

# AAT LOD Microthesauri

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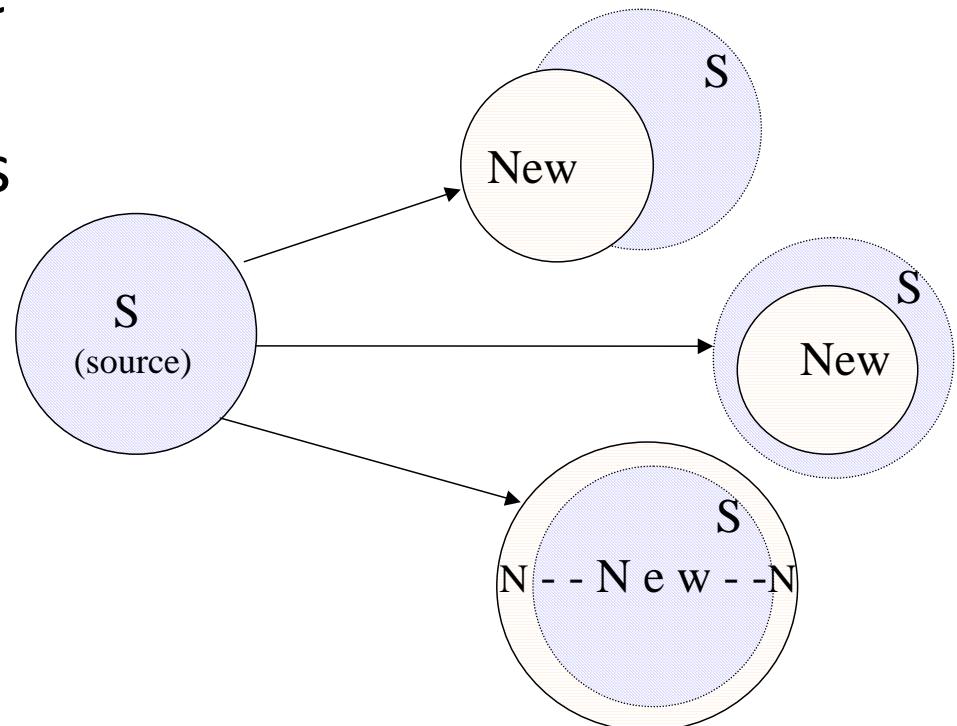
# 1. Definition

Microthesaurus: designated subset of a thesaurus that is capable of functioning as a complete thesaurus.

-- ISO25964-2:2013

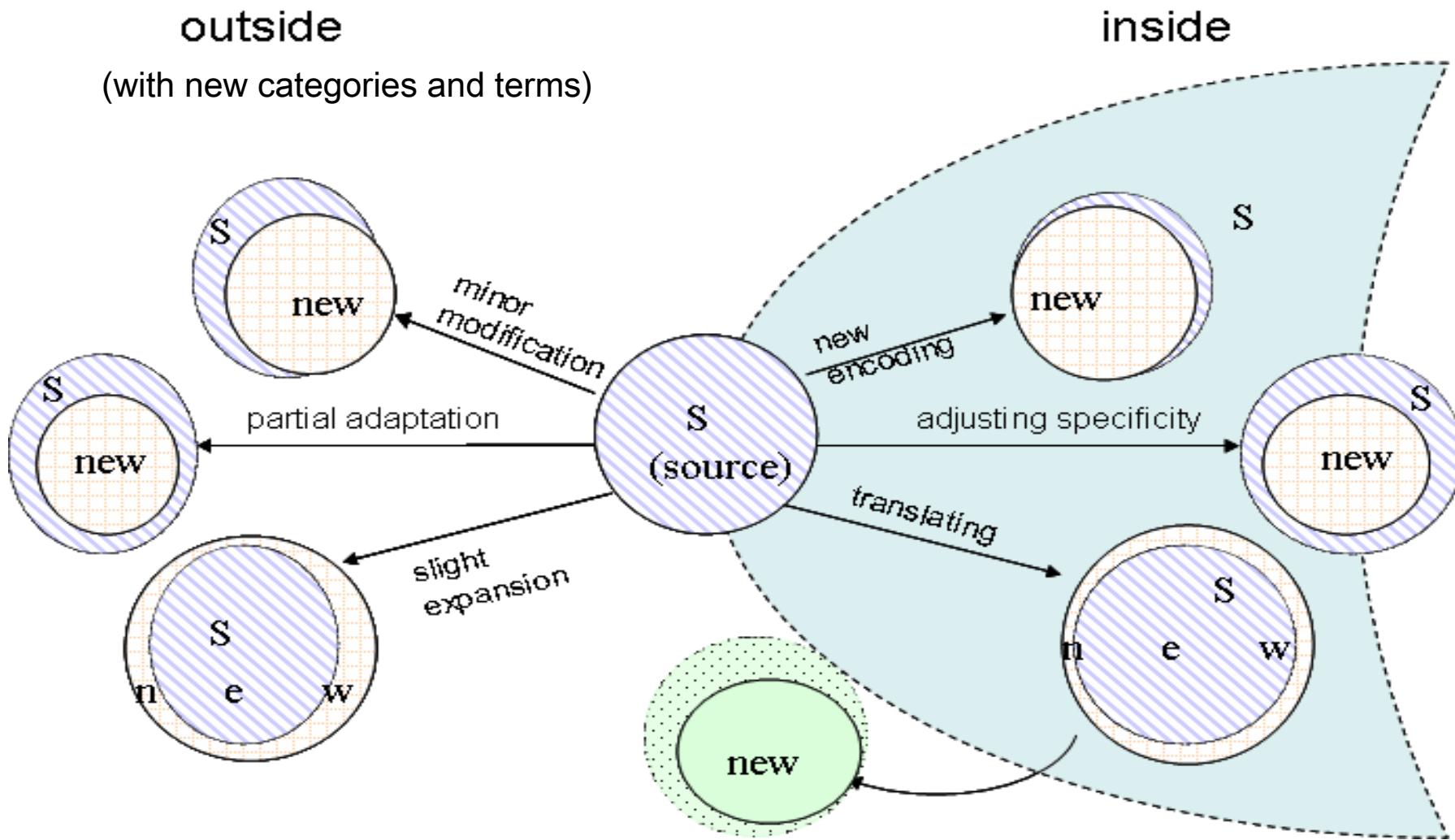
Microthesauri are different from:

- Derived vocabularies
  - adaptation
  - modification
  - expansion
  - partial adaptation
  - translation

