

Insects and Fruit
Jan van Kessel
1660 - 1665, Rijksmuseum
Netherlands, Public Domain

euopeana

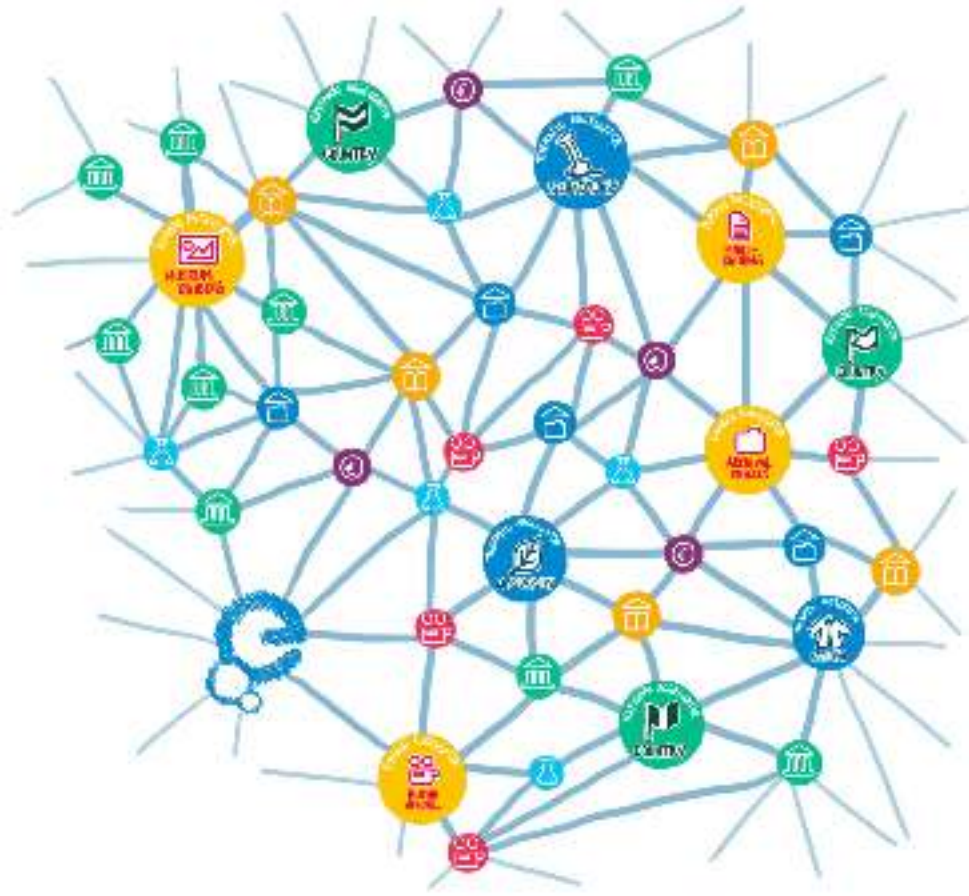


Period 2 First Workshop
Hugo Manguinhas | **Europeana Foundation**

J.V. KESSEL 5

What is Europeana?

The Platform for Europe's Digital Cultural Heritage



We aggregate metadata:

- *From all EU countries*
- *~3,500 galleries, libraries, archives and museums*
- *More than 52M objects*
- *In about 50 languages*
- *Huge amount of references to places, agents, concepts, time*

[Europeana aggregation infrastructure](#)

Europeana | CC BY-SA

Europeana Linked Data Strategy

- *Improve user experience*
 - *support better ways of searching and navigating through the collections, eliminating ambiguity and clarifying the meaning of descriptions*
 - *better adapt to the language of the user*
- *by improving the interlinking of data*
 - *brings more context to the objects*
 - *alleviates polysemy issues*
 - *better language coverage*
 - *Contributes to build a web of data ('knowledge graph') that third parties can use to improve their users' experience*

What can it enable?

