CIDOC 2017 Tbilisi, Georgia

Enriching Iconclass LOD with AAT concepts

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RKD NETHERLANDS INSTITUTE FOR ART HISTORY

RKD, Netherlands Institute for Art History, The Hague

RKD Collections

- Art documentation
- Library catalogue
- Archive inventories
- Datasets (web portal RKDexplore)
- **Vocabularies: RKDartists, Iconclass and Dutch AAT**

Controlled Vocabularies RKD

RKDartists: biographical info 250.000 persons related to the arts

Dutch AAT: 42.000 generic concepts for heritage collections

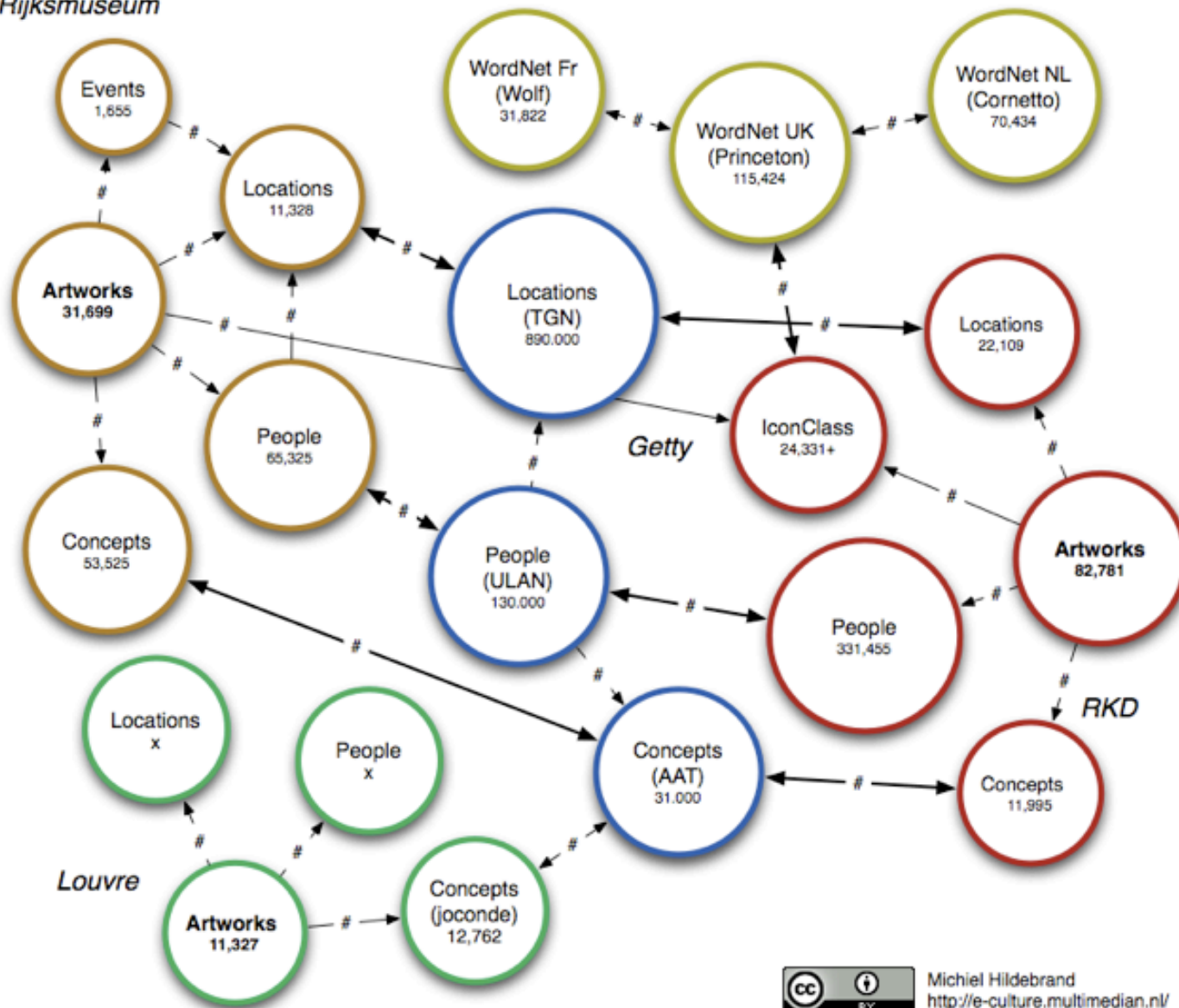Iconclass: 28.000 classifications for art subjects

