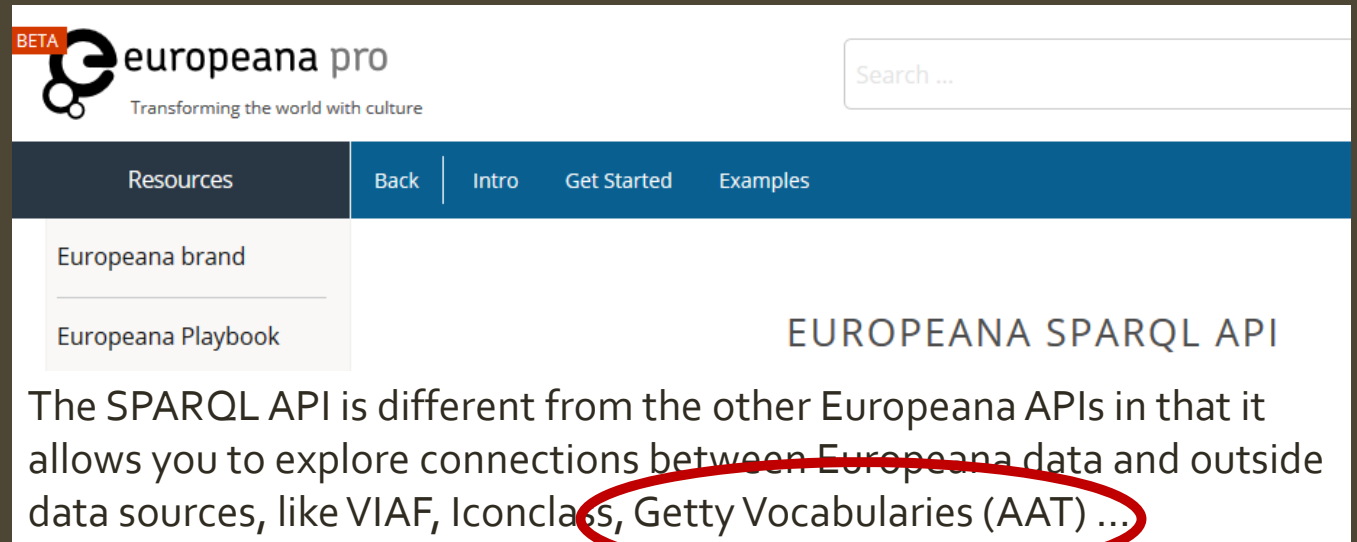
Name	Korowai ngore (cloak)
Production	Unknown; weaver; New Zealand
Classification	cloaks, costume
Materials	muka, wool
Material Summary	muka, wool
Techniques	twining
Dimensions	Overall: mm (length)
Registration Number	ME011997

twining

Links to outside

LINKS

- Examples of aligning or co-referencing Getty vocabularies
- <https://pro.europeana.eu/page/europeana-aat>
- The Ariadne project <http://www.ariadne-infrastructure.eu/Resources/AAT/Mappings-to-AAT>



The screenshot shows the Europeana Pro website. The header includes the Europeana Pro logo with a 'BETA' tag and the tagline 'Transforming the world with culture'. A search bar is located in the top right. A navigation bar contains links for 'Resources', 'Back', 'Intro', 'Get Started', and 'Examples'. Under 'Resources', there are links for 'Europeana brand' and 'Europeana Playbook'. The main content area is titled 'EUROPEANA SPARQL API' and contains the text: 'The SPARQL API is different from the other Europeana APIs in that it allows you to explore connections between Europeana data and outside data sources, like VIAF, Iconclass, Getty Vocabularies (AAT) ...'. The phrase 'Getty Vocabularies (AAT)' is circled in red.

Background
on CONA

Update on CONA

- About CONA

What is CONA

LINKS

Names/titles and other information about many types of works, built and unbuilt, historical and current, extant and destroyed, groups and items

LINKS and RELATIONSHIPS

- **Thesaural relationships**, equivalence, associative, hierarchical
- **Powerful links and relationships** within a CONA, between CONA records, and to the other Getty vocabularies

Sample record

CONA ID: 700000141

Titles/Names:

Hagia Sophia (en)
Ayasofya (tr)
Αγία Σοφία (el)
Agia Sofia
Agia Sophia
Haghia Sophia
Sainte-Sophie (fr)
Santa Sofía (es)
Sancta Sophia (la)
Sancta Sapientia (la)
Holy Wisdom (en)
Saint Sophia (en)
圣索菲亚大教堂 (zh)

Catalog Level: item

Work Types:

church (historical) **AAT**
mosque (historical)
museum
basilica

Classification:

architecture

Creation Date:

original structure dated from 4th century CE; present structure built 532-537 CE; rebuilt in 12th century

Creator Display:

Anthemios of Tralles (Byzantine, ca. 474-ca. 534) and Isidoros of Meletus, the Elder (Byzantine, active mid-6th century)

Locations:

Current: İstanbul (Turkey)