Food and Drink

- Agriculture 25286
- Beverages 14856
- Cuisine 26796
- Eating behaviors 27721
- Food and drink by country 18669
- Food and drink preparation 28396
- Food and drink terminology 10581
- Food and the environment 1027
- Food culture 27563
- Food decorations 2160
- Food festivals

Places

- 10861432 1569
- Africa 3776
- Americas 92
- Antarctica 6
- Arabian Peninsula 33
- Asia 2074
- Atlantic Ocean 45
- Australia (continent) 3
- Bering Sea 1
- British Empire 12
- Community of Latin American and Caribbean

Entity based facets

Search Leo

- Leonardo da Vinci
- Leonard Cohen
- Leo Tolstoy

Semantic auto-completion

Search Dress

Technical description: Dress: pale yellow silk tulle with a large collar and long sleeves. The dress is made of silk tulle and has a large collar and long sleeves. The dress is made of silk tulle and has a large collar and long sleeves.

Semantic and Metadata annotations

Entity Pages



Leonardo da Vinci

Painter

Leonardo di ser Piero da Vinci was an Italian Renaissance polymath: painter, sculptor, architect, musician, mathematician, engineer, inventor, anatomist, geologist, cartographer, botanist, and writer. [Wikipedia](#)

Born: April 15, 1452, Vinci, Italy

Died: May 2, 1519, Amboise, France

Full name: Leonardo di ser Piero da Vinci

Period: High Renaissance

Parents: Piero Fruosino di Antonio da Vinci, Caterina da Vinci

Artwork

View 20+ more



Mona Lisa

1517



Virgin of the Rocks

1485



Lady with an Ermine

1485



Ginevra de' Benci

1475



The Baptism of Christ

1485

Our efforts and lines of work

- Europeana Data Model (EDM) offers a base for linking data
- We apply an enrichment strategy to link source data to reference data, e.g. DBpedia, Geonames
- Encourage data providers to contribute their own vocabularies so that we can benefit from data links made at data providers' level
- We encourage alignment activities between domain vocabularies

Vocabularies currently provided to Europeana

Name	URL
MIMO-General	http://www.mimo-db.eu/
MIMO-Person	http://www.mimo-db.eu/
AAT Subjects	http://vocab.getty.edu/aat/
GeonamesVersion2	http://sws.geonames.org/
IconClass concepts	http://iconclass.org/
GNDSubjectHeadingsSensoStricto	http://d-nb.info/gnd
GNDDifferentiatedPerson	http://d-nb.info/gnd
Israel Museum Jerusalem	http://www.imj.org.il/imagine/thesaurus/objects/
Dismarc Format	http://purl.org/dismarc/ns/dmFormats/
GNDTerritorialCorporateBodyOrAdministrativeUnit	http://d-nb.info/gnd
WWI Data Europeana from Loc	http://data.europeana.eu/concept/loc
VIAF	http://viaf.org/viaf/
Israel Museum Jerusalem objects	http://www.imj.org.il/imagine/thesaurus/objects
GNDRoyalMemberofARoyalHouse	http://d-nb.info/gnd
GNDCorporateBody	http://d-nb.info/gnd
EAGLE_vocabulary	http://www.eagle-network.eu/voc/material/skos/
Dismarc Genres	http://purl.org/dismarc/ns/dmGenres/
Sounds genres	http://data.europeana.eu/concept/soundgenres/
PartagePlus	http://partage.vocnet.org/

has small set of
historical periods

Vocabularies used for enrichment

- *Places*
 - *a subset of **Geonames**, corresponding to places which are part of European countries and of some specific feature classes.*
- *Agents*
 - *a subset of **DBpedia** corresponding to most of the instances of `dbp:Artist` with some exceptions.*
- *Concepts*
 - *a subset of **DBpedia** corresponding to a handful of concepts and **GEMET** which will stop being used.*
- **Time Spans**
 - *The chronological periods from **SemiumTime** (explained later).*



Title The Milkmaid | Vermeer, Johannes

Hot milkmaid!