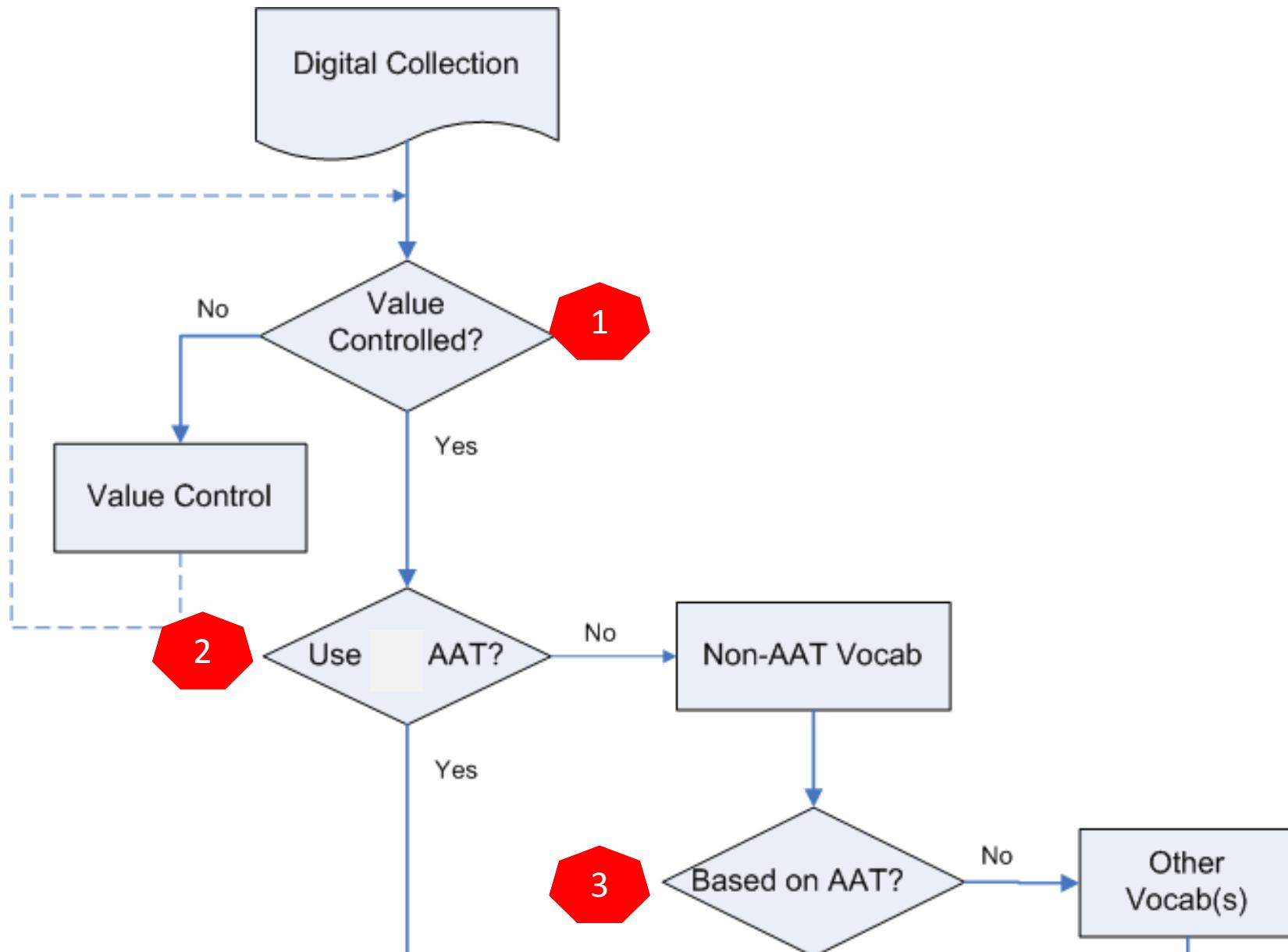


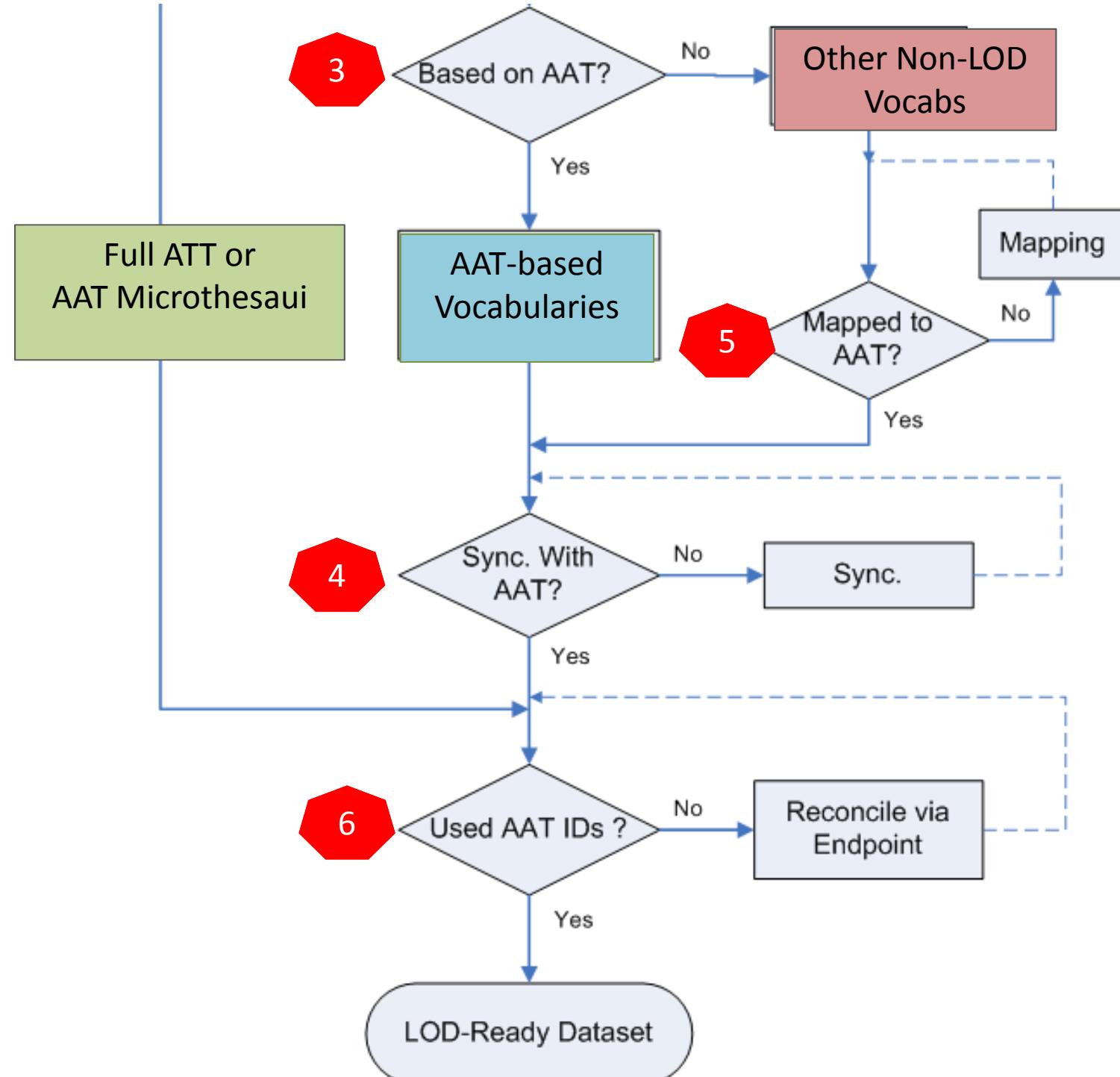
# Deriving new vocabularies from a source vocabulary

*New vocabularies depending on a source vocabulary*

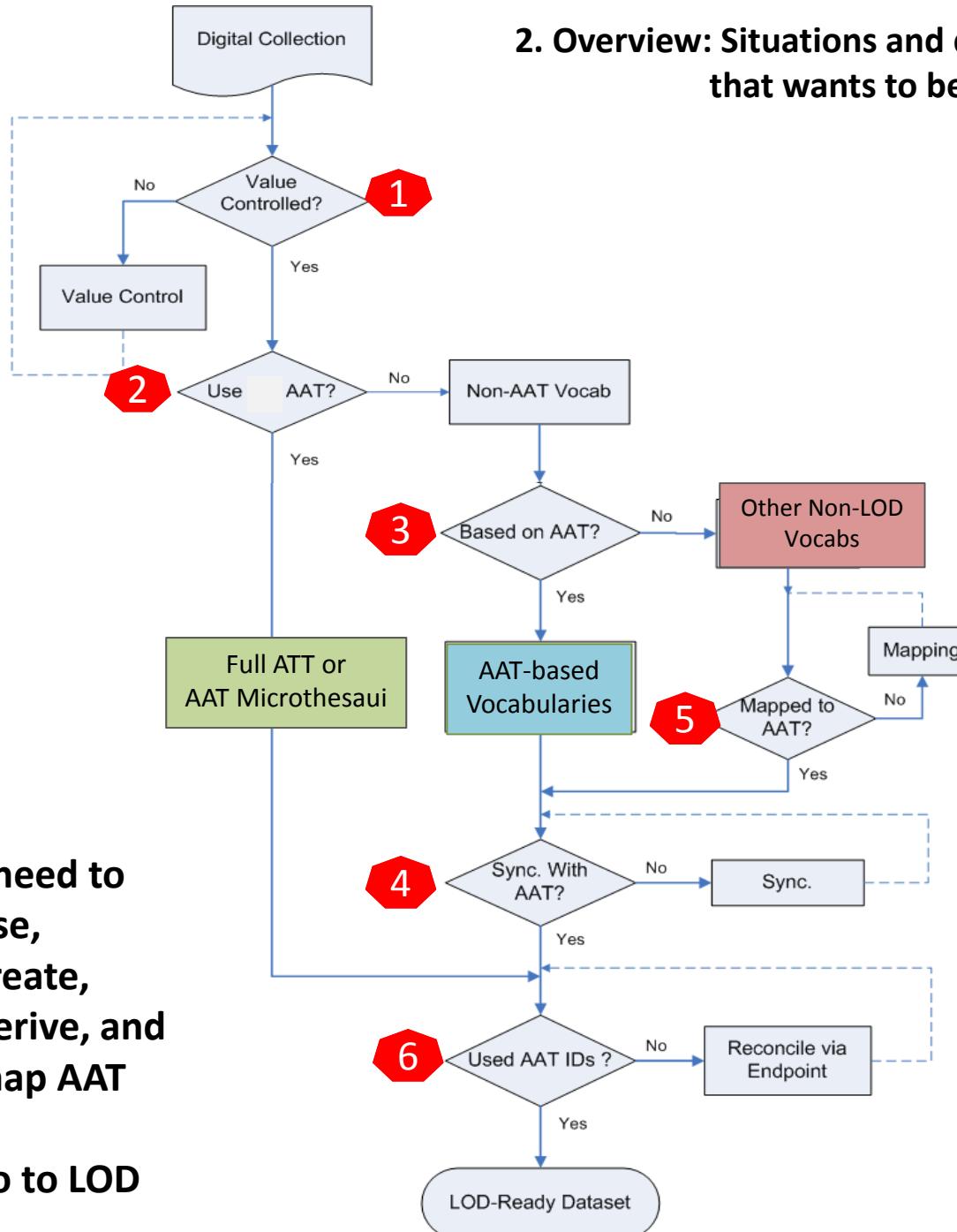


## 2. Overview: Situations and decisions for a digital collection that wants to become LOD dataset





## 2. Overview: Situations and decisions for a digital collection that wants to become LOD dataset



**The need to**

- **use,**
- **create,**
- **derive, and**
- **map AAT**

**&**

- **go to LOD**

### 3. Can a microthesaurus be made from an existing thesaurus?

	Structure	Example
YES	Classificatory structure	<ul style="list-style-type: none"><li>• <i>EUROVOC</i></li><li>• <i>Chinese Classified Thesaurus</i></li><li>• <i>[English Heritage Thesauri]</i></li></ul>
YES	Faceted structure	<ul style="list-style-type: none"><li>• AAT</li><li>• FAST (Faceted Application of Subject Terminology)</li></ul>
YES	Deep hierarchies (family trees)	<ul style="list-style-type: none"><li>• AAT</li><li>• NASA Thesaurus</li><li>• INSPEC Thesaurus</li></ul>
NO	flat structure [alphabetically organized]	<ul style="list-style-type: none"><li>• LCSH</li><li>• hundreds of thesauri</li></ul>

*Microthesaurus: designated subset of a thesaurus that is capable of functioning as a complete thesaurus.* -- ISO25964-2:2013

# EuroVOC

Europa > EuroVoc homepage > Domains and MT

Content language:

(en) English ▾

Simple search



■ Advanced search

Browse

■ Browse the subject-oriented version

Download

- By domain
- Permutated alphabetical
- Multilingual list
- Alphabetical index
- EuroVoc SKOS/RDF
- EuroVoc XML

Your proposals

- Contribute

## Domains

- ⊕ 04 POLITICS
- ⊕ 08 INTERNATIONAL RELATIONS
- ⊕ 10 EUROPEAN UNION
- ⊕ 12 LAW
  - 1206 sources and branches of the law
  - 1211 civil law
  - 1216 criminal law
  - 1221 justice
  - 1226 organisation of the legal system
  - 1231 international law
  - 1236 rights and freedoms
- ⊕ 16 ECONOMICS
- ⊕ 20 TRADE
- ⊕ 24 FINANCE
- ⊕ 28 SOCIAL QUESTIONS
- ⊕ 32 EDUCATION AND COMMUNICATIONS

"EuroVoc is split into 21 domains and 127 microthesauri.

Each domain is divided into a number of microthesauri.

A microthesaurus is considered as a concept scheme with a subset of the concepts that are part of the complete EuroVoc thesaurus."

<http://eurovqc.europa.eu/drupal/?q=node/555>



## CHIN's Professional Exchange



Canada

 Search[Find Resources](#) [Jobs](#) [Funding](#) [Conferences & Training](#) [Artefacts Canada](#) [Add to Professional Exchange](#) [Help](#)

Home &gt; Find Resources &gt; Summary "Art &amp; Architecture Thesaurus (AAT) Processes and Techniques Hierarchy"

[Back to List](#)[First](#) [Previous](#) [Next](#) [Last](#)**Summary "Art & Architecture Thesaurus (AAT) Processes and Techniques Hierarchy"**

Created by the J.Paul Getty Trust, the AAT is a thesaurus of terms used in the cataloguing and indexing of art, architecture, artifactual, and archival materials.

The Processes and Techniques of the AAT contains terminology for "actions and methods performed physically on or with materials and objects, and for processes occurring in materials and objects."

CHIN recommends the use of the AAT for museums with broad humanities collections. The terminology found in the AAT Processes and Techniques Hierarchy is appropriate for use in the Technique and Decorative Technique fields of the Artefacts Canada: Humanities database, as well as some Condition fields within museum collections management systems.

CHIN has contributed approximately 2600 French terms to the AAT: these are now visible within the AAT as French language equivalents for the most common terms. This bilingual version of the AAT is used to assist with search.

Institution / Organization: CHIN  
Submitted by: Canadian Centre for Architecture  
Date: 2013-06-10  
Collection:

CHIN listed  
891  
recommended  
resources.