- SEMANTIC WEB AND CULTURAL HERITAGE

Exploring connections Iconclass and AAT
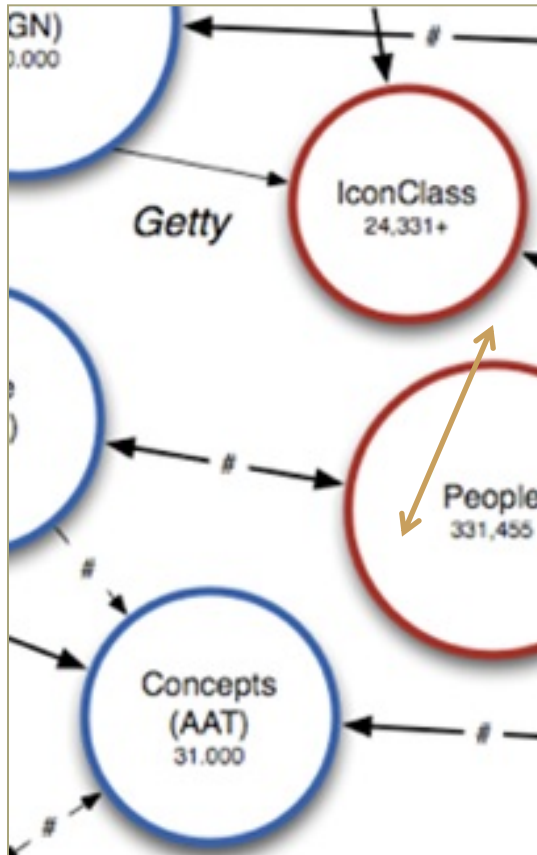
Questions:

Connect on a concept level?
or
Connect on keyword level?

Data structure issues?

What are the benefits?

ICONOLOGIA
of
Iconclass
a multilingual classification system for cultural content

Henri van der Waal (1910-1972)
Start in 1950's
Computerized editions: 1990-2001 (cd-rom) Online browser 2004. Update in 2009 www.iconclass.org
Alfanumerical codes with text.
Hierarchies like thesaurus
Multilingual
LOD publication (URI, API and full set)

Hierarchical structure

Rembrandt, Portret van een echtpaar als Isaak en Rebecca, 1662-1666

7 – Bible

71 – Old Testament

71C – Genesis: the patriarchs

71C2 – story of Isaac

71C21 – Rebekah (Rebecca) sought in marriage (Genesis 24)

71C217 – marriage of Isaac and Rebekah

Keys: Eliezer (servant of Abraham) · Genesis · Genesis 24 · Isaac · Old Testament · Rebekah · bible · marriage · patriarch · proposal

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Voorbeelden 11H Saints

- Mary Magdalene under female saints

- 11HH(MARY MAGDALENE)(+3) the penitent harlot Mary Magdalene... (+ angel(s))

- Keywords: Christian religion · Mary Magdalene (St.) · angel · book · crown · crown of thorns · crucifix · jar · mirror · musical instrument · ointment · palm-branch · religion · rosary · saint · scourge · scroll · supernatural · whore · woman