Description A milkmaid pours milk, entirely absorbed in her work. Except for the stream of milk, everything else is still. Vermeer took this simple everyday activity and made it the subject of an impressive painting – the woman stands like a statue in the brightly lit room. Vermeer also had an eye for how light by means of hundreds of colourful dots plays over the surface of objects.

People **Creator:** Vermeer, Johannes

Classifications: **Type:** waxel paintings (paintings by form) **Subject:** kitchen maid, kitchen servant

Properties **Size:** height: 45,5 CM., width: 41 CM **Format:** canvas **Language:** nl

Time **Date:** <http://nbnmuseum.org/time/166> **Creation date:** 1660 **Period:** Second half of the 17th century **Maximum:** third quarter 17th century

Coming from the data provider (Rijksmuseum)



OUR SITES **LANGUAGE**

SUBJECTS, RESOURCE TYPES, GENRES AND FORMS (CONCEPTS)

CONCEPT TERM
<http://vocab.getty.edu/uri/300014078>

CONCEPT LABEL
 [ˈmɛsɛl] (de); [ˈɔuk] (sv); [ˈkɑvɔs] (en); [ˈtɛlə (materiale tɛstlɛr)] (fr); [ˈtoʊle (materiɑu tɛksɪl)] (fr); [ˈtɛlə (material tɛksɪl)] (es); [ˈkɑvɔs] (nl)

BROADER CONCEPT
<http://vocab.getty.edu/uri/300231365>

CONCEPT TERM
<http://nbnmuseum.org/41022/>

CONCEPT LABEL
 [ˈkɪchenmɔ͡dchɛn, ˈkɪchenmɔ͡d] (nl); [ˈkɪchenmɔid, ˈkɪchen sɛrvɑnt] (fr); [ˈkɪchen-mɔid, ˈkɪchen sɛrvɑnt] (en); [ˈgɪstɔwa] (it); [ˈlɛ dɛ kuʁin, sɛrvɑnt] (de cuisine)] (fr)

BROADER CONCEPT
<http://nbnmuseum.org/41033/>

CONCEPT TERM
<http://vocab.getty.edu/uri/300177435>

CONCEPT LABEL
 [ˈStɑffɛləlɔ͡d] (de); [ˈɛsɛl pɛɪntɪŋs (pɑɪntɪŋs bɪ fɔrm)] (en); [ˈpɛɪntʊres dɛ ʃɛvɑlɛt] (fr); [ˈpɪntʊras dɛ kabalɛtɛ] (es); [ˈschilderɪjɛn] (nl)

BROADER CONCEPT
<http://vocab.getty.edu/uri/300033518>

PERSONS AND ORGANISATIONS (AGENTS)

AGENT TERM
 RM0001.PEOPLE.2529

AGENT LABEL
 Vermeer, Johannes



Title The Milkmaid | Vermeer, Johannes

Hot knowledge!

Description A milkmaid pours milk, entirely absorbed in her work. Except for the stream of milk, everything else is still. Vermeer took this simple everyday activity and made it the subject of an impressive painting – the woman stands like a statue in the brightly lit room. Vermeer also had an eye for how light by means of hundreds of colourful dots plays over the surface of objects.

People Creator: Vermeer, Johannes

Classifications: Type: visual paintings (paintings by form)
Subject: kitchen maid, kitchen servant

Properties Size: height 45,5 CM., width 41 CM.
Format: canvas
Language: nl

Time Date: <http://semium.org/time/1656>
Created: later 1650
Period: Second half of the 17th century
Maximum: third quarter 17th century

KNOW OUT MORE

[View at Rijksmuseum](#)

CAN I USE IT?