Address Note: 41.008548°N; 28.979938°E

Mat & Tech: system bearing masonry, centralized plan; ashlar and brick; interior surfaces are sheathed with polychrome marble, porphyry, and mosaics

Dimensions: central dome: diameter 31 meters (102 feet); height 56 meters (184 feet)

Styles:

Byzantine | Ottoman

General Subject:

architecture **Type:** isness
religion and mythology **Extent:** purpose

Specific Subjects:

Holy Wisdom (Christian allegory)

Contributors:

VP; BWR

Sources: Maidstone, Hagia Sophia (1988); Built Works Registry database (2015-) BWR3782560; Fleming, Penguin Dictionary of Architecture (1999); Theoharidou, Architecture of Hagia Sophia (1988); UNESCO World Heritage Centre [online] (1992-) C356



ULAN

LINKS

TGN

AAT

AAT

AAT
TGN
ULAN
CONA
IA

How will CONA be used? Ideas for Getty use, and beyond

- Compiled in CONA 9,000 of records to represent many types of works and relationships in order to test hypotheses about content, required fields, editorial guidelines, data model
1300 records from GRISC
3700 records from JPGM
- Now analyzing how CONA can be most useful for GRI and beyond decisions being considered by Digital Initiatives section (headed by **Anne Helmreich, Associate Director**)
- Development driven by needs of GRI projects and community, several possibilities
- Contributors:
Built Works Registry, etc.

Patricia Harpring © 2018 J. Paul Getty Trust. For educational purposes only. Do not distribute.

Sample record

CONA ID: 700000141

Titles/Names:

Hagia Sophia (en)
Ayasofya (tr)
Αγία Σοφία (el)
Agia Sofia
Agia Sophia
Haghia Sophia
Sainte-Sophie (fr)
Santa Sofía (es)
Sancta Sophia (la)
Sancta Sapientia (la)
Holy Wisdom (en)
Saint Sophia (en)
圣索菲亚大教堂 (zh)

Catalog Level: item

Work Types:

church (historical)
mosque (historical)
museum
basilica

Classification:

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AAT

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ULAN

LINKS

TGN

AAT

AAT

AAT
TGN
ULAN
CONA
IA

Images may be under additional copyright

Broadened Scope of CONA: Major subdivisions

Built Works

- **Structures or parts of structures** that are the result of conscious construction, are of practical use, are relatively stable and permanent, and are of a size and scale appropriate for—but not limited to—habitable buildings

Movable Works

- The **visual arts and other cultural works** that are of the type collected by art museums and special collections, or by an ethnographic, anthropological, or other museum, or owned by a private collector; Examples **include paintings, sculpture, prints, drawings, manuscripts, photographs, ceramics**, textiles, furniture, and other visual media such as frescoes and architectural sculpture, performance art, archaeological artifacts, and various functional objects that are from the realm of material culture and of the type collected by museums

Conceptual Works

- **Multiples: records for series as a concept**, conceptual records for multiples (made from same plate, negative, mold, etc.), and other similar records; physical works, such as prints that belong to a series, may be linked to conceptual record for the series (similar to FRBR “work”)

Visual Surrogates

- **Images and three-dimensional works intended to be surrogates for the works depicted**, for example *study photographs*; does not include works considered themselves works of art (e.g., Julius Shulman)

Unidentified Named Works

- **Works described in archival inventories or other sources**, but their identity is not established (e.g., Provenance Index inventories, or named architecture in finding aids)

Possible implementations of CONA

Development would be driven by needs, if any, of PhotoTech project

(Records linked to CONA, not necessarily ingested)

Works depicted in visual surrogates

- Relationship for subjects may be one way
- Associative Relationships are reciprocal

Surrogate in GRI Photo Archive



LINK

specific subject



Velázquez et al copy in the Uffizi after Rubens



CONA_ID: 700008694 Class.: paintings

Potential CONA project

- CONA as resource for works depicted in visual surrogates or in other works
- GRI Photo Archive = capture information about massive Photo Archive collection

Works depicted in visual surrogates

- Relationship for subjects may be one way
- Associative Relationships are reciprocal



Surrogate in GRI Photo Archive

Velázquez et al copy in the Uffizi after Rubens



LINKS

specific
subject



Potential CONA project

- CONA as resource for works depicted in visual surrogates or in other works
- GRI Photo Archive = capture information about massive Photo Archive collection
- Investigate possibly Pharos application ?
(pharosartresearch.org, an international photo archive project)

Works depicted in visual surrogates

- What is advantage to linking to CONA for work depicted?
- Access for all surrogates for same work
- Multilingual access, links, etc.