Iconclass browser

a multilingual classification system for cultural content

JSON

RDF/SKOS

```
{
  • p: [
      "1",
      "11",
      "11H",
      "11HH",
      "11HH(...)",
      "11HH(MARY MAGDALENE)"
  ],
  • o: [
      "11HH(MARY MAGDALENE)(+3
  ],
  • txt: {
      fr: "Marie Madeleine, pé
      en: "the penitent harlot
      cn: "the penitent harlot
      de: "Maria Magdalena, bü
      it: "Santa Maria Maddale
      fi: "katuva portto Maria
  },
  • kw: {
    • fr: [
```

```
<rdf:Description rdf:about="http://iconclass.org/11HH%28MARY%20MAGDALENE%29%28%2B3%29"
  <rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Concept"/>
  <skos:prefLabel xml:lang="fr">
    Marie Madeleine, pécheresse pénitente; attributs possibles : livre (ou rouleau), couronne, couronne d'épi
  </skos:prefLabel>
  <skos:prefLabel xml:lang="en">
    the penitent harlot Mary Magdalene; possible attributes: book (or scroll), crown, crown of thorns, crucif
  </skos:prefLabel>
  <skos:prefLabel xml:lang="de">
    Maria Magdalena, büßende Prostituierte; mögliche Attribute: Buch (oder Schriftrolle), Krone, Dornenkr
  </skos:prefLabel>
  <skos:prefLabel xml:lang="it">
    Santa Maria Maddalena prostituta penitente; attributi: corona, corona di spine, crocifisso, flagello, libro
  </skos:prefLabel>
  <skos:prefLabel xml:lang="fi">
    katuva portto Maria Magdaleena; mahdolliset attribuutit: kirja (tai kirjakäärö), kruunu, orjantappurakruu
  </skos:prefLabel>
  <skos:inScheme rdf:resource="http://iconclass.org/rdf/2011/09/"/>
  <skos:notation>11HH(MARY MAGDALENE)(+3)</skos:notation>
  <skos:narrower rdf:resource="http://iconclass.org/11HH%28MARY%20MAGDALENE%29%28%2B31
  <skos:broader rdf:resource="http://iconclass.org/11HH%28MARY%20MAGDALENE%29"/>
  <dc:subject xml:lang="fr">Marie Madeleine (Ste)</dc:subject>
  <dc:subject xml:lang="fr">ange</dc:subject>
  <dc:subject xml:lang="fr">couronne</dc:subject>
  <dc:subject xml:lang="fr">couronne d'épines</dc:subject>
  <dc:subject xml:lang="fr">crucifix</dc:subject>
```
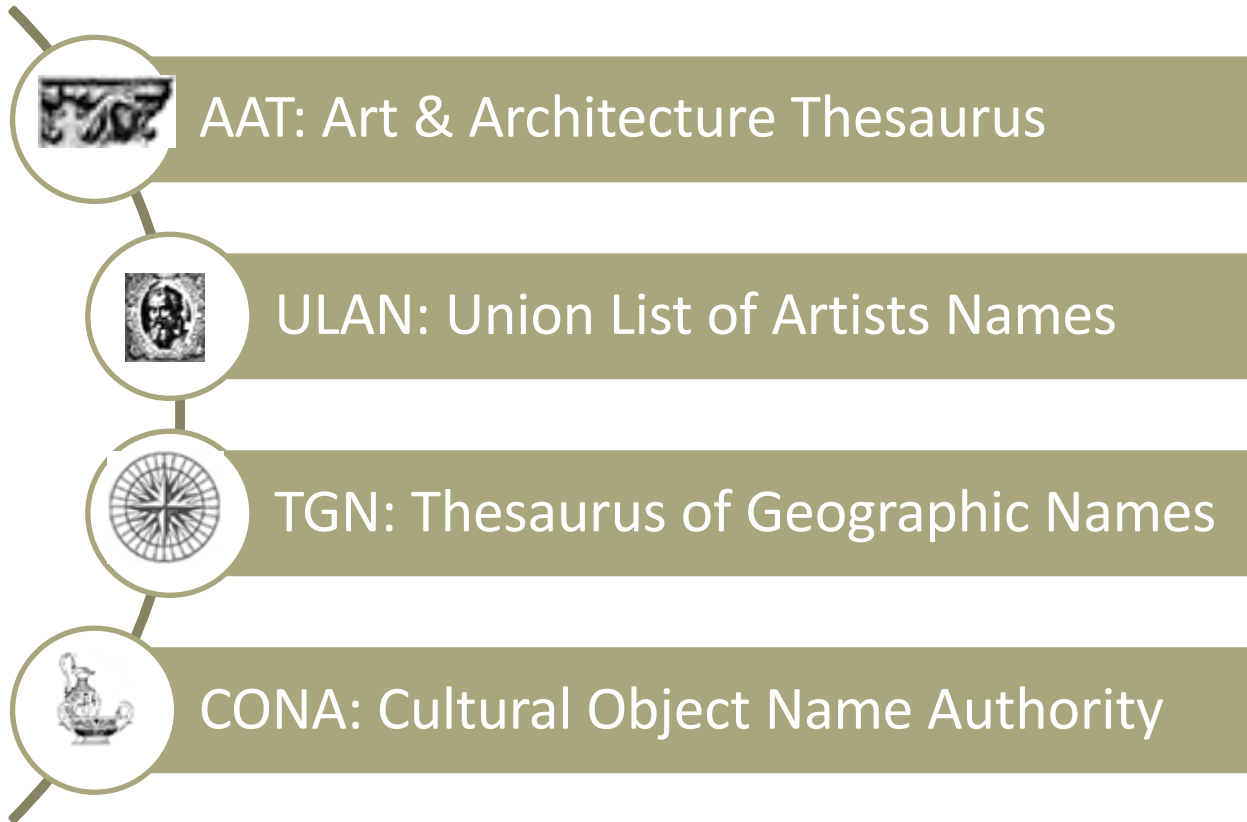
Issues with Iconclass keywords

