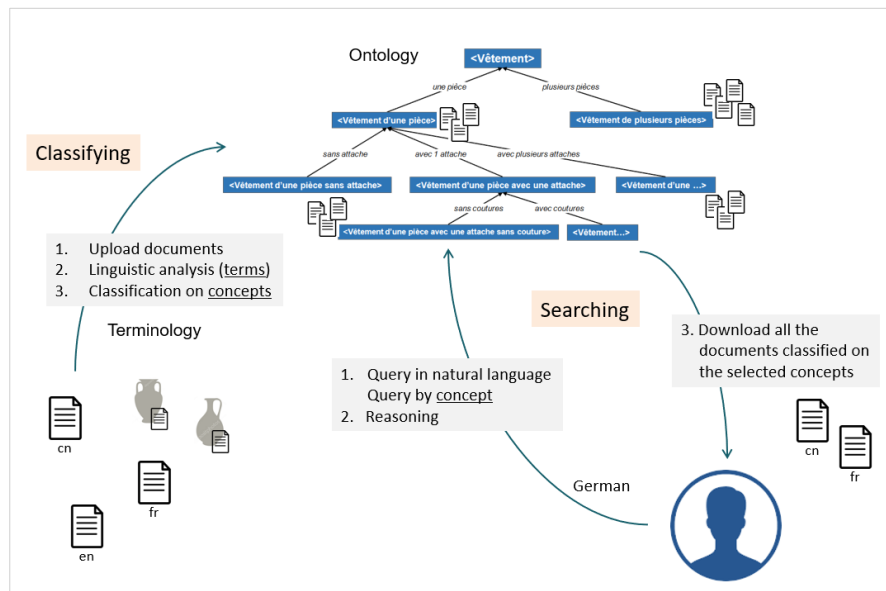


# Ontological definition of terms

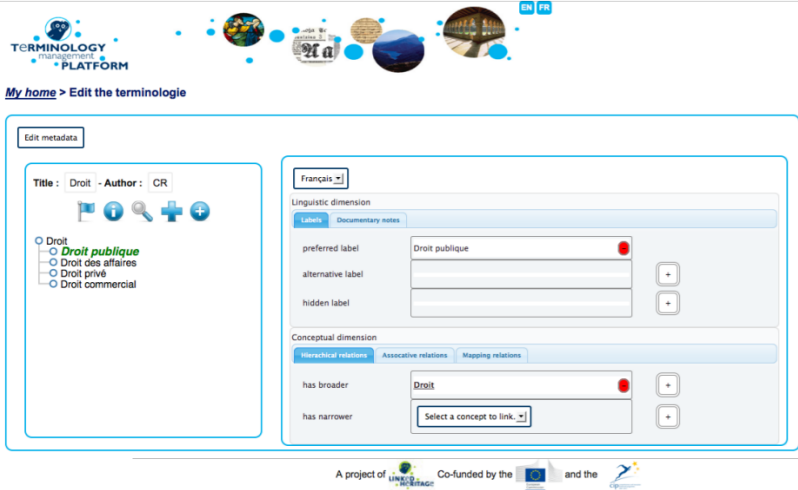
## Examples from cultural heritage



Maria Papadopoulou

Université Savoie Mont-Blanc  
LISTIC Lab-Equipe Condillac  
[www.condillac.org](http://www.condillac.org)

# Ontoterminology for Thesaurus

TERMINOLOGY management PLATFORM

My home > Edit the terminologie

Edit metadata

Title : Droit - Author : CR

Linguistic dimension

Labels: Documentary notes

preferred label: Droit publique




alternative label:

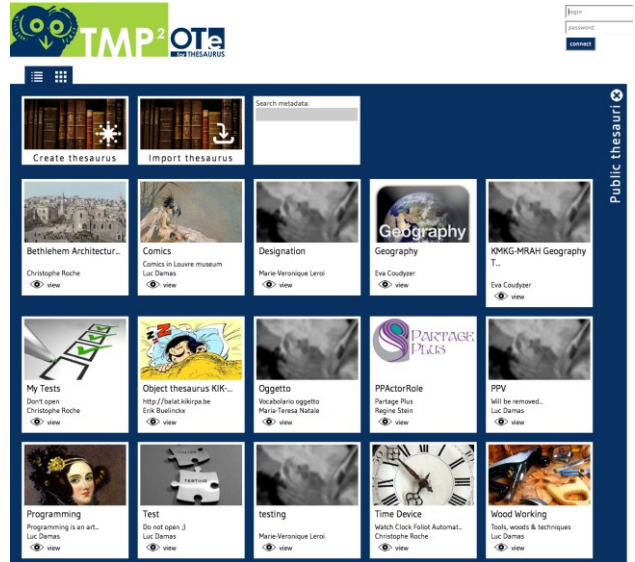
hidden label:

Conceptual dimension

has broader: Droit

has narrower: Select a concept to link...