Surrogate in GRI Photo Archive

Velázquez et al copy in the Uffizi after Ruben



LINKS

specific
subject



*Enough
information in
surrogate
records to
make minimal
record for work
depicted*

CONA_ID: 700008694 Class.: paintings
Titles: Equestrian Portrait of Philip IV
 Filippo IV, re di Spagna
 Felipe IV a caballo
 Work Types: painting (visual work) **AAT**
 Creation Date: ca. 1645
 Creator Display: Diego Velázquez and assistants;
 after Peter Paul Rubens, now lost **ULAN**
 Locations: Galleria degli Uffizi (Florence, Tuscany, Italy) [500125191] **ULAN**
 Repository Numbers: 1890:792 **TGN**
 Address Note: Room 41: Ruben **ULAN**
 Display Materials: oil on canvas **AAT**
 Dimensions: 338 x 267 cm
 General Subject: portraits
 Specific Subjects:
 equestrian portrait [300403976] (AAT) **AAT**
 Philip IV, King of Spain (Spanish king, 1605-1665) [500282775] (ULAN) **ULAN**
 Related Works:
 pastiche copy after Equestrian Portrait of Philip IV [700008695] painting (visual work); Peter Paul Rubens; now lost; 1628-1629
 Sources and Contributors:
 [VP] [GRIPA] **CONA**
 Fossi, Uffizi Gallery (2001)
 GRI Photo Archives database (1974-)

Possible implementations of CONA

Works depicted in visual surrogates

- Photograph in Photo Archive depicts a painting, which in turn is a copy after a lost painting
- Rubens' original painting was destroyed in the fire at the Royal Alcázar of Madrid in 1734

Surrogate in GRI Photo Archive



LINK

specific
subject



Velázquez et al copy in the Uffizi after Rubens

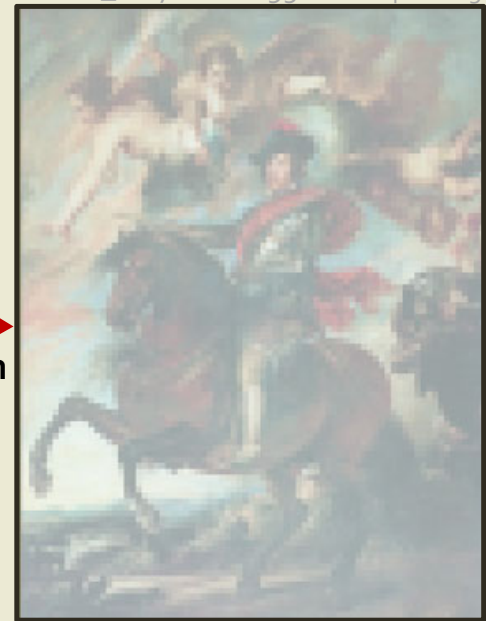


LINK

depicts
depicted in



lost painting by Rubens



Possible implementations of CONA

architectural documents at GRI

Movable works linked to architecture depicted



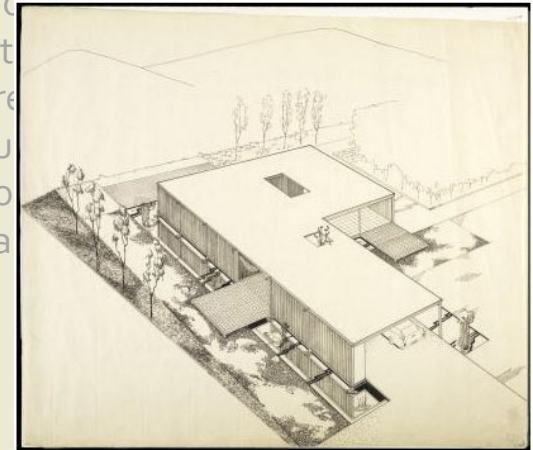
Development would be driven by needs, if any, of GRI

CONA ID 700000090 Class. 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: 34.116634 - 118.391623; 038 Wonderland Park Avenue, Hollywood Hills, Los Angeles, 90046

LINKS

preparatory for

based on



CONA ID 700008539 Work Type:

depicts

depicted in



Possible implementations of CONA

prints at GRI

Movable works linked to destroyed work

Destroyed, ephemeral triumphal arch

CONA ID 700001288 Class.: architecture

Work Type: triumphal arch
(memorial arch)

Title: Arc de Triomphe du Trône

Location: Paris (France)

Creator: based on designs by Charles Perrault (French architect, 1613-1688), built by Claude Perrault (French architect, physician, scientist, 1613-1688)

Date: begun 1670, demolished 1716

Materials: stone and plaster

Dimensions: unavailable

General subject: architecture

Type: isness

Specific Subject: Louis XIV

Extent: honoree

ephemeral structure Extent: purpose

LINKS

depicts

depicted in

CONA ID 700001650



CONA ID 700001650

depicts

depicted in



Possible implementations of CONA

LINKS

JPGM could record deaccessioned works in CONA; No longer in their collections management system

Can also record works at a repository for exhibitions

Works in databases that are being retired, e.g., Art on Screen

- Works deaccessioned and deleted from repository database

Locations:

Current: Museo archeologico (Aidone, Sicily, Italy)

Repository Numbers: unavailable

Former: J. Paul Getty Museum (Los Angeles, California)

Repository Numbers: former : 85.AD.105

Creation: Morgantina (Sicily, Italy)