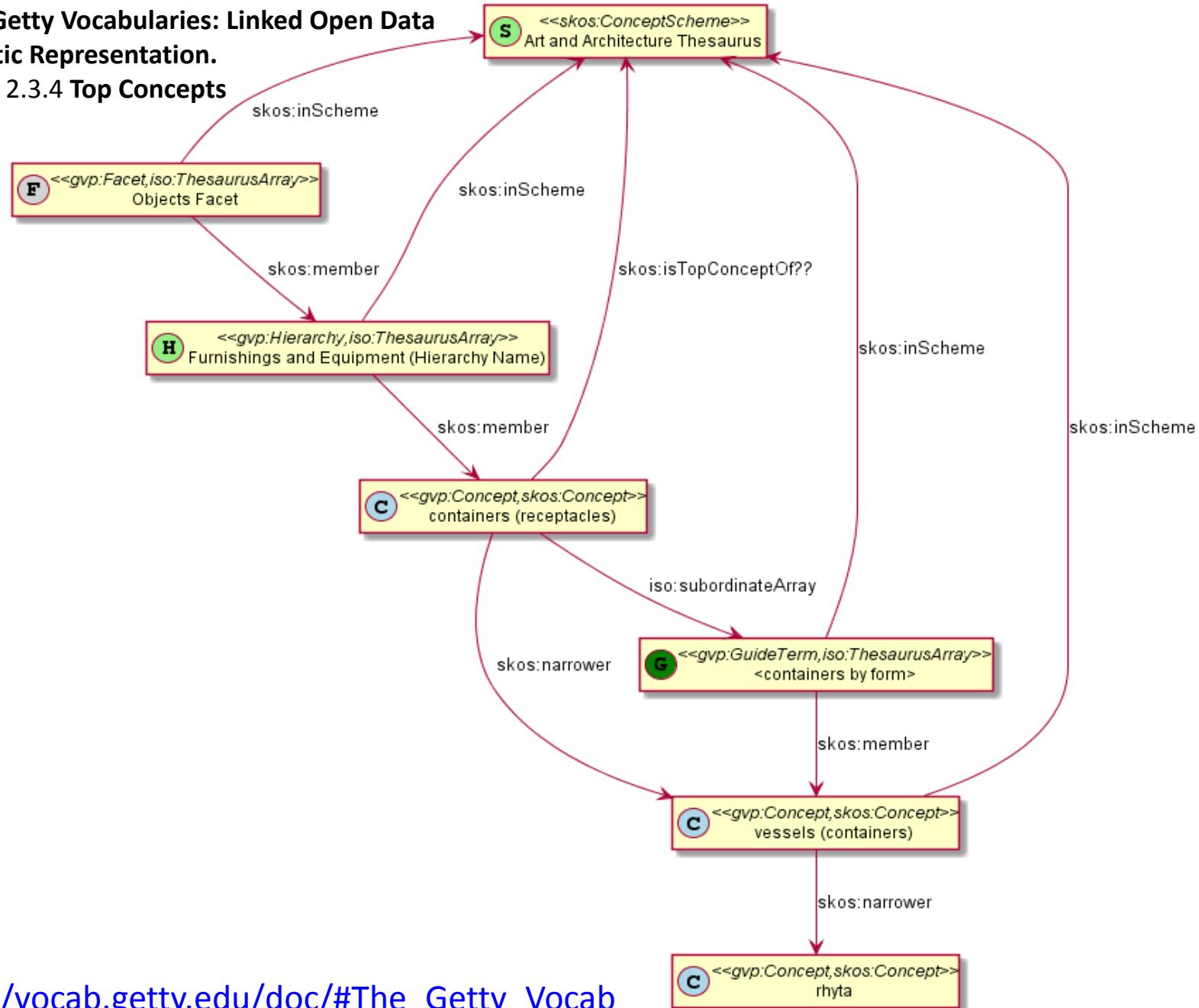
Only AAT  
has facets and  
hierarchies  
that are listed  
separately.

- [Art & Architecture Thesaurus \(AAT\) Processes and Techniques Hierarchy](#) ←
- [Canadian Centre for Architecture Bilingual Term Lists](#)
- [Art & Architecture Thesaurus \(AAT\) Agents Facet](#) ←
- [Cultural Objects Name Authority \(CONA\)](#)
- [Art & Architecture Thesaurus \(AAT\) Materials Facet](#) ←
- [Art & Architecture Thesaurus \(AAT\) Physical Attributes Facet](#) ←
- [Art & Architecture Thesaurus \(AAT\)](#)
- [Art & Architecture Thesaurus \(AAT\) Disciplines Hierarchy](#) ←
- [Art & Architecture Thesaurus \(AAT\) Objects Facet](#) ←
- [Art & Architecture Thesaurus \(AAT\) Styles and Periods Facet](#) ←
- [The Info-Muse classification system for fine arts and decorative arts museums](#)
- [Testing a Vocabulary Standard Against Cataloguing Practice in Canadian Museums](#)
- [Guidelines for Forming Language Equivalents: A Model Based on the Art & Architecture Thesaurus](#)

## From: Getty Vocabularies: Linked Open Data

Semantic Representation.

### Section 2.3.4 Top Concepts



[http://vocab.getty.edu/doc/#The Getty Vocabularies and LOD](http://vocab.getty.edu/doc/#TheGettyVocabulariesandLOD)

## Art and Architecture Thesaurus (AAT)

**s** <<skos:ConceptScheme>>  
Art and Architecture Thesaurus

Facet:  
Objects

Hierarchy:  
Furnishing and Equipment

Concept:  
containers (receptacles)

Guide term:  
<containers by form>

concept:  
vessels (containers)

concept:  
rhyta

skos:inScheme

skos:inScheme

skos:isTopConceptOf??

skos:member

skos:inScheme

skos:inScheme

skos:member

iso:subordinateArray

skos:narrower

skos:member

skos:narrower

## Art and Architecture Thesaurus (AAT)

## What are special in AAT

Facet:  
Objects

Hierarchy:  
Furnishing and Equipment

Concept:  
containers (receptacles)

Guide term:  
<containers by form>

concept:  
vessels (containers)

concept:  
rhyta

The units were recommended to use by projects such as The Canadian Heritage Information Network (CHIN)

Facets

[large] Hierarchies  
(full coverage, deep layer)

Sub-facets  
(Indicated by node labels)

## Vases

### URI(s)

- › <http://id.loc.gov/authorities/subjects/sh85142374>
- › <info:lc/authorities/sh85142374>
- › <http://id.loc.gov/authorities/sh85142374#concept>

### Instance Of

- › [MADS/RDF Topic](#)
- › [MADS/RDF Authority](#)
- › [SKOS Concept](#)

### Scheme Membership(s)

- › [Library of Congress Su](#)

### Collection Membership

- › [LCSH Collection - Auth](#)
- › [LCSH Collection - Gen](#)
- › [LCSH Collection - May](#)

### Broader Terms

- › [!\[\]\(e6f27c5ec79c31d8fcfa1903b3419dc7\_img.jpg\) Containers](#)

### Narrower Terms

- › [!\[\]\(ca157df4bb3fec34cfd763f57dde9341\_img.jpg\) Flower vases](#)
- › [!\[\]\(7387c800a6315d824abff0cb6f603371\_img.jpg\) Presentation vases](#)
- › [!\[\]\(fdd18a1886701f6f6bc81980d7d964df\_img.jpg\) Stone vases](#)
- › [!\[\]\(47441a9e78fbf53a31a449d5d6033a07\_img.jpg\) Vase-painting](#)

### Related Terms

- › [!\[\]\(560481a88b9a2b36dff4227f4d8c99f8\_img.jpg\) Urns](#)

### Closely Matching Concepts from Other Schemes

- › [!\[\]\(dbe4a5a071cdf06f09631589661ef282\_img.jpg\) Vase](#)
- › [!\[\]\(c54cb189899b78c65cf15ac5109e1905\_img.jpg\) Vases](#)

What are usually available in a flat structured LOD thesauri

```
<rdf:RDF>
- <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh85142374">
  <rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Concept"/>
  <skos:prefLabel xml:lang="en">Vases</skos:prefLabel>
  <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85031520"/>
  <skos:narrower rdf:resource="http://id.loc.gov/authorities/subjects/sh85142364"/>
  <skos:narrower rdf:resource="http://id.loc.gov/authorities/subjects/sh2012001607"/>
  <skos:narrower rdf:resource="http://id.loc.gov/authorities/subjects/sh2007001063"/>
  <skos:narrower rdf:resource="http://id.loc.gov/authorities/subjects/sh2004005300"/>
  <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh85141432"/>
- <skos:closeMatch>
  - <rdf:Description rdf:about="http://d-nb.info/gnd/4126513-0">
    <rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Concept"/>
    <skos:prefLabel xml:lang="DE">Vase</skos:prefLabel>
  </rdf:Description>
</skos:closeMatch>
```

<http://id.loc.gov/authorities/subjects/sh85142374.skos.rdf>

Concept

BT

concept

NT

concept:

**Easy to get an immediate family members.**  
**This is true for all thesauri, LCSH, AGROVOC, etc.**

- ..... Styles and Periods
- ..... <styles, periods, and cultures by region>
- ..... Asian
- ..... East Asian
- ..... Chinese (culture or style)
- ..... <Chinese dynastic styles and periods>
- ..... Xia (culture, period)
- ..... Erlitou
- ..... Shang
- ..... Zhou (culture)
- ..... Qin (style and period)
- ..... Han (Chinese)
- ..... Three Kingdoms (Chinese)
- ..... Southern and Northern Dynasties
- ..... Sui
- ..... Tang (Chinese style)
- ..... Five Dynasties
- ..... Liao
- ..... Jin (Golden Tartars)
- ..... Song (Chinese style)
- ..... Yuan
- ..... Ming
- ..... Qing
- ..... Xiongnu
- ..... Xixia
- ..... Chinese prehistoric periods
- ..... Chinese Paleolithic periods
- ..... Chinese Mesolithic periods

Getty Vocabularies: LOD SPARQL Search... Search Brief

## <Chinese dynastic styles and periods>

Source:<http://vocab.getty.edu/aat/300018353>

Subject (64)	Predicate	Object
	Website   Hierarchy   Download in: JSON   RDF   N3/Turtle   N-Triples	Inference Explicit only
Statements in which the resource exists as a subject.		
Predicate	Object	
rdf:type	gvp:GuideTerm, skos:OrderedCollection	
rdfs:seeAlso	<a href="http://www.getty.edu/vow/AATFullDisplay?find=&amp;logic=AND&amp;note=&amp;subjectid=300018353">http://www.getty.edu/vow/AATFullDisplay?find=&amp;logic=AND&amp;note=&amp;subjectid=300018353</a>	
dcterms:contributor	aat_contrib:10000000, aat_contrib:10000131, aat_contrib:10000159, aat_contrib:10000205	
skos:inScheme	aat	
skos:prefLabel	<Chinese dynastic styles and periods>@en, <Chinese dynastieke stijlen en perioden>@nl, <estilos y periodos dinásticos chinos>@es, <périodes et styles des dynasties chinoises>@fr	
skos:changeNote	aat_rev:5000006961, aat_rev:5001058485, aat_rev:5001681606, aat_rev:5001685357, aat_rev:5001694391, aat_rev:5002063243, aat_rev:5002257476, aat_rev:5002257481, aat_rev:5002854758, aat_rev:5002854764	
skos:member	aat:300018354, aat:300018356, aat:300018372, aat:300018383, aat:300018385, aat:300018393, aat:300018419, aat:300018420, aat:300018422, aat:300018425, aat:300018427, aat:300018436, aat:300018438, aat:300018478, aat:300106389, aat:300106415, aat:300264899, aat:300386727, aat:300387413	
skos:memberList	aat:300018353-list-300018354	