- They are standardized following some conventions
- But not unique: they are not concepts

- keywords in LOD, are not always symmetrically structured between the language variants.
  - Keyword 1 in French = 'Victoria'
  - Keyword 1 in English = 'idea'

  My experiment focussed on mapping the English keywords: no automatic mapping for the other languages.

Getty vocabularies

AAT: Art & Architecture Thesaurus

ULAN: Union List of Artists Names

TGN: Thesaurus of Geographic Names

CONA: Cultural Object Name Authority

They are all constructed as thesauri

Art & Architecture Thesaurus® Online
Search Results

🔍 New Search   ◂ Previous Page

- Developed since 1980

- 43.000 concepts, and 300.000 terms

- Generic concepts for describing objects and images in serveral languages. Multi-lingual

  - No names of persons and unique events

  - 'Cathedal' yes, but not 'Chartres cathedral' (CONA)

- Strict editorial control, validation by sources

- Thesaurus construction follows **ISO 25964**

- international (even global) scope

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The Art & Architecture Thesaurus

ID: 300004590   **Record Type:** concept

chapels (rooms or structures) (Christian religious building spaces, religious building spaces, ... Components (hierarchy name))

Terms:

chapels (rooms or structures) (**preferred**,C,U,LC,English-P,D,U,PN)
chapel (room or structure) (C,U,English,AD,U,SN)
chappelle (C,U,English,UF,U,N)   .... documented by the 13th
                                                                             century in English texts

          (French,UF,U,N)
chapelle (C,U,English,UF,U,SN)   .... current French spelling, formerly
                                                                             also found in English

          (French,AD,U,SN)
cappella (C,U,English,UF,U,SN)   .... current Italian; Medieval English
                                                                             spelling

          (Latin,AD,U,SN)
          (Medieval Latin,UF,U,SN)
          (Italian,AD,U,SN)
kapellen (ruimten of constructies) (C,U,Dutch-P,D,U,U)
kapel (C,U,Dutch,AD,U,U)
chapelles (C,U,French-P,D,U,PN)
Kapellen (Raum oder Gebäude) (C,U,German,D,PN)
Kapelle (Raum oder Gebäude) (C,U,German-P,AD,SN)
cappelle (C,U,Italian-P,D,U,PN)
capillas (habitación o estructura) (C,U,Spanish-P,D,U,PN)
capilla (habitación o estructura) (C,U,Spanish,AD,U,SN)
chappel (H,U,English,UF,U,N)   .... obsolete spelling, used through
                                                                             the 19th century

- Editorial Guidelines   Here you will find a list of the most frequently asked questions about the thesaurus.
- Getty Vocabularies as
  Linked Open Data   **AAT@getty.edu**
- Frequently Asked Questions Click here to send a message to the AAT editors.
▸ Obtain the Getty

Getty web service

- The base URI is http://vocab.getty.edu/

- SPARQL-endpoint

- Standard presentation is SKOS or SKOS-XL

- Mappings and ontology based on RDF/XML and Turtle

- Published versions of lookup lists e.g.,languages, roles, nationalities, place types, and bibliographic sources)

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Compare Iconclass - AAT

IC notations (text) can be equivalent to AAT concept, but more often not

- difficult to determine exact meaning and often out of scope

  41A71   'furniture to put things on'

  Iconclass notation: ***47H6 textile fabric, cloth*** mapping with AAT: ***cloth*** (300162391)

IC keywords for 'textile fabric, cloth':

civilization · cloth · craft · culture · industry · occupations · society · textile industry

- These keywords can be mapped well because more standardized and generic!