CONA ID: 700006607 Work Type: sculpture



es

Museo Archeologico di Aidone

J. Paul Getty Museum

Morgantina, Italy

BCE

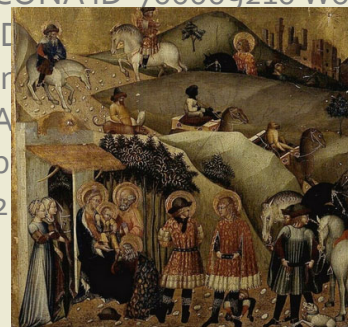
and polychromy

8 1/16 x 7 5/16

- Works in exhibitions, not owned by repository hosting the exhibition

E.g., loaned to JPGM from Kröller-Müller Stichting (Otterlo, Netherlands)

CONA ID: 700009210 Work Type: painting



type: Movable Work

(panel painting (painting

o (Italian, 1403-1482);

Kröller-Müller Stichting

- Film about art, in retired STAR
- Art on Screen DB*
- *E.g., Palette of Glass, film about Chagall's America Windows*

CONA ID: 700009505 Work Type: film



American Windows

(work); director,

features Marc

Let's consider important linking characteristics of CONA that could be interesting for research and discovery in future

Title: Grottes de Mogao

Title: 莫高窟

Record Type: built work **Catalog Level:** complex **Classification:** architecture

Work Type: complexes (buildings)

Creator: various artists

Date: 4th to the 14th century

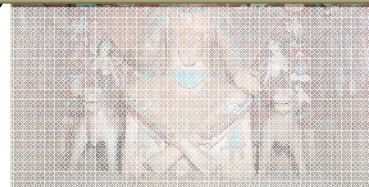
Location: Mogao caves (ancient site) (Dunhuang, China)

Desc. Note: 492 cells and cave sanctuaries in Mogao are famous for statues and wall paintings spanning a 1,000 years of Buddhist art.

AAT

TGN

hierarchical
relationship



Title: Mogao Cave 275
room, space

architectural
context is
Associative
Relationship



Title: Buddha from Cave 275
a sculpture

Images may be under additional copyright

Possible implementations of CONA

CONA has thesaural relationships: equivalence, hierarchical, associative



Title: Mogao Caves Complex

Title: Grottes de Mogao

Title: 莫高窟

Record Type: built work **Catalog Level:** complex

Classification: architecture

Work Type: complexes (buildings)

Creator: various artists

Date: 4th to the 14th century

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(Dunhuang, China)

Desc. Note: 492 cells and cave sanctuaries in Mogao are famous for statues and wall paintings, spanning 1,000 years of Buddhist art.

Hierarchical Relationship

AAT

TGN

LINKS

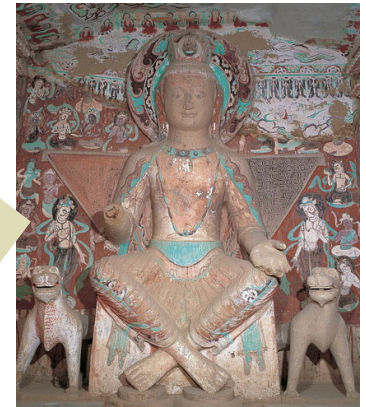
..... Built Works by class: religious, ceremonial
→ Mogao Caves
..... Mogao Cave 158
..... Mogao Cave 16
..... Mogao Cave 17
..... Mogao Cave 275



Title: Mogao Cave 275
room, space

architectural context is

Associative Relationship



Title: Buddha from Cave 275
a sculpture

Possible implementations of CONA

Movable works linked to destroyed work

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

Proposed reconstruction of Asciano Altarpiece



LINKS

..... [Asciano Altarpiece](#)
..... [Archangel Gabriel \[N\]](#)
..... [Assumption of the Virgin \[N\]](#)
..... [Saint Agatha and Saint Lucy \[N\]](#)
..... [Saint Augustine \[N\]](#)
..... [Saint Jerome \[N\]](#)
..... [Saint Michael the Archangel \[N\]](#)
..... [Saint Monica praying for the conversion of her son Augustine \[N\]](#)
..... [Saint Nicholas of Bari \[N\]](#)
..... [Virgin Annunciate \[N\]](#)

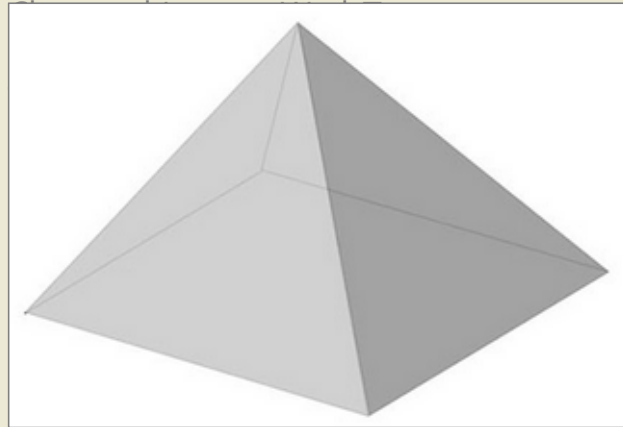
CONA ID 700008554 Proposed reconstruction of Matteo di Giovanni's Asciano Altarpiece by Rachel Billinge. Extant panels are now in National Gallery London, Siena, Asciano, Villa I Tatti, Esztergom, Altenburg, Rhode Island, and Private Collections.