## Art and Architecture Thesaurus (AAT)

Facet:  
Objects

Hierarchy:  
Furnishing and Equipment

Concept:  
containers (receptacles)

Guide term:  
<containers by form>

concept:  
vessels (containers)

concept:  
rhyta

## What are special in AAT & are available as LOD

Facets

[large] Hierarchies  
(full coverage, deep layer)

Concept

Sub-facets  
(Indicated by  
node labels)

concept

concept:

## 4. An example

- Use a <Guide Term> to obtain all concept URIs in a facet or hierarchy
- Part 1. Get Data

ID: 300117143

 <object genres by function> (object genres (object Name)) ←

**Terms:**

object genres by function ([preferred](#), C, U, English-P)  
objectgenres naar functie (C, U, Dutch-P, D, U, U)  
categorías de objetos por función (C, U, Spanish-P)

**Facet/Hierarchy Code:** V.PE

**Hierarchical Position:**

 Objects Facet  
 .... Object Genres (Hierarchy Name) (G)  
 ..... object genres (object classifications) (G)  
 ..... <object genres by function> (G)

**Sources and Contributors:**

categorías de objetos por función..... [CDBP-DIBAM, RKD, AAT-Ned Pre]..... TAA database  
objectgenres naar functie..... [RKD, AAT-Ned Pre]..... AAT-Ned (1994-)

**Subject:** ..... [CDBP-DIBAM, RKD, AAT-Ned, VP]

**After choosing a facet or a hierarchy...**

1. Get the ID
2. Go to SPARQL Endpoint  
→next slide

<input type="checkbox"/>	 Top of the AAT hierarchies
<input type="checkbox"/>	 .... Objects Facet
<input type="checkbox"/>	 ..... Object Genres (Hierarchy Name)
<input type="checkbox"/>	 ..... object genres (object classifications)
<input type="checkbox"/>	 ..... <object genres by function>
<input type="checkbox"/>	..... accessories
<input type="checkbox"/>	 ..... aids to navigation
<input type="checkbox"/>	 ..... beacons [N]
<input type="checkbox"/>	..... buoys [N]
<input type="checkbox"/>	..... lighthouses [N]
<input type="checkbox"/>	..... light stations [N]
<input type="checkbox"/>	 ..... navigational instruments [N]
<input type="checkbox"/>	 ..... amulets
<input type="checkbox"/>	..... Thor's hammers (amulets) [N]
<input type="checkbox"/>	..... armrests (object genre)
<input type="checkbox"/>	..... backdrops
<input type="checkbox"/>	..... backrests
<input type="checkbox"/>	 ..... ceremonial objects
<input type="checkbox"/>	..... baptismal syringes
<input type="checkbox"/>	..... bow stands [N]
<input type="checkbox"/>	..... brush aspergilla [N]
<input type="checkbox"/>	..... calumets [N]
<input type="checkbox"/>	..... ceremonial chairs [N]
<input type="checkbox"/>	 ..... ceremonial containers [N]
<input type="checkbox"/>	 ..... ceremonial costume [N]
<input type="checkbox"/>	 ..... ceremonial sound devices [N]
<input type="checkbox"/>	 ..... ceremonial watercraft [N]
<input type="checkbox"/>	 ..... ceremonial weapons [N]
<input type="checkbox"/>	..... déblés [N]

Query:

1 # 5.1.2 Descendants of a Given Parent

2 select \* {?x gvp:broaderExtended aat:300117143; skos:inScheme aat: }

⚠ SPARQL Select template, 5.1.1 Top-level Subjects, 5.1.2 Descendants of a Given Parent, 5.1.3 Subjects by Contributor Id, 5.1.4 Subjects by Contributor Abbrev, 5.1.5 Preferred Ancestors, 5.1.6 Full Text Search Query, 5.1.7 Find Person Occupations by broaderExtended, 5.1.8 Find Person Occupations by Double FTS, 5.1.9 Find Quartz Timepieces by Double FTS, 5.1.10 Find Subject by Exact English PrefLabel, 5.1.11 Find Subject by Language-Independent PrefLabels, 5.1.12 Find Subject by Any Label, 5.1.13 Find Terms by Language Tag, 5.1.14 Find Ordered Subjects, 5.1.15 Find Ordered Hierarchies, 5.1.16 Get Subjects in Order, 5.1.17 Find Contributors by Vocabulary, 5.1.18 Find Sources by Vocabulary, 5.2.1 Subject Preferred Label, 5.2.2 All Data for Terms of Subject, 5.2.3 Preferred and Vernacular Terms, 5.2.4 Scientific Names by Language, 5.2.5 Scientific Names not in English and Latin, 5.2.6 All Data For Subject, 5.2.7 Historic Information on Relations, 5.2.8 Historic Information of Terms, 5.2.9 Preferred Terms for Contributors, 5.2.10 Preferred Terms for Sources, 5.2.11 Concepts Related by Particular Associative Relation, 5.2.12 Languages and ISO Codes, 5.2.13 Language URLs, 5.3.1 Places by Type, 5.3.2 Places, with English or GVP Label, 5.3.3 Places by Direct and Hierarchical Type, 5.3.4 Breakdown of Sovereign States by Type, 5.3.5 Inhabited Places That Were Sovereign States, 5.3.6 Places by Type and Parent Place, 5.3.7 Places by Type with placeTypePreferred, 5.3.8 Places by Triple FTS, 5.3.9 Places by FTS Parents, 5.3.10 Capitals by Type, 5.3.11 Members of the European Union, 5.3.12 Members of the United Nations, 5.3.13 Countries and Capitals By Type and Containment, 5.3.17 Places by Type Within Bounding Box, 5.3.20 Places Outside Boundary, 5.4.1 Descriptive Info from VOID, 5.4.2 Number of Entities from VOID, 5.4.3 Number of Global Sources (Dynamic), 5.4.4 Number of Terms per Language, 5.5.1 Ontology Classes and Properties, 5.5.2 Ontology Values

<http://vocab.getty.edu/sparql>

2. Go to SPARQL Endpoint
3. Choose "Descendants of a Given Parent"

- 4. Replace the ID in the Query template**
- 5. Submit**
- 6. Get all URIs and labels under this guide term.**

## SPARQL Query

Query:

```
1 # 5.1.2 Descendants of a Given Parent
2 select * {?x gvp:broaderExtended aat:300117143.
3   ?x gvp:prefLabelGVP [xl:literalForm ?l]; skos:inScheme aat:
4     } order by ?l
5
```

Note: Here is the text of the query.

I replaced the aat ID, also inserted a line to get the labels, and sort by label:

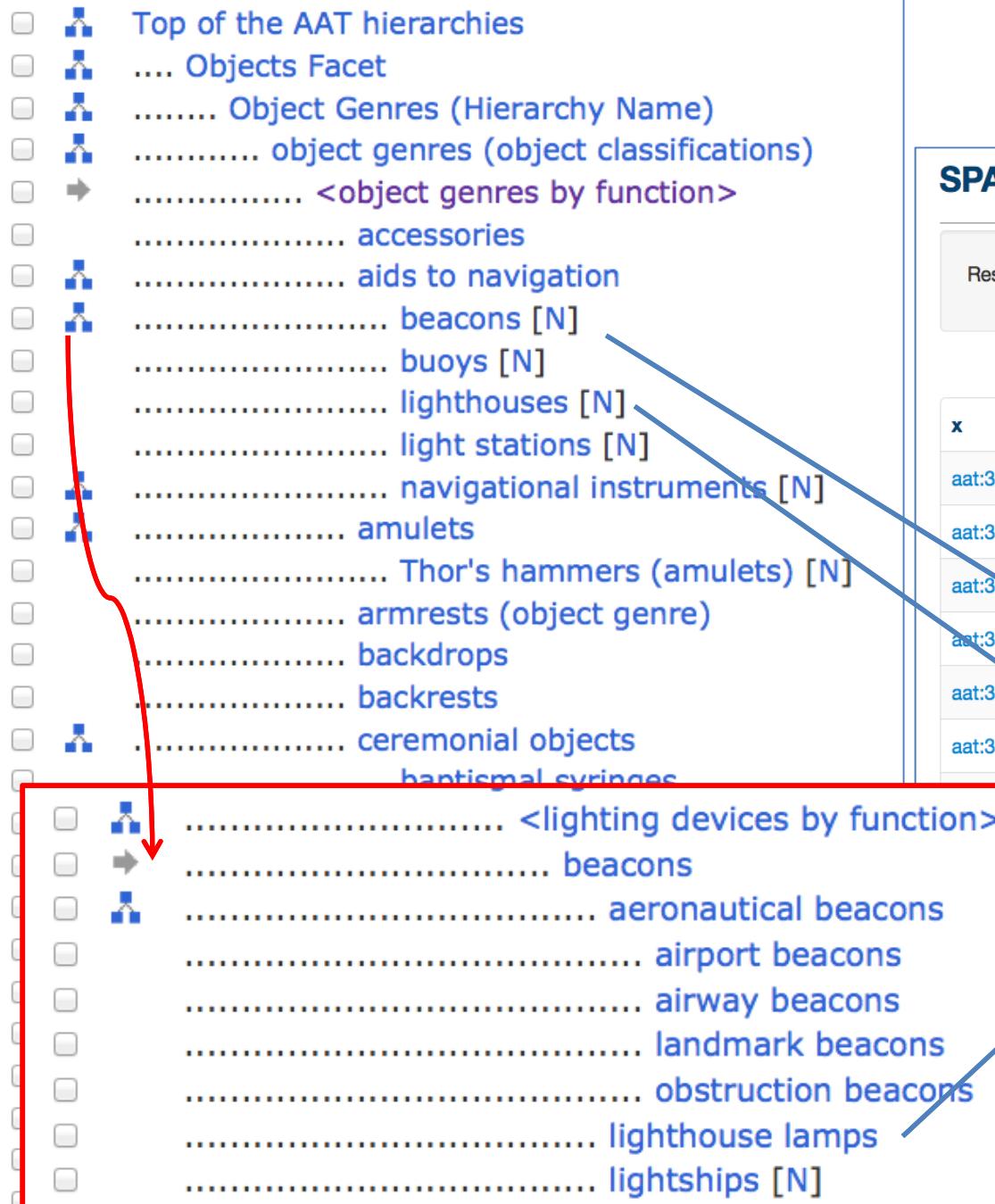
```
# 5.1.2 Descendants of a Given Parent
select * {?x gvp:broaderExtended aat:300117143.
  ?x gvp:prefLabelGVP [xl:literalForm ?l];
  skos:inScheme aat:
} order by ?l
```