This Resource [Public Domain Mark](#)

EXPLORE BY COLOUR



SHARE



Result of chronological time period enrichments with SemiumTime



TIME SPINS AND DATES (TIME SPIN)

PERIOD TERM

http://semium.org/time/1656_2_half

PERIOD LABEL

[17th century] (nl) [Second half of the 17th century] (en) [17de eeuw] (nl)

PERIOD BEGIN

Sun Jan 01 01:00:00 CET 1651

PERIOD END

Tue Dec 31 01:00:00 CET 1701

PERIOD TERM

<http://semium.org/time/>

PERIOD LABEL

[Time] (en)

PERIOD TERM

http://semium.org/time/1656_1_quarter

PERIOD LABEL

[2nd quarter 17th century] (nl) [2 quarter of the 17th century] (en) [2de kwart 17e eeuw] (nl)

PERIOD BEGIN

Sun Jan 01 01:00:00 CET 1651

PERIOD END

Tue Dec 31 01:00:00 CET 1675

PERIOD TERM

<http://semium.org/time/1656>

PERIOD LABEL

[17th cen.] (nl) [17th, 17th, 17th] (de) [17th, 17th, 17th century] (en) [17e eeuw] (nl)

PERIOD BEGIN

Mon Jan 01 01:00:00 CET 1651

PERIOD END

Fri Dec 31 01:00:00 CET 1700

What about Historical Time Periods?

The screenshot shows the Europeana website interface. At the top, there is a search bar and navigation links. The main content area features a large image of a Roman coin with a circular design. Below the image, there is a title "Kaiser. Floas. Senf. Itali" and a detailed description in German. The description includes information about the coin's origin, date, and historical context. A callout box points to the date and temporal information in the description.

Date: Roman? (Late Empire).
Temporal: Roman? (Late Empire).

The screenshot shows the Europeana website interface with search results for "Roman". The page displays a grid of search results, each with a thumbnail image and a title. The results include various Roman artifacts, such as coins, inscriptions, and pottery. The interface includes a search bar, navigation links, and a list of filters on the left side of the page.

Past work on Time Periods

- *Europeana Connect's Temporal Gazetteer*
 - *Initially developed for the DIGMAP Project*
 - *Mainly based on the ECAI Time Period Directory expanded with Wikipedia labels (~1,989 resources)*
- *Annocultor*
 - *Developed by VU Amsterdam for the Multimedial eCulture Project*
 - *Further developed in Europeana Connect and Europeana under the name SemiumTime*
 - *Ad hoc vocabulary created from the values found in the data*
 - *Historical time periods were discontinued:*
 - *too labour intensive to maintain*
 - *low success when used for automatic enrichment*

Annocultor

Time

- Historical period
- Chronological period
- 4e millénaire avant J.-C.
- 3e millénaire avant J.-C.
- 2e millénaire avant J.-C.
- 1er millénaire avant J.-C.
- 3e millénaire après J.-C.
- 2e millénaire après J.-C.
- 19de eeuw
- 21e eeuw
 - 4 quarter of the 21th century
 - Late 21th century
 - 3 quarter of the 21th century
 - Mid 21th century
 - 2 quarter of the 21th century
 - 21e (fin)
 - Early 21th century
 - 1 quarter of the 21th century
 - 21e (début)
- 20e eeuw
- 19e eeuw
- 18e eeuw
- 17e eeuw
- 16e eeuw
- 15e eeuw
- 14e eeuw
- 13e eeuw
- 12e eeuw
- 11e eeuw
- 1er millénaire après J. C.

[Back to AnnoCultor](#)

Preferred label

1 quarter of the 21th century ^{en}

1-я четверть 21-го века ^{ru}

1er quart 21e siècle ^{fr}

Alternative labels

Period

2001-01-01 - 2026-12-31

Time

- Historical period
 - Viking Age (875 - 950 AD)
 - Римская республика
 - Roman Kingdom
 - Римская империя
 - Постмодерн
 - Neolithic
 - Модерн
 - Средние века
 - Iron Age
 - Greek, Roman period
 - Post-classical period
 - Hellenistic period
 - Классическая эпоха
 - archaic period
 - Античность
 - Gallo-Roman
 - IIIe République (1870-1940)
 - IIe République (1848-1851)
 - Second Empire (1852-1870)
 - règne de Louis-Philippe (1830-1848)
 - règne de Louis XVI (1774-1792)
 - règne de Louis XV (1723-1774)
 - règne de Louis XIV (1661-1715)
 - Premier Empire (1804-1814)
 - Late Period
 - Greek-Roman
 - early modern era
 - Bronze Age
- Chronological period
 - 4e millénaire avant J.-C.
 - 3e millénaire avant J.-C.
 - 2e millénaire avant J.-C.
 - 1er millénaire avant J.-C.
 - 3e millénaire après J.-C.
 - 2e millénaire après J.-C.