Possible implementations of CONA

Movable works linked to unrealized work

architecture never built

CONA ID 7000xxxx

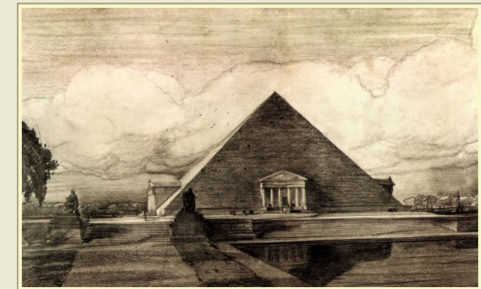


LINKS

designs for
based on

J R Pope's designs for
pyramidal Lincoln Memorial, Washington DC

CONA ID 700008523



Possible implementations of CONA

Movable works linked to conceptual work

Conceptual works

Multiples, Series of works

Single print cataloged as an item

CONA ID 700000091 Cat. Level: item Class:

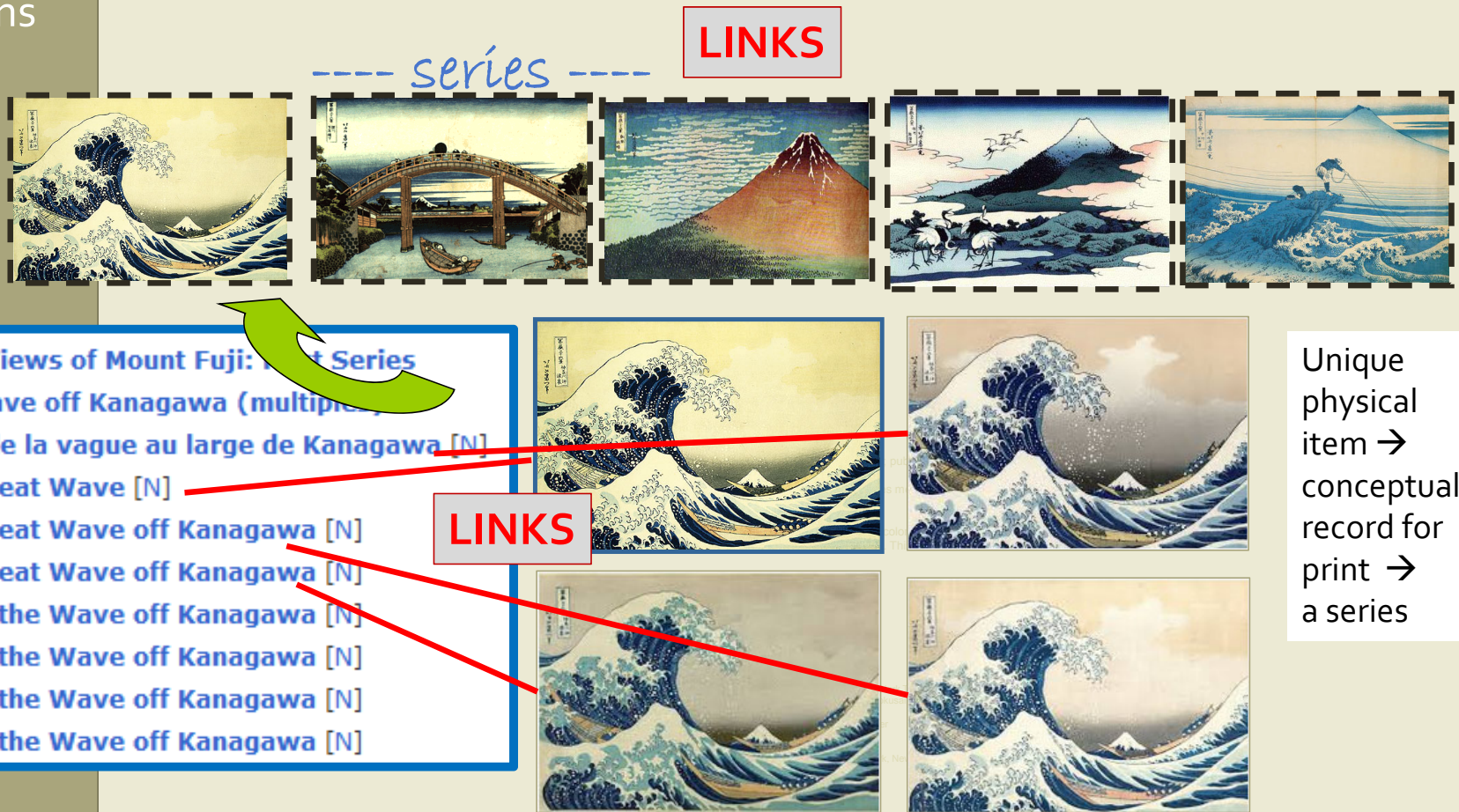
prin
Title
Kat
pub
cen
Mat
on p
Dim
inch
Sub
wav
Cur
Nev