A project of  Co-funded by the  and the 



TMP<sup>2</sup> OTe

Search metadata:

Create thesaurus Import thesaurus

Bethlehem Architectur... Comics Designation Geography KMKG-MRAH Geography T...

My Tests Object thesaurus KIK... Oggetto PFactorRole PIV

Programming Test testing Time Device Wood Working

Public thesauri

## Thesaurus Management Platform v2

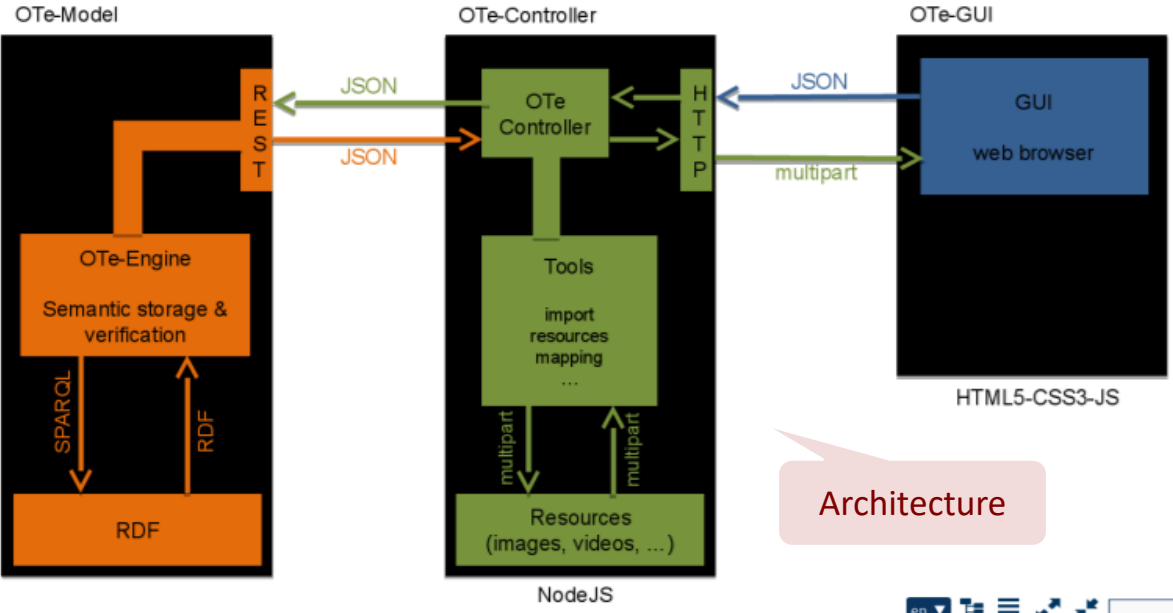


**OntoTerminology** engine for thesaurus

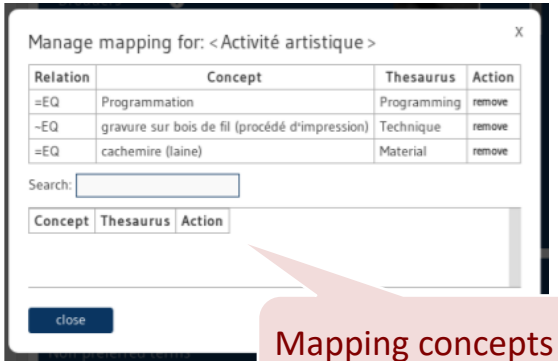
**ontoterminology** : a terminology whose conceptual system is a formal ontology

Christophe Roche, Luc Damas, Julien Roche. Multilingual Thesaurus: The Ontoterminology Approach. CIDOC 2014 - Access and Understanding – Networking in the Digital Era, CIDOC COMITÉ INTERNATIONAL POUR LA DOCUMENTATION, Sep 2014, Dresden Germany.