Preferred label

Roman Empire ^{en}

Римская империя ^{ru}

Alternative labels

Roman ^{en}

Empire romain (27 avant J.-C.-476 après J.-C.) ^{fr}

Haut-Empire romain (27 avant J.-C.-235 après J.-C.) ^{fr}

Bas-Empire romain (307-425) ^{fr}

Period

-27 - 476

AnnoCultor report on conversion and enrichment

This report on data conversion and enrichment is generated by [AnnoCultor](#), a tool that performs conversion of databases and XML files to RDF, and semantic enrichment of data with links to vocabularies.

Environment Graphs Matched **Missed** Ambiguous Rules Unused Console

Labels not found in vocabularies

term	count
fileset/file/response/result/doc/arr[@name='dc_date']/str:unknown	285482
fileset/file/response/result/doc/arr[@name='dc_date']/str:0	239000
fileset/file/response/result/doc/arr[@name='dc_date']/str:19e siècle,	54638
fileset/file/response/result/doc/arr[@name='dc_date']/str:0000-00-00 00:00:00	34667
fileset/file/response/result/doc/arr[@name='dc_date']/str:um 1	31213
fileset/file/response/result/doc/arr[@name='dc_date']/str:20e siècle,	28842
fileset/file/response/result/doc/arr[@name='dc_date']/str:18e siècle,	17599
fileset/file/response/result/doc/arr[@name='dc_date']/str:17e siècle,	14017
fileset/file/response/result/doc/arr[@name='dc_date']/str:IIIe République (1870-1940),	13898
fileset/file/response/result/doc/arr[@name='dc_date']/str:16e siècle,	13672
fileset/file/response/result/doc/arr[@name='dc_date']/str:15e siècle,	7282
fileset/file/response/result/doc/arr[@name='dc_date']/str:s.d.	6764
fileset/file/response/result/doc/arr[@name='dc_date']/str:Second Empire (1852-1870),	4410
fileset/file/response/result/doc/arr[@name='dc_date']/str:Premier Empire (1804-1814),	4226
fileset/file/response/result/doc/arr[@name='dc_date']/str:20e siècle,19e siècle,	3933
fileset/file/response/result/doc/arr[@name='dc_date']/str:vor	3695
fileset/file/response/result/doc/arr[@name='dc_date']/str:1890s - 1936	3372
fileset/file/response/result/doc/arr[@name='dc_date']/str:règne de Louis XV (1723-1774),	3152
fileset/file/response/result/doc/arr[@name='dc_date']/str:nach	2960
fileset/file/response/result/doc/arr[@name='dc_date']/str:14e siècle,	2895
fileset/file/response/result/doc/arr[@name='dc_date']/str:17e siècle,règne de Louis XIV (1661-1715),	2714
fileset/file/response/result/doc/arr[@name='dc_date']/str:18e siècle,19e siècle,	2511

How do we choose a target vocabulary?

As defined in the recent [Europeana Tech Task Force on enrichment and evaluation](#), we consider the following criteria when selecting a vocabulary:

- *Properly documented and supported by a community*
- *Technically available on the web according to the Linked Data best practices and recipes*
- *Available under an open licence*
- *Multilingual*
- *Abide to a minimal ontological commitment principle*
- *Apply the best practices and standards for the representation, structure and description of vocabularies*
- *Well-connected internally and externally to other vocabularies (preferably spine vocabularies)*

Wrapping up...

We have a gap with regards to historical time periods

*... we hope to fulfill with **PeriodO!***

Flowers
Anonymous
1700-1799, Rijksmuseum
Netherlands, Public Domain



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#AllezCulture