# SPARQL Query

Results for # 5.1.2 Descendants.. (100 of 525)

Download SPARQL Results in: [JSON](#) | [XML](#)

x	I
<a href="#">aat:300391225</a>	<religious visual works by related event>@en
<a href="#">aat:300391082</a>	Advent candleholders@en
<a href="#">aat:300391224</a>	Advent wreaths@en
<a href="#">aat:300178242</a>	Andachtsbilder@en
<a href="#">aat:300265145</a>	Bhagavad-gītās@en
<a href="#">aat:300263184</a>	Bible stories@en
<a href="#">aat:300264513</a>	Bibles@en
<a href="#">aat:300263411</a>	Bibles historiales@en



(Below: Checked if the results are at multiple levels in the hierarchy; display did not sort. )

SPARQ

Results for:

Sparql gave me:

Download SPARQL Results in: [JSON](#) | [XML](#)

x	I
aat:300161886	striking blocks@en
aat:300202542	keepsakes (books)@en
aat:300220519	religious texts@en
aat:300210422	buskins (stockings)@en
aat:300184600	aeronautical beacons@en
aat:300007739	beacons@en
182941	lighthouse lamps@en
007741	lighthouses@en
180588	Hanukkah lamps@en
190801	votive lamps@en

## SPARQL Query

Results for # 4.1.2 Descendants... (100 of 523)

Download SPARQL Results in: [JSON](#) | [XML](#)

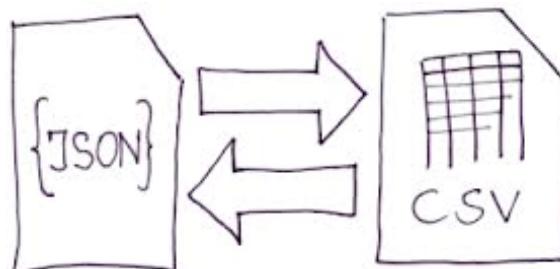
x	I
aat:300161886	striking blocks@en
aat:300202542	keepsakes (books)@en
aat:300220519	religious texts@en
aat:300210422	buskins (stockings)@en
aat:300181600	aeronautical beacons@en
aat:300007739	beacons@en
aat:300182941	lighthouse lamps@en
aat:300007741	lighthouses@en
aat:300180588	Hanukkah lamps@en
aat:300190801	votive lamps@en

## 7. Download JSON format data, now I have a dataset.

### Download Options:

- (1) [JSON\\*](#)
- (2) [XML](#)

\* JSON (JavaScript Object Notation) is a lightweight data-interchange format.



```

{
  "head" : {
    "vars" : [ "x", "l" ]
  },
  "results" : {
    "bindings" : [ {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300217935"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal",
        "value" : "'üds"
      }
    }, {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300264679"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal",
        "value" : "8mm (size: videotape)"
      }
    }, {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300055897"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal"
      }
    }
  }
}

```

AAT URIs and preferred labels under one facet or hierarchy

```

{
  "head" : {
    "vars" : [ "x", "l" ]
  },
  "results" : {
    "bindings" : [ {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300391225"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal",
        "value" : "<religious visual works by related event>"
      }
    }, {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300391082"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal",
        "value" : "Advent candleholders"
      }
    }, {
      "x" : {
        "type" : "uri",
        "value" : "http://vocab.getty.edu/aat/300391224"
      },
      "l" : {
        "xml:lang" : "en",
        "type" : "literal"
      }
    }
  }
}

```

AAT URIs and labels according to a Contributor

# 5.1.2 Descendants of a Given Parent

```

select * {?x gvp:broaderExtended
aat:300117143.
  ?x gvp:prefLabelGVP
  [xl:literalForm ?l]; skos:inScheme aat:
} order by ?l

```

#5.1.3 Subjects by Contributor Id

```

select * {
  ?x a gvp:Subject; dct:contributor
  aat_contrib:10000178.
  ?x gvp:prefLabelGVP [xl:literalForm ?l]
} order by ?l

```

## Part 2. Viewing the dataset by a non-techy person

Acknowledgement: Thanks to a  
Visiting Scholar En-bo Jiang for  
helping the testing.

# How to manage by a non-techy person?

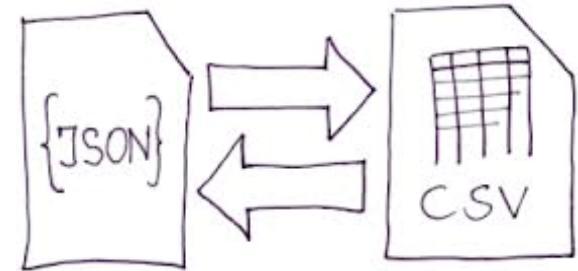
Non-techy person's wish:

I can see what are in the dataset;

I can use a spreadsheet to open and manage it.

Techy-person can prepare the file as:

1. From a JSON\* file → convert to CSV\*\* file (can be opened as spreadsheet) using an open source converter



\*JSON = (JavaScript Object Notation), a lightweight data-interchange format.

\*\*CSV = Comma Separated Value file format

"Form" view online

Using an online converter, turn JSON to CSV.

The screenshot shows the Code Beautify JSON Viewer interface. On the left, the "JSON Input" panel displays a large block of JSON code with line numbers from 5208 to 5238. The JSON structure includes arrays and objects with properties like "type", "value", and "xml:lang". In the center, the "Result mode:" dropdown is set to "form". Below it are several buttons: "Load Url", "open", "Tree Viewer" (which is currently selected), "Beautify", "Minify", "Validate", "JSON To XML", "Export To CSV", and "Download". On the right, the "Result : Tree Viewer" panel shows a hierarchical tree structure of the JSON data. A blue arrow points to the "Export To CSV" button, indicating the next step in the process. At the bottom of the page, the URL <http://codebeautify.org/view/jsonviewer> is displayed.

My Ip | Recents links | Sample | Save | More | Sign in | (?)

Save & Share

JSON Input

sample

5208     "type" : "uri",  
5209        "value" : "http://vocab.getty.edu/aat/300256965"  
5210 },  
5211     {l : {  
5212        "xml:lang" : "en-us",  
5213        "type" : "literal",  
5214        "value" : "navigational instruments"  
5215     }  
5216 }, {  
5217     "x" : {  
5218        "type" : "uri",  
5219        "value" : "http://vocab.getty.edu/aat/300210830"  
5220 },  
5221     {l : {  
5222        "xml:lang" : "en-us",  
5223        "type" : "literal",  
5224        "value" : "parade armors"  
5225     }  
5226 }, {  
5227     "x" : {  
5228        "type" : "uri",  
5229        "value" : "http://vocab.getty.edu/aat/300214161"  
5230 },  
5231     {l : {  
5232        "xml:lang" : "en-us",  
5233        "type" : "literal",  
5234        "value" : "scepters"  
5235     }  
5236 } ]  
5237 }]  
5238 }

Result mode:

form

Load Url

open

Tree Viewer

Beautify

Minify

Validate

JSON To XML

Export To CSV

Download

Result : Tree Viewer

root {1}  
  array {2}  
    head {1}  
    results {1}  
      bindings [523]  
        0 {2}  
        1 {2}  
          x {2}  
            type : uri  
            value : http://vocab.getty.edu/aat/300391082  
        1 {3}  
          xml:lang : en  
          type : literal  
          value : Advent candleholders  
        2 {2}  
        3 {2}  
        4 {2}  
        5 {2}  
        6 {2}

<http://codebeautify.org/view/jsonviewer>

## JSON file "Form" view

```
▼ root {1}
  ▼ array {2}
    ► head {1}
    ▼ results {1}
      ▼ bindings [523]
        ► 0 {2}
        ▼ 1 {2}
          ▼ x {2}
            type : uri
            value : http://vocab.getty.edu/aat/300391082
          ▼ l {3}
            xml:lang : en
            type : literal
            value : Advent candleholders
        ► 2 {2}
        ► 3 {2}
        ► 4 {2}
        ► 5 {2}
```

<http://codebeautify.org/view/jsonviewer>

Firefox File Edit View History Bookmarks Tools Window Help

file:///Us...aper.html × W MARC standard... × g Redirect Notice × Art & Architect... × Getty Vocabula... × AAT - Google S... × Cb Best Online JSO... × JSON CSV JSON to CSV × +

codebeautify.org/view/jsonviewer

Most Visited Twitter / Home Analytics Settings... DCMI Advisory Bo... Wiki Concept Exp... Terms - Linked O... Exec Committee ... Hak ontoforum ZENG, MARCIA - ... Hak intis2013

Code Beautify Google Custom Search My Ip | Recents links | Sample | Save | More | Sign in | (?)

## JSON VIEWER

Save & Share

**JSON Input**

sample

```
4668      "type" : "uri",
4669      "value" : "http://vocab.getty.edu/aat
/300265603"
4670    },
4671    "l" : {
4672      "xml:lang" : "en",
4673      "type" : "literal",
4674      "value" : "synodicons"
4675    }
4676  },
4677  {
4678    "x" : {
4679      "type" : "uri",
4680      "value" : "http://vocab.getty.edu/aat
/300207778"
4681    },
4682    "l" : {
4683      "xml:lang" : "en",
4684      "type" : "literal",
4685      "value" : "tabernacles (liturgical container
s)"
4686    },
4687    "x" : {
4688      "type" : "uri",
4689      "value" : "http://vocab.getty.edu/aat
/300234011"
4690    },
4691    "l" : {
4692      "xml:lang" : "en",
```

**Result mode:**

tree

Load Url

open

Tree Viewer

Beautify

Minify

Validate

JSON To XML

Export To CSV

Download

**Result : Tree Viewer**

root {1}
array {2}
head {1}
results {1}
bindings [523]
0 {2}
1 {2}
x {2}
type : uri
value : http://vocab.getty.edu
/aat/300391082
1 {3}
xml:lang : en
type : literal
value : Advent candleholders
2 {2}
3 {2}
4 {2}
5 {2}

<http://codebeautify.org/view/jsonviewer>

# How to manage by a non-techy person?

Non-techy person's wish:

I can see what are in the dataset;

I can use a spreadsheet to open and manage it.

Techy-person can prepare the file as:

1. From a JSON\* file → convert to CSV\*\* file (can be opened as spreadsheet) using an open source converter, or
2. From a JSON file → export to spreadsheet from OpenRefine



A power tool for working with messy data.