Mapping keywords to AAT

Civilization	• http://vocab.getty.edu/aat/300055806
cloth	• http://vocab.getty.edu/aat/300162391
craft	• http://vocab.getty.edu/aat/300054704
culture	• http://vocab.getty.edu/aat/300055768
industry	• http://vocab.getty.edu/aat/300055718
occupations	• http://vocab.getty.edu/aat/**300263369**
society	• http://vocab.getty.edu/aat/300026009
textile industry	• **NO MATCH**

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Mapping results

Tools: Excel, Open Refine, Cultuurlink

When removing duplicates from the keywords. The result was about: 35% matches overall

When Using Cultuurlink for the full set: the percentage rose to around 50%

Mapping results 2

Named entities do not match!

Cleopatra, Arthur, Ophelia, Odin, Mars, Paris, Marseille

iconographical (biblical) subjects do not match (often)
'Man of Sorrows', **'hand of God'** and **'Jacob's ladder'**

Unusual compound terms do not match

apparent death', '**love unrequited'** and **'not too poor, not too rich'**
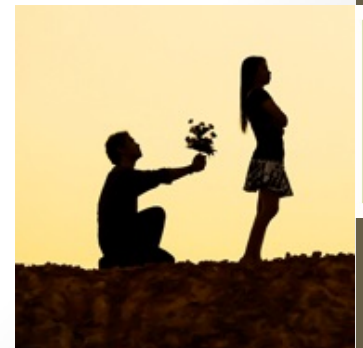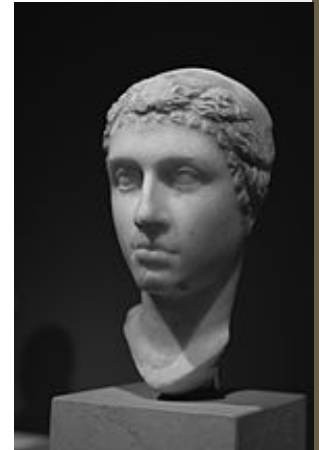
IC-AAT Linked Data

4|civilization = http://vocab.getty.edu/aat/300055806

4|culture = http://vocab.getty.edu/aat/300055768

4|society = http://vocab.getty.edu/aat/300026009

41|materiality = http://vocab.getty.edu/aat/

41A|housing = http://vocab.getty.edu/aat/
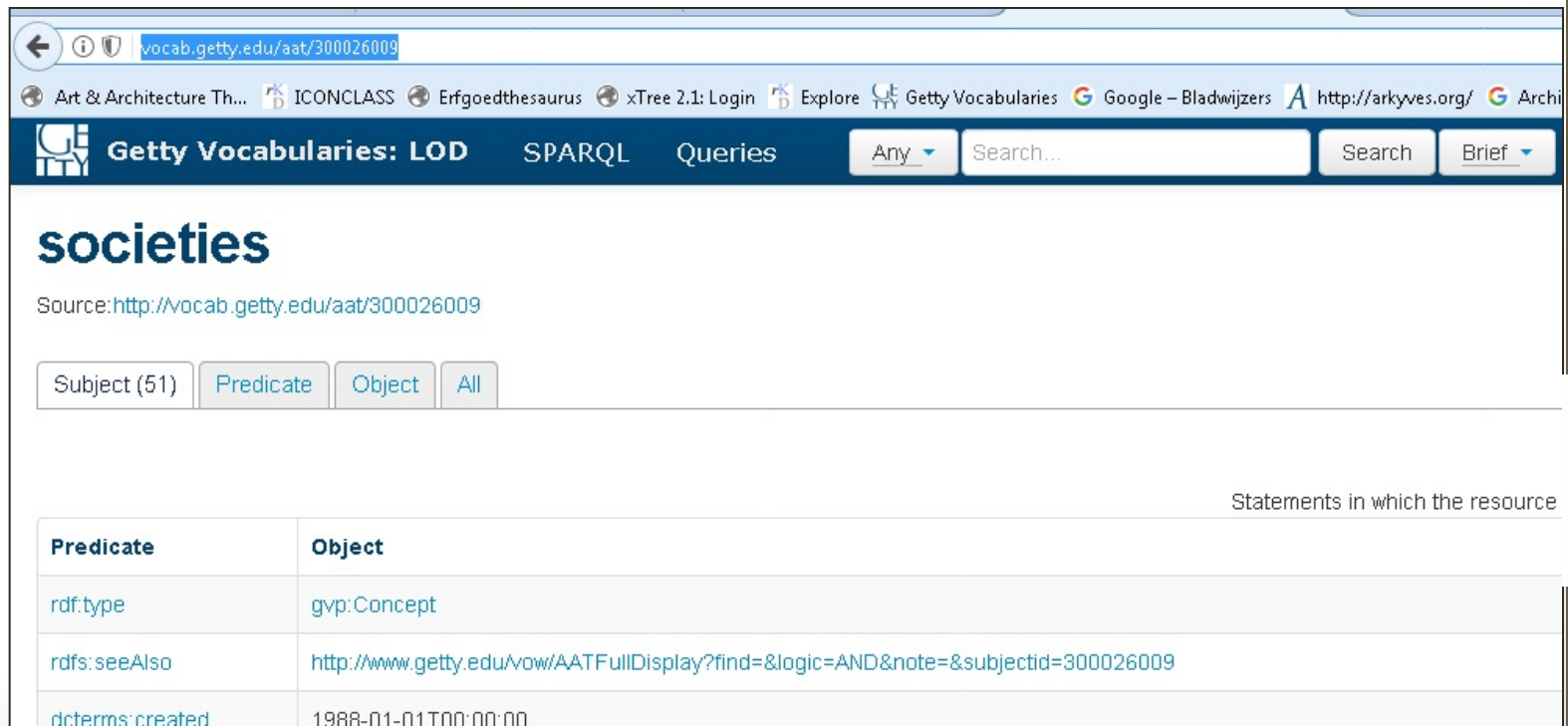
41A1|architecture = http://vocab.getty.edu/aat/