- Print at a museum or special collection is cataloged as an item
- Unique physical item = linked to conceptual record

Possible
implementations
of CONA

Movable works linked to conceptual work



Possible implementations of CONA

reconcile contributors' data, return a copy to contributor



Works linked to Getty vocabularies

Value added: Contributions to CONA are reconciled with the Getty vocabularies

CONA record

CONA ID: 700002850

Catalog Level item

Classification vessels

Work Type vase

Title Blue and White Glazed Globular Vase
明 永樂 青花龍紋天球瓶

Creator unknown Chinese

Creation Date 1403/1424 CE

General Subject utilitarian objects

Specific | animal | dragon

Current Location National Palace Museum (Taipei, Taiwan)

Repository Number: 012547N000000000

Dimensions 42.9 cm high and 9.7 cm diameter; foot diameter 15.8 cm

Mat & Tech: blue and white porcelain
| porcelain (material) | blue-and-white (ceramic glaze)

LINKS

AAT

ULAN

AAT
TGN
ULAN
CONA
IA

AAT

AAT record

ID: 300132254

vases (vessels (containers), <containers by form>, ... Furnishings and Eq

Note: Vessels of varying shape and size but which are usually taller than they form and use. In modern usage, typically refers to vessels for displaying flower often refers to any ceramic or metal vessel in a range of shapes and used to h substance

Terms:

vases (preferred, C, U, English, A, (French-P, D, U, U)

vase (C, U, English, A, (French, AD, U, U)

花瓶 (C, U, Chinese (in)-P, UF, U, U)

陶瓶 (C, U, Chinese (out tones)-P, UF, U, U)

huā píng (C, U, Chinese (s)-P, UF, U, U)

hua ping (C, U, Chinese)

hua p'ing (C, U, Chinese)

vazen (C, U, Dutch-F)

vaas (C, U, Dutch, AD)

vasos (C, U, Spanish)

vaso (C, U, Spanish, (Name) (G)

Possible implementations of CONA

Works linked to outside resources

Merging information from multiple contributors

- CONA ID uniquely identifies the work in CONA
- Links to other IDs, such as LOC, VIAF, BWR

CONA ID: [700002923](#)

Catalog Level item **Classification** architecture

Work Type building complex | temple

Title/Name Temple of Heaven (en)

Tian Tan (zh-tr) | T'ien-t'an (zh-tr) | 天坛 (zh)
| 天壇 (zh) | 천단 (ko)

Creator [display] first built by Ming Chengzu (1360-1424); extended by Ming Shizong (1507-1567); renovated by Qianlong (1711-1799)

Creation Date [display]: 1530, during Ming dynasty

General Subject architecture **Type:** isness

Specific Earth [TGN 7030638] **Extent:** dedication

Current Location Beijing (Beijing Shi (municipality), China) (nation) **Address Note:** 39°57'05"N 116°24'36"E

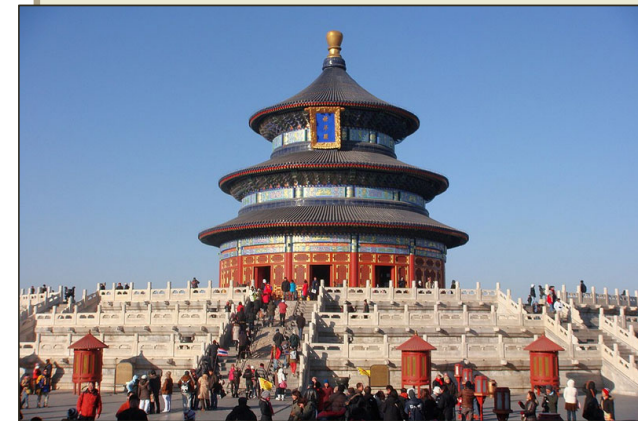
Dimensions [display] entire complex: 237 hectares

Mat & Tech [display] wood and stone [wood AAT 300011914 | stone AAT 300011176]

Style: Chinese [AAT 300018322] | Taoist [AAT 30014366]

Contributors [JPGM](#) [VP](#) [GRISC](#) [BWR](#)

Sources Built Works Registry [BWR3792244](#); Library of Congress Authorities online (2002-) [n2011019454](#); Fodor's Travel (2016); J. Paul Getty Museum, collections online (2000-); Great Buildings Online (1997-)



LINKS

Possible implementations of CONA

Multiple opinions for information re. the work

CONA ID: 700000178

Catalog Level item

Classification paintings

Work Type panel painting | altarpiece

Title Adoration of the Magi

Adorazione dei Magi (repository title)

Creator Bartolo di Fredi (Sienese painter, active by 1353, died 1410)

Creation Date [display]

1380s/1390s; some scholars date it ca. 1400 or later

execution

Start Date 1380 **End Date** 1399

alternative date

Start Date 1395 **End Date** 1409

General Subject religion and mythology | human figures

Specific | Adoration of the Magi **Extent:** foreground |

Siena | horses | Holy Family | gold | frankincense | myrrh |

Journey of the Magi **Extent:** background | king | deity |

death | Epiphany | Three Ages of Man

Current Location Pinacoteca Nazionale di Siena (Siena, Italy);