Create Project

Open Project

Import Project

Language Settings

« Start Over Configure Parsing Options

Object name sparql.json

Create Project »

When uploaded the JSON file to OpenRefine, highlight the first enter in order for the software to tell the structure.

```
results: {  
  bindings: [ {  
    l: {  
      value: <religious visual works by related event>,  
      xml:lang: en,  
      type: literal  
    },  
    x: {  
      value: http://vocab.getty.edu/aat/300391225;  
      type: uri  
    }  
  }]  
}
```

Parse data as

Please specify a record path first.

Update Preview

JSON files

Load at most

row(s) of data

Parse data as

Please specify a record path first.

Line-based text files

CSV

Fixed

PC-A

RDF

XML

Open

(ods)

**JSON files**

Line-based text files

CSV / TSV / separator-based files

Fixed-width field text files

PC-Axis text files

RDF/N3 files

XML files

Load at most

Preserve empty strings

Trim leading & trailing whitespace from strings

Parse cell text into numbers, dates, ...

Store file source (file names, URLs) in each row

 Version 2.6-beta.1 [TRUNK]

Help  
About

Facet / Filter

Undo / Redo 0

523 rows

Show as: rows records

Show: 5 10 25 50 rows

&lt; first &lt; previous 1 - 10 next &gt; last &gt;

[Open...](#) [Export](#) [Help](#)

Extensions: undefined

### Using facets and filters

Use facets and filters to select subsets of your data to act on. Choose facet and filter methods from the menus at the top of each data column.

Not sure how to get started?

[Watch these screencasts](#)

# Establish a 'Project', then ready to edit.

	_ - l - type	_ - l - value	_ - l - xml:lang	_ - x - type	_ - x - value
1.	literal	<religious visual works by related event>	en	uri	<a href="http://vocab.getty.edu/aat/300391225">http://vocab.getty.edu/aat/300391225</a>
2.	literal	Advent candleholders	en	uri	<a href="http://vocab.getty.edu/aat/300391082">http://vocab.getty.edu/aat/300391082</a>
3.	literal	Advent wreaths	en	uri	<a href="http://vocab.getty.edu/aat/300391224">http://vocab.getty.edu/aat/300391224</a>
4.	literal	Andachtsbilder	en	uri	<a href="http://vocab.getty.edu/aat/300178242">http://vocab.getty.edu/aat/300178242</a>
5.	literal	Bhagavad-gītās	en	uri	<a href="http://vocab.getty.edu/aat/300265145">http://vocab.getty.edu/aat/300265145</a>
					<a href="http://vocab.getty.edu/aat/300263184">http://vocab.getty.edu/aat/300263184</a>
					<a href="http://vocab.getty.edu/aat/300264513">http://vocab.getty.edu/aat/300264513</a>
					<a href="http://vocab.getty.edu/aat/300263411">http://vocab.getty.edu/aat/300263411</a>
					<a href="http://vocab.getty.edu/aat/300211640">http://vocab.getty.edu/aat/300211640</a>
					<a href="http://vocab.getty.edu/aat/300026456">http://vocab.getty.edu/aat/300026456</a>

### \_ - l - value

<religious visual works by related event>

Advent candleholders

en

Advent wreaths

en

Andachtsbilder

en

Bhagavad-gītās

[edit](#)

en

Bible stories

en

Bibles

en

Bibles historiales

en

Bibles moralisées

en

The screenshot shows the Refine interface at [localhost:3333/project?project=2387700166074](http://localhost:3333/project?project=2387700166074). The main area displays 523 rows of data in a table format. On the right, a red 'Export' button is highlighted, and a dropdown menu is open, listing various export options: Tab-separated value, Comma-separated value, HTML table, Excel, ODF spreadsheet (which is selected), Triple loader, MQLWrite, Custom tabular exporter..., and Templating... A blue arrow points from the bottom of the page towards the 'Export' button, while another blue arrow points from the left side of the page towards the 'ODF spreadsheet' option in the dropdown.

Open the JSON file from spreadsheet on my laptop

	A	B	C	D	
1	_ - l - type	_ - l - value	_ - l - xml:lang	_ - x - type	_ - x - value
2	literal	<religious visual works by related event>	en	uri	http://vocab.getty.edu/aat/300391225
3	literal	Advent candleholders	en	uri	http://vocab.getty.edu/aat/300391082
4	literal	Advent wreaths	en	uri	http://vocab.getty.edu/aat/300391224
5	literal	Andachtsbilder	en	uri	http://vocab.getty.edu/aat/300178242
6	literal	Bhagavad-gītās	en	uri	http://vocab.getty.edu/aat/300265145
7	literal	Bible stories	en	uri	http://vocab.getty.edu/aat/300263184
8	literal	Bibles	en	uri	http://vocab.getty.edu/aat/300264513
9	literal	Bibles historiales	en	uri	http://vocab.getty.edu/aat/300263411
10	literal	Bibles moralisées	en	uri	http://vocab.getty.edu/aat/300211640
11	literal	Biblia pauperum	en	uri	http://vocab.getty.edu/aat/300026456
12	literal	Bifwebe	en	uri	http://vocab.getty.edu/aat/300262593
13	literal	Buddhas	en	uri	http://vocab.getty.edu/aat/300262950
14	literal	Christmas trees	en	uri	http://vocab.getty.edu/aat/300264822
15	literal	DNA microarrays	en	uri	http://vocab.getty.edu/aat/300387460
16	literal	Easter eggs	en	uri	http://vocab.getty.edu/aat/300380312
17	literal	Hanukkah lamps	en	uri	http://vocab.getty.edu/aat/300180588
18	literal	Korans	en	uri	http://vocab.getty.edu/aat/300265128
19	literal	Passionskrippen	en	uri	http://vocab.getty.edu/aat/300266359
20	literal	Schnitzaltars	en	uri	http://vocab.getty.edu/aat/300264823
21	literal	Stations of the Cross	en	uri	http://vocab.getty.edu/aat/300265130
22	literal	Thor's hammers (amulets)	en	uri	http://vocab.getty.edu/aat/300265347
23	literal	Torah shrines	en	uri	http://vocab.getty.edu/aat/300375669
24	literal	Transylvanian carpets	en	uri	http://vocab.getty.edu/aat/300185969
25	literal	Vedas	en	uri	http://vocab.getty.edu/aat/300386788
26	literal	ablution basins	en	uri	http://vocab.getty.edu/aat/300391285
27	literal	ablution chalices	en	uri	http://vocab.getty.edu/aat/300391079
519	literal	favors	en-us	uri	http://vocab.getty.edu/aat/300257628
520	literal	incense boats	en-us	uri	http://vocab.getty.edu/aat/300198818
521	literal	miters (headgear)	en-us	uri	http://vocab.getty.edu/aat/300212995
522	literal	navigational instruments			/300256965
523	literal	parade armors			/300210830
524	literal	scepters			/300214161

To do: need to double check if all node labels and preferred terms are in.

If open the XML file from spreadsheet, it looks like:

	B	C	D	E	F
1	result - binding	result - binding - name	result - binding - uri	result - binding - literal	result - binding - literal - xml:lang
2		x	http://vocab.getty.edu/aat/300391225		
3					
4				<religious visual works by r	en
5					
6		x	http://vocab.getty.edu/aat/300391082		
7					
8				Advent candleholders	en
9					
10		x	http://vocab.getty.edu/aat/300391224		
11					
12				Advent wreaths	en
13					
14		x	http://vocab.getty.edu/aat/300178242		
15					
16				Andachtsbilder	en
17					
18		x	http://vocab.getty.edu/aat/300265145		
19					
20				Bhagavad-gītās	en
21					
22		x	http://vocab.getty.edu/aat/300263184		
23					
24				Bible stories	en
25					
26		x	http://vocab.getty.edu/aat/300264513		
27					

# Summary of the steps

1. Choose the facet or hierarchy you like to start;
2. Find the ID of that concept.
3. Use this template to get the URIs and labels:

```
# 5.1.2 Descendants of a Given Parent
select * {?x gvp:broaderExtended
aat:300117143.
          ?x gvp:prefLabelGVP
[xl:literalForm ?I]; skos:inScheme aat:
} order by ?I
```

- Replace the ID in the Query template
- Submit
- Get the URIs and labels in under this guide term.
- Sort by order (column x)

4. Use a tool that can treat JSON to view and manage.

# Additional: Using RelFinder to Visualize Interactive Relationship Discovery in RDF Data

<http://www.visualdataweb.org/relocator.php>

# Example: Find relations between Leonardo da Vinci and Renaissance (based on DBpedia dataset) -1

1. Pointing to a SPARQL end point
2. Type two terms to find matching entries

The screenshot shows the RelFinder interface. In the top-left, there's a search bar with 'between' selected, containing the terms '(1) Leonardo da Vinci' and '(2) Renaissance'. Below the search bar are buttons for 'add', 'clear', and 'Find Relations'. Underneath these are filter options: 'length', 'class', 'link', and 'conne...'. A table titled 'object class' lists two rows: 'http://www.w3.org/2004/02/skos/concept' and 'http://schema.org/Person', both with 'num' 2/2 and 'vi' status. At the bottom left, there's a link 'More Infos: dbpedia.org'.

The main area displays a semantic graph. Nodes include 'Leonardo da Vinci', 'Renaissance', 'Victor Bregeda', and 'Hieronymus Bosch'. Relationships shown are 'influencedBy' (from Leonardo to Victor Bregeda and from Victor Bregeda to Hieronymus Bosch), and 'movement' (from Hieronymus Bosch to Renaissance). Below the graph, a callout bubble contains steps 3 and 4.

3. The tool will display the triples one by one  
4. Click on any concept to highlight the relations

## Leonardo da Vinci and Renaissance (based on DBpedia dataset) 2

RelFinder

URL

between examples

(1) Leonardo da Vinci

(2) Renaissance

**add** **clear** **Find Relations**

Filter by: relations: (2/2)

object class	num	vi
http://www.w3.org/2004/02/skos/core#Concept	2/2	
http://schema.org/Person	2/2	

**Victor Bregeda**

More Infos: [dbpedia.org](http://dbpedia.org)



Victor Bregeda (born 1 July 1963) is a Russian painter. He was born in the Russian city of Taganrog into a family of painters. He was

Diagram:

```
graph TD; LDV[Leonardo da Vinci] -- influencedBy --> VBG[Victor Bregeda]; LDV -- subject --> AEE[Age of Enlightenment]; VBG -- influencedBy --> HBS[Hieronymus Bosch]; VBG -- movement --> R[Renaissance]; R -- subject --> HE[Historical eras]; HE -- broader --> AEE
```

The diagram illustrates the relationships between Leonardo da Vinci, Victor Bregeda, Hieronymus Bosch, and the Renaissance. Leonardo da Vinci influenced Victor Bregeda, who in turn influenced Hieronymus Bosch. Both Victor Bregeda and Hieronymus Bosch were associated with the Renaissance movement. The Renaissance movement is also connected to the Age of Enlightenment and Historical eras.