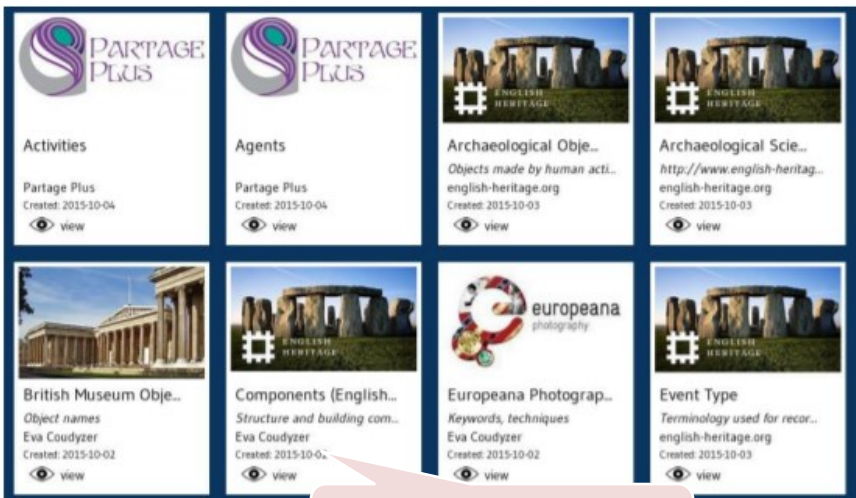
# Thesaurus Management Platform



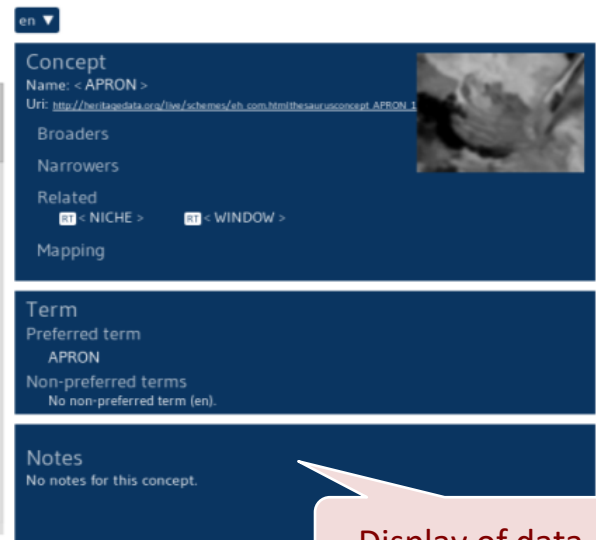
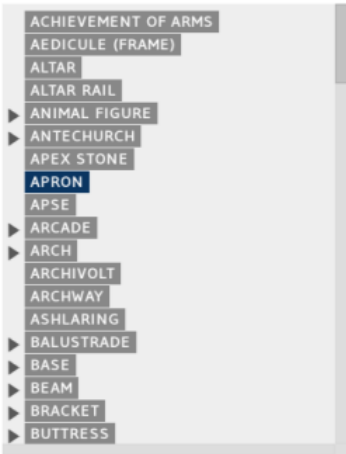
Architecture



Mapping concepts in different thesauri



Display of thesauri list

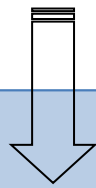
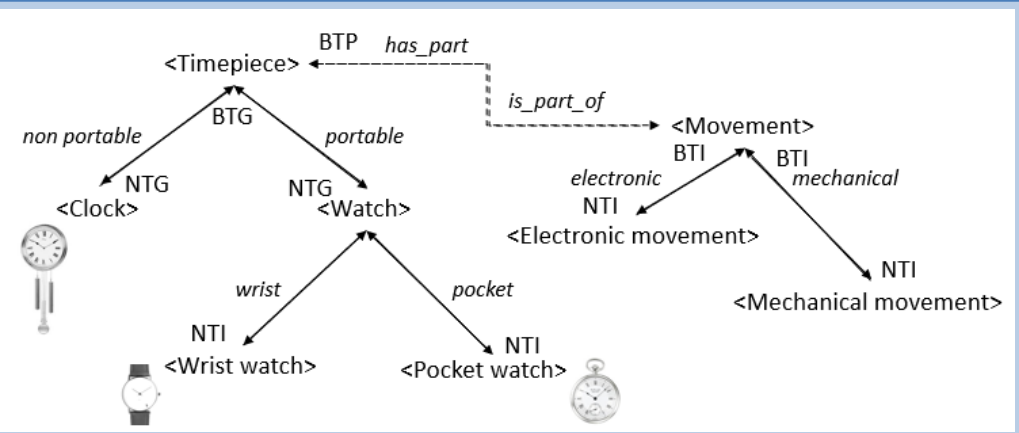


Display of data

# Ontology

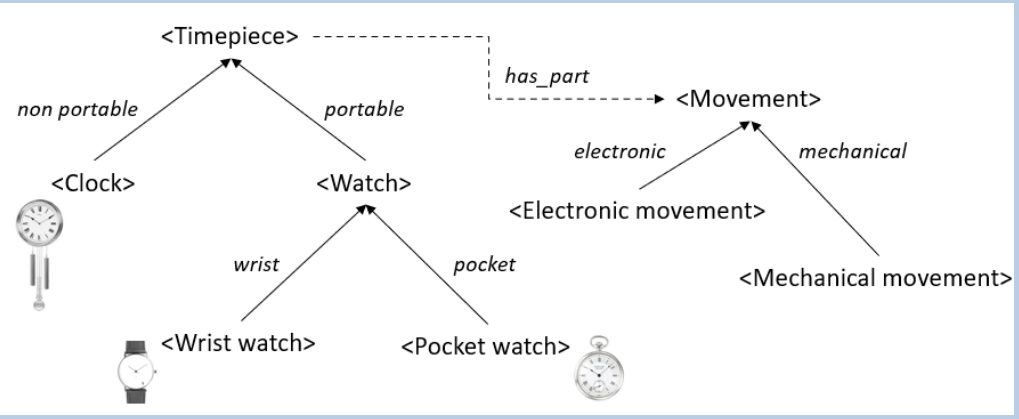
“today there is a demand [...] for vocabularies that enable inferencing by machines”