41A1|civil architecture = http://vocab.getty.edu/aat/

Possible value

End user visualization
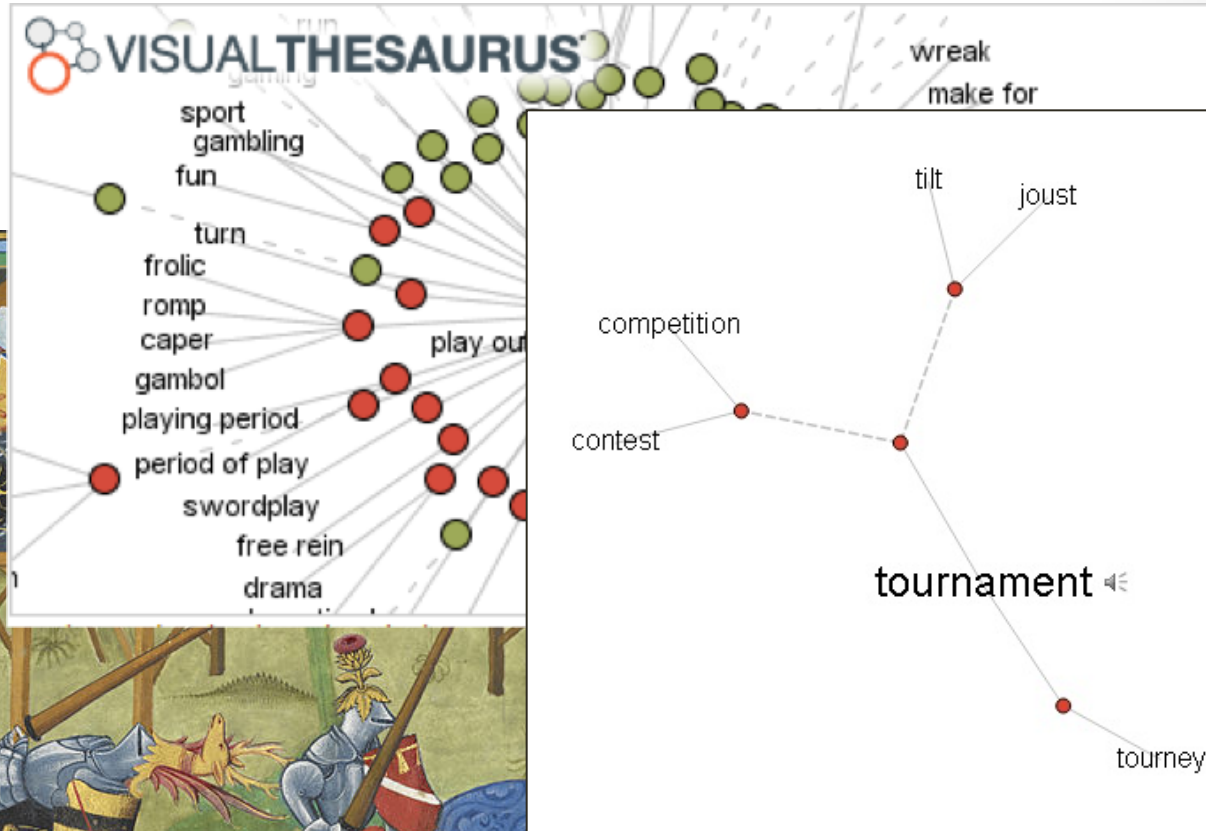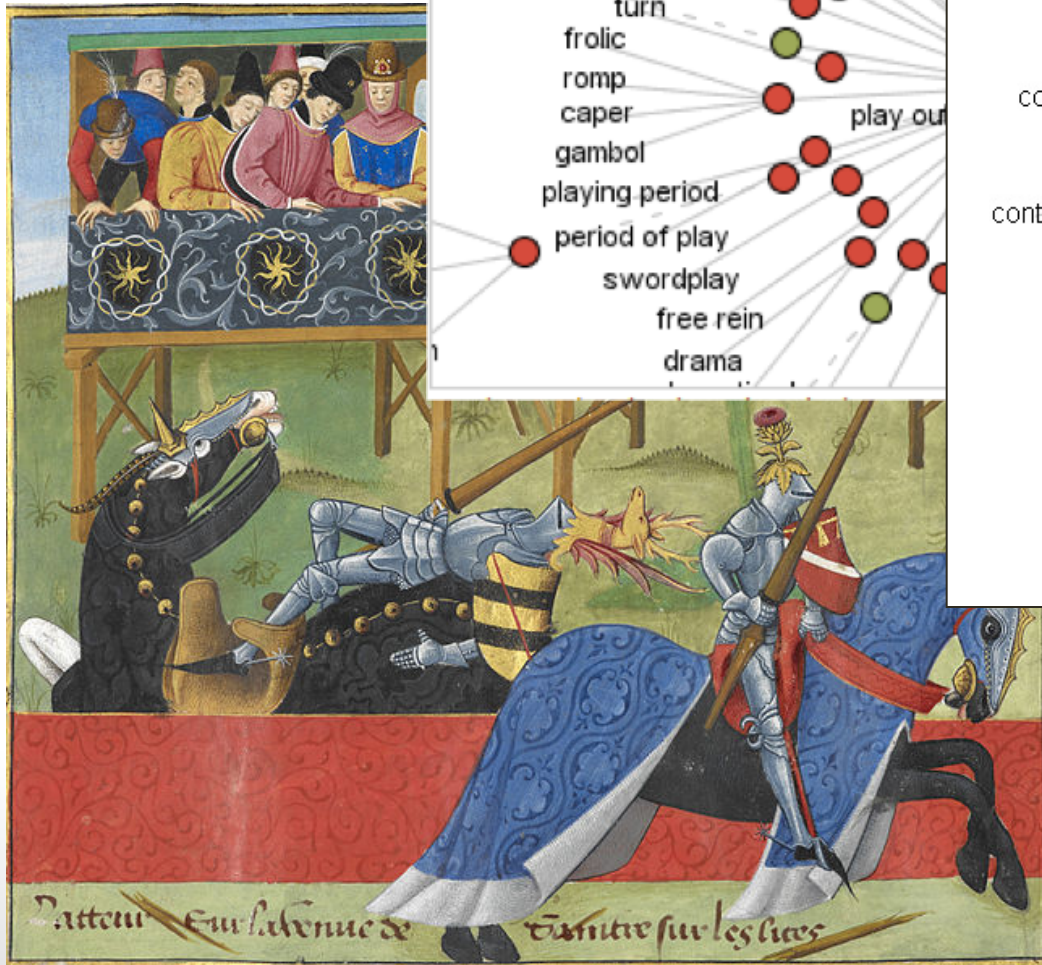
Wikidata?

Thank you for listening!

RKDexplore https://rkd.nl/en/

Iconclass

http://www.iconclass.org

LOD http://www.iconclass.org/help/lod

Getty vocabularies

http://www.getty.edu/research/tools/vocabularies/index.html   LOD http://vocab.getty.edu/

Open Refine http://openrefine.org/

Cultuurlink http://cultuurlink.beeldengeluid.nl/app/#/