My Plan: to create a friendly SPARQL query creator  
for generating AAT Microthesauri

SPARQL Query Creator [Beta]

Getty Vocabularies: LOD : SPA... Chen Chengpo Digital Arc... Sparql query End-point - ... Getty Vocabularies: LOD : SPA... SPARQL Query Creator

marciazeng.slis.kent.edu/metadata/sparqlTemp.html AAT

Select Category\* (please select:) (Note: Consult <http://mappings.dbpedia.org/server/ontology/classes/> for other Classes.)

Filter by Birth Place  & Select Birth Place (please select:)

Use filter: Influenced By  Influenced  Do not use influence filter

• Further filter according to individuals   
○ Name 1   
E.g., Pablo\_Picasso (Note: Name must be exactly same as that in dbpedia or wikipedia URI. See Picasso at [http://dbpedia.org/page/Pablo\\_Picasso](http://dbpedia.org/page/Pablo_Picasso) or [http://en.wikipedia.org/wiki/Pablo\\_Picasso](http://en.wikipedia.org/wiki/Pablo_Picasso).)

○ Name 2 (optional)   
E.g., Henri\_Matisse

Limit Number of Results

Output data will contain :  
 URI  
 Name

---

Submit

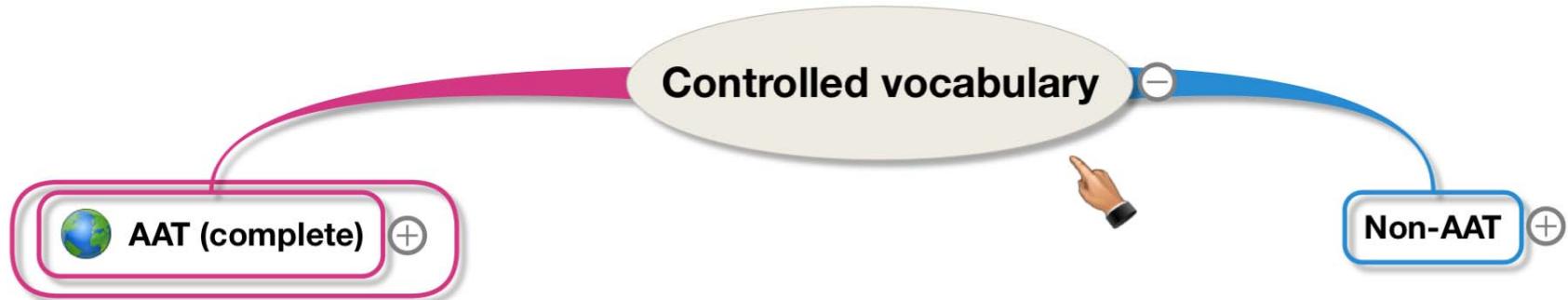
\* = required

---

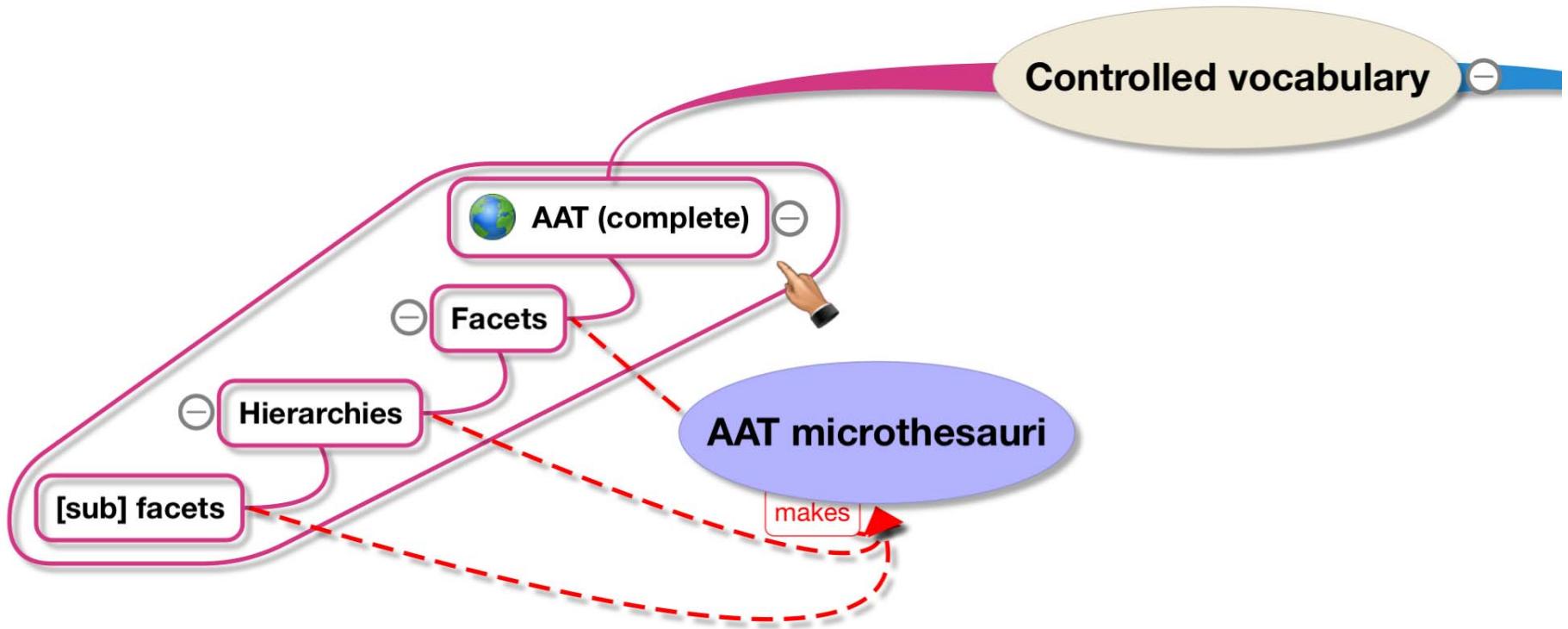
© Designed and coded by [Marcia Lei Zeng](#), Kent State University, 2013-03-01.

## 5. Conclusion

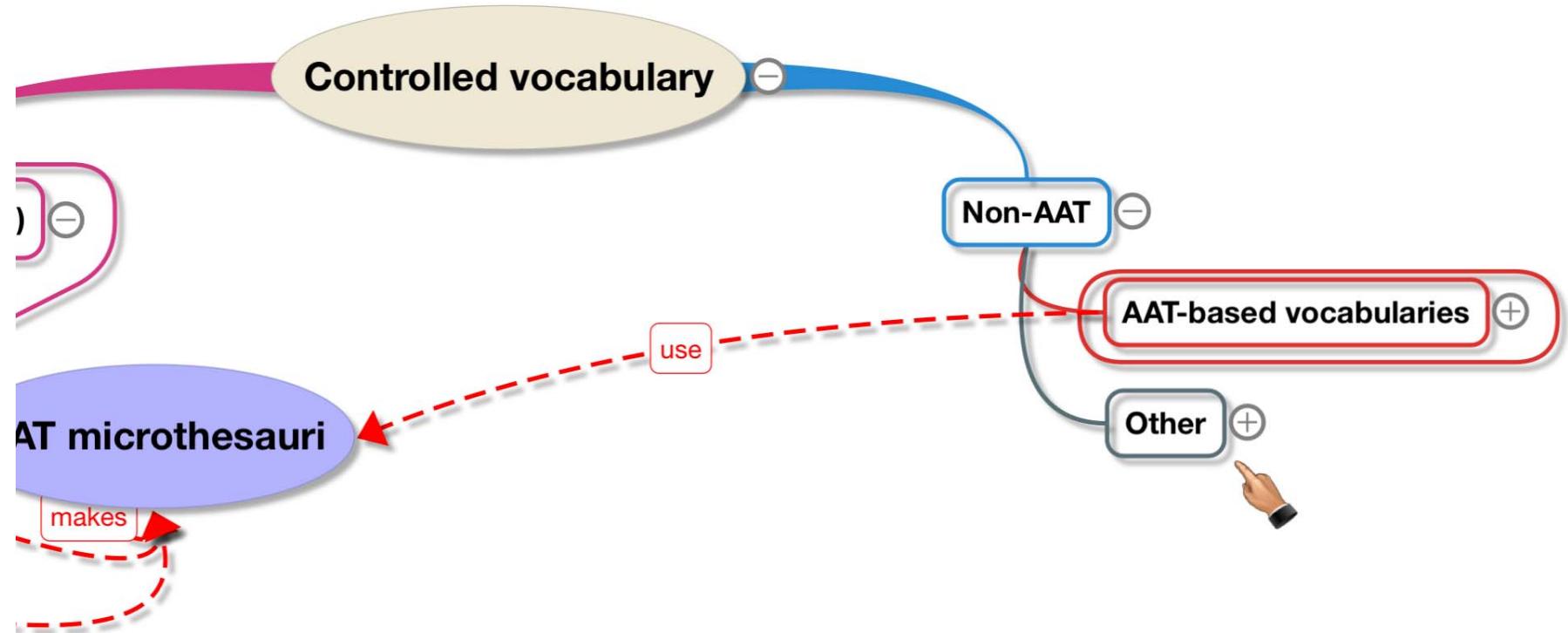
### LOD AAT Microthesauri's importance in the Non-AAT World