Repository No no. 104

Dimensions 195 x 158 cm (76 x 61 5/8 inches)

Mat & Tech tempera on panel

Contributors [BHA](#) [VP](#) [CD](#) [PNS](#) [GRI-PA](#)

Sources Pinacoteca Nazionale di Siena (2002-); Boucher and Fiorini, Magi Reconstructed (2012); Cole, Sienese Painting (1985); Freuler, Bartolo di Fredi (1994); Harpring, Bartolo di Fredi (1992)

[LINKS](#)

- E.g., Opinions on the date may vary



Images may be under additional copyright

Possible implementations of CONA

Multiple opinions

Collocates IDs for this unique work
Link back to site, to LOD, or other resource for the same work

CONA ID: **700000178**

Catalog Level item

Classification paintings

Work Type panel painting | altarpiece

Title Adoration of the Magi

Adorazione dei Magi (repository title)

Creator Bartolo di Fredi (Sienese painter, active by 1353, died 1410)

Creation Date [display]

1380s/1390s; some scholars date it ca. 1400 or later

execution Start Date **1380** End Date **1399**

alternative date Start Date **1395** End Date **1409**

General Subject religion and mythology | human figures

Specific | Adoration of the Magi **Extent:** foreground | Siena | horses | Holy Family | gold | frankincense | myrrh | Journey of the Magi **Extent:** background | king | deity | death | Epiphany | Three Ages of Man

Current Location Pinacoteca Nazionale di Siena (Siena, Italy)

Repository No **no. 104**

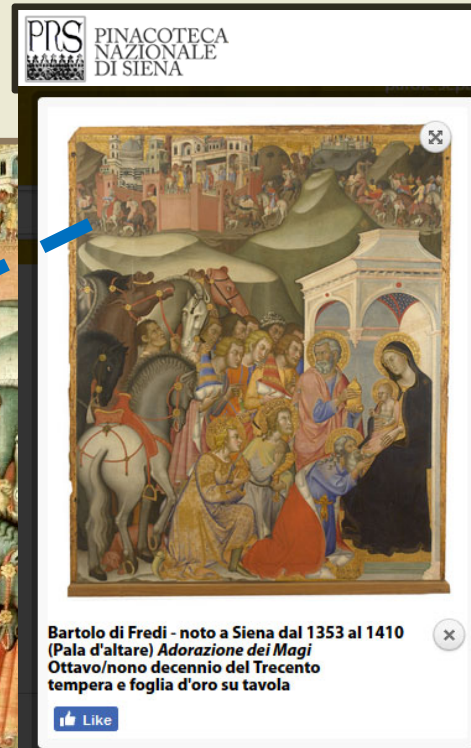
LINK to repository data

Dimensions 195 x 158 cm (76 x 61 5/8 inches)

Mat & Tech tempera and gold leaf on panel

Contributors BHA VP CD PNS GRI-PA

Sources Pinacoteca Nazionale di Siena (2002-); Boucher and Fiorini, Magi Reconstructed (2012); Cole, Sienese Painting (1985); Freuler, Bartolo di Fredi (1994); Harpring, Bartolo di Fredi (1992)



Possible implementations of CONA

LINKS

IA ID 1000045

Names

- Xibalba
- Place of Fear

ULAN ID 500329587

Names

- Unen Bahlam
- Baby Jaguar

AAT ID 300191778

Terms

- skeleton [English]
- beendergestel [Dutch]
- esqueleto [Spanish]
- squelette [Italian]
- 骨架 [Chinese]

Works linked to subjects depicted

Value added: Contributions to CONA may be indexed for subject depicted access

OCLC survey, of core fields missing is subject depicted

Mining titles and text for subjects depicted, missing from museum data

Controlled by AAT, ULAN, TGN, CONA, and IA

CONA ID 70000012 Class: Pre-Colombian art

General Subject:

- religion and mythology [General Subject ID 31801]

Specific Subjects:

- Xibalba (Mayan underworld) [IA 1000045]
- Baby Jaguar (Mayan king, ruled ca. 317 BCE) [ULAN 500329587]
- man (male human) [AAT 300025928]
- skeleton (animal component) [AAT 300191778]
- ax (weapon) [AAT 300024664]
- altar [AAT 300003725]
- death [AAT 300151836]
- celebration [AAT 300152441]



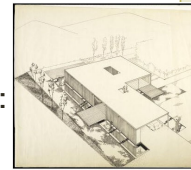
Examples in CONA and IA

Examples in CONA

Arc de triomphe de Louïs XIV a la porte St. Antoine (print – with link to built work) <http://vocab.getty.edu/page/cona/700001650>



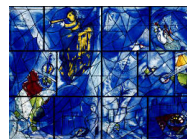
Case Study House 21 (architectural drawing – with link to built work):
<http://vocab.getty.edu/page/cona/700000120>



Equestrian Portrait of Philip IV (study photograph – link to work depicted*) <http://vocab.getty.edu/page/cona/700008701>