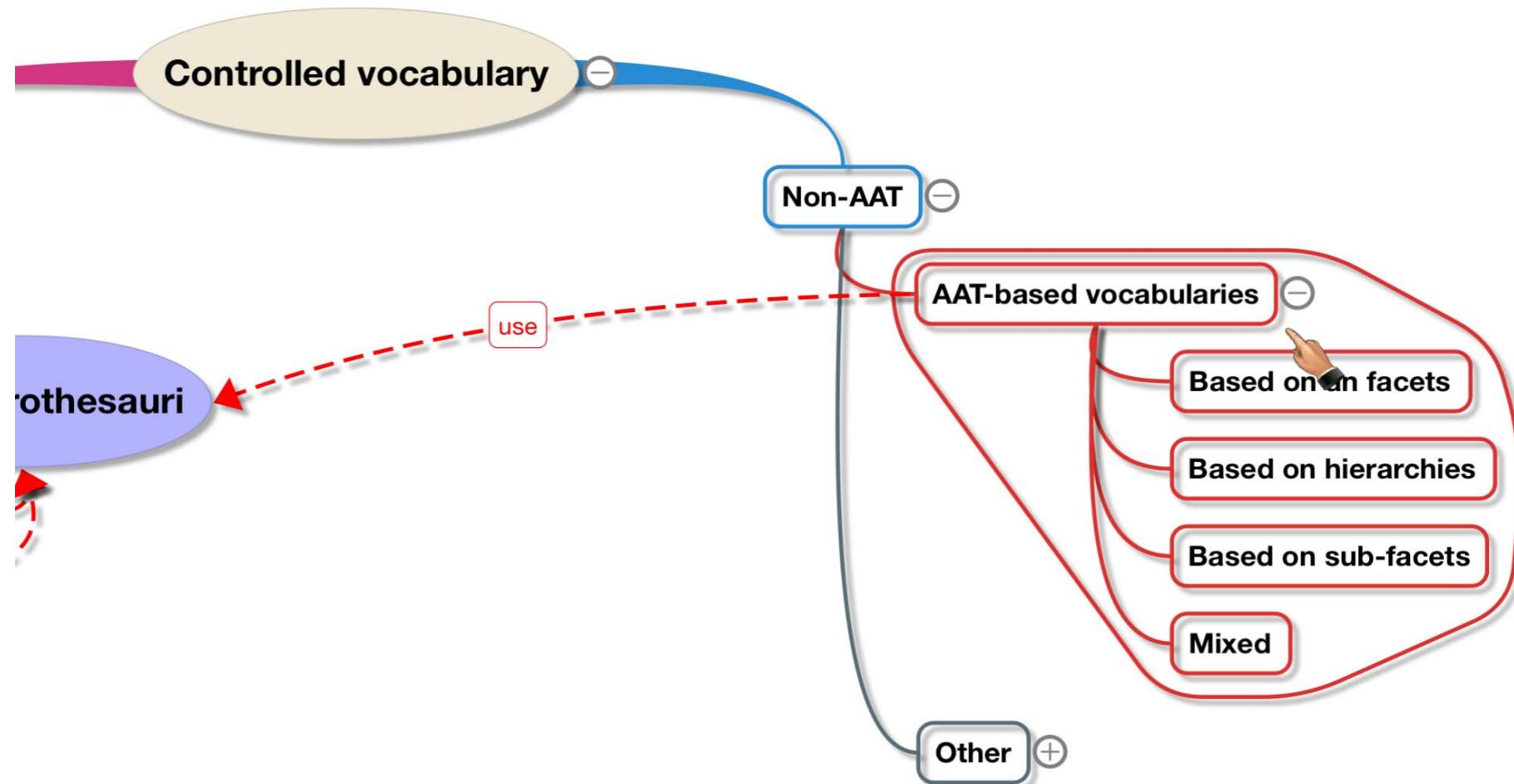


TOPIC = 1 topic (2 words)  
BRANCH = 16 topics (39 words)

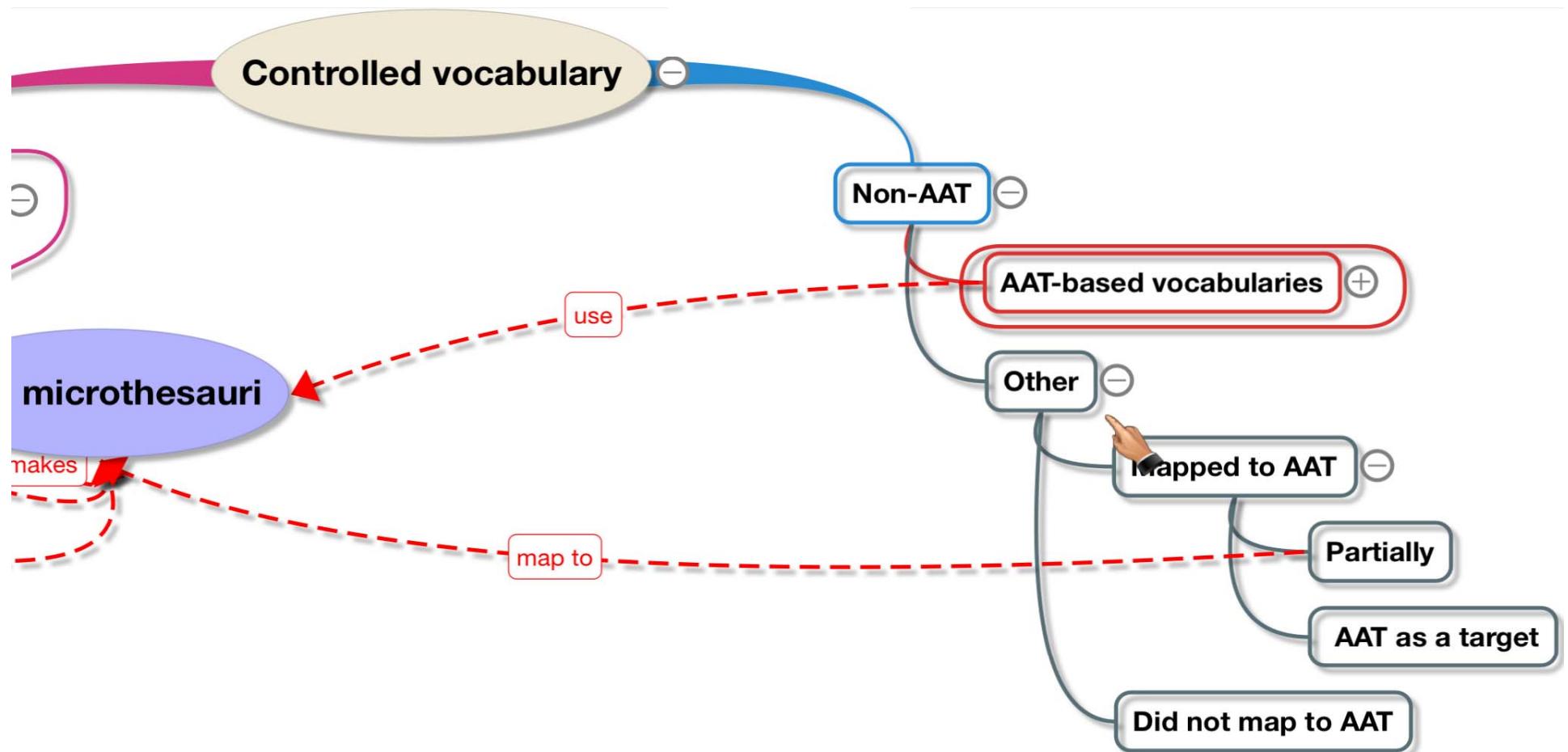


TOPIC = 1 topic (2 words)  
BRANCH = 4 topics (6 words)



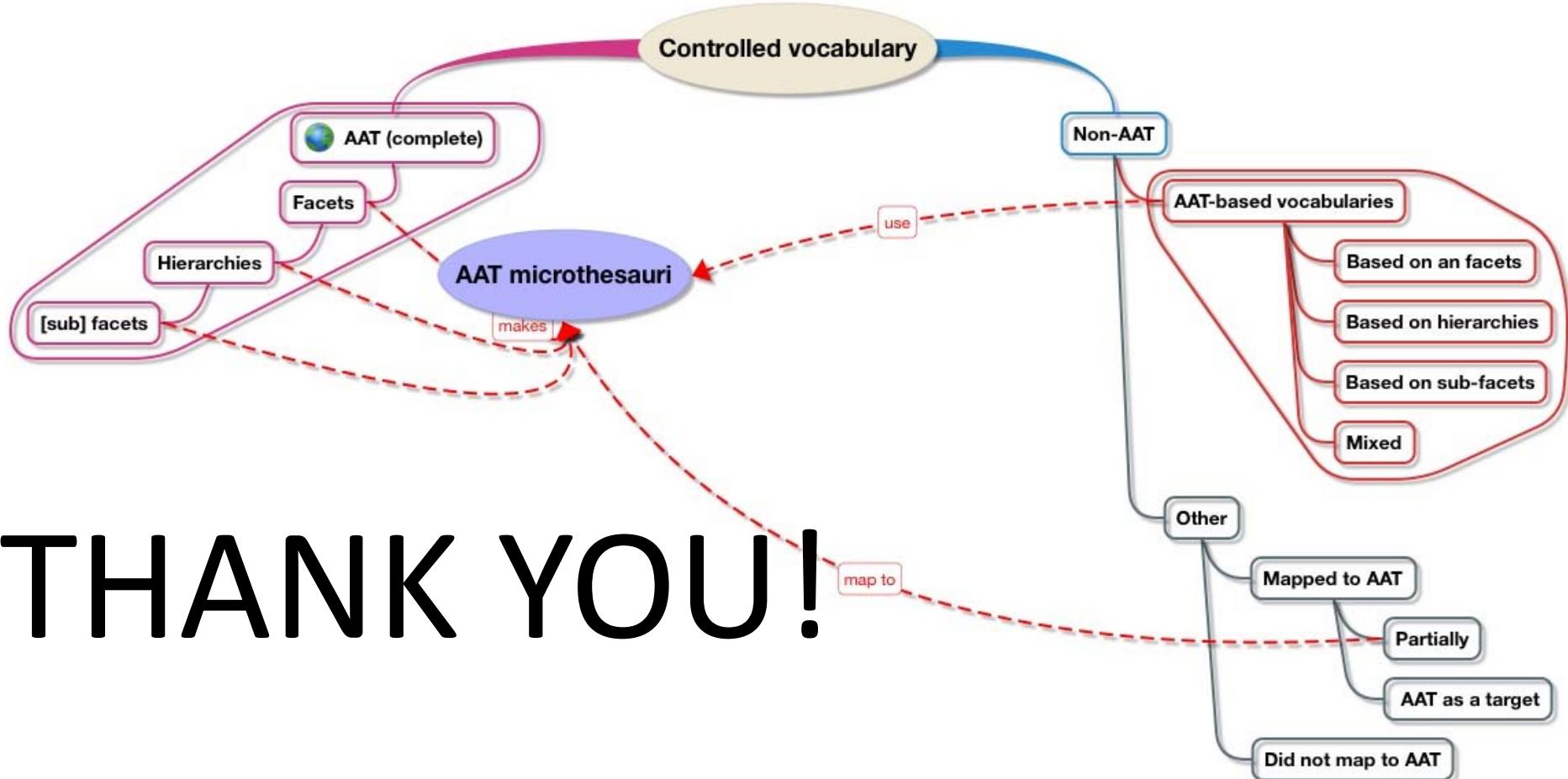


TOPIC = 1 topic (3 words)  
BRANCH = 5 topics (15 words)



TOPIC = 1 topic (1 word)  
BRANCH = 5 topics (14 words)

## AAT's importance in the Non-AAT World



## Wish: Provide better SPARQL template interfaces, allowing all kinds of explorations

The screenshot shows a SPARQL editor interface with the following components:

- Toolbar:** Includes icons for file operations (New, Open, Save, Import, Export), search, refresh, and navigation.
- Header:** Shows the Dataset as "Legislation", Mode as "SPARQL 1.0", and Output as "Plain text".
- Query Editor:** A text area labeled "Query 1" containing the following SPARQL code:

```
1 PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
2 PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
```
- Function Palette:** A large panel on the right side containing a grid of SPARQL keywords. The "functions group" is highlighted with a red box. The grid includes categories like SPARQL, Properties, Classes, Prefixes, and Samples, with sub-categories like ALL, MODIFIER, STRING, TERM, etc.
- Status Bar:** Displays the message "Line: 4; Position: 1; Query is invalid".
- Bottom Navigation:** Buttons for "Query Results" and "Visual Results Mode".