Palette of Glass (Art on Screen):
<http://vocab.getty.edu/page/cona/700009505>



Florentine Codex (subject of research):
<http://vocab.getty.edu/page/cona/700009561>



[Example in IA] Xibalba: <http://vocab.getty.edu/page/ia/901000045>



Cultural Objects Name Authority® Online

Search CONA [? Help](#)

Find Title or ID: [Search](#)

Work Types: [Clear](#)

[AAT Lookup](#)

Creator, etc.:

[ULAN Lookup](#)

Material:

[AAT Lookup](#)

Location/Repository: number

[ULAN Lookup](#)

Geographic:

[TGN Lookup](#) (Does not include works in repositories)

Creation Date Range: start year end year

General Subject:

[Lookup](#)

Specific Subject:

[AAT Lookup](#) [ULAN Lookup](#) [TGN Lookup](#) [IA Lookup](#)

Search the Iconography Authority (IA)

Iconography:

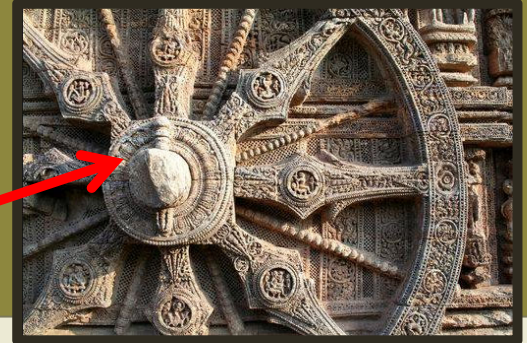
[Browse IA hierarchies](#)

What comes next?

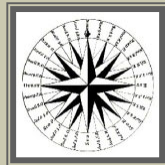
- Conclusion

Conclusion

linchpins
SN: Pins inserted through the end of an axletree to secure the wheel or other part from sliding off the axle



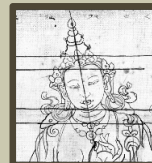
AAT



TGN



ULAN

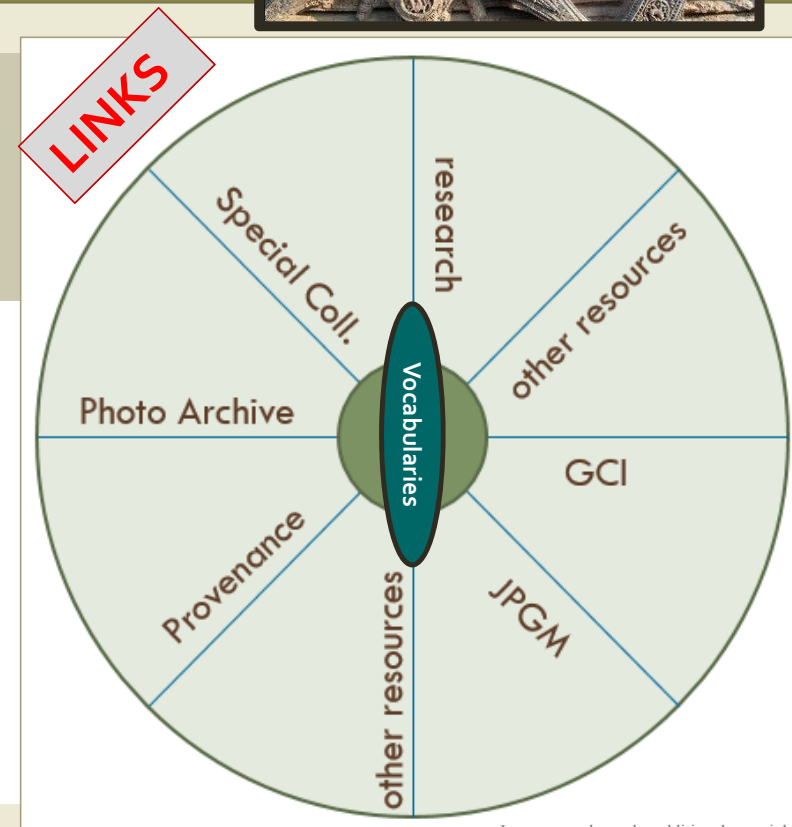


IA



CONA

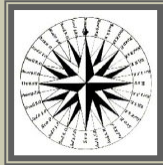
- The Getty vocabularies are used to link to each other and to Getty resources and outside resources



Conclusion



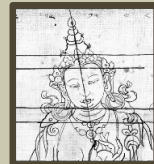
AAT



TGN



ULAN



IA



CONA

- The Getty vocabularies are constructed to allow their use in linked data
- Releasing the Getty vocabularies as Linked Open Data = transformative effect on research
- **Digitizing data does not necessarily ensure that it will be usable or used**
- Continue to investigate optimizing and exploiting the power of the Getty vocabularies
- Working with the broader user community to improve possibilities for research and discovery
- Look for: possibly **Reconciliation Tools**; **LOUD** ("usable"); **Linked.Art** (exchange format)
[Getty Digital]



THE GETTY



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