[ISO 25964-1]



## ONTOLOGY

a shared description of concepts and their relationships within a domain, formally defined, enabling automated reasoning and inferencing of new knowledge



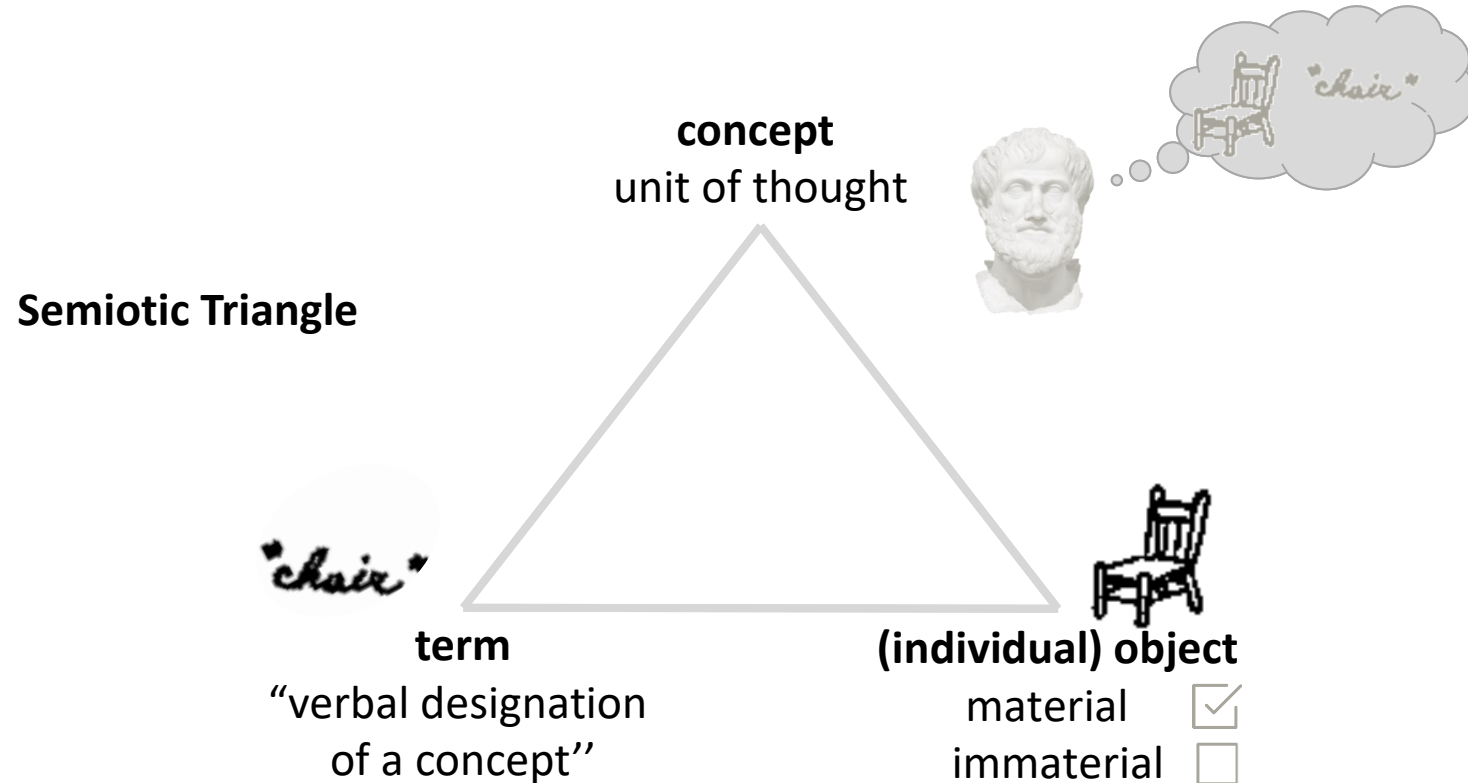


# Term and Concept

**term** : - verbal designation of a concept (ISO 1087-1)  
- belongs to the terminology of the domain

**concept** : - knowledge based on a plurality of things  
- is extralinguistic  
- belongs to the ontology of the domain

**ontological definition of the term** : definition of the concept denoted by the term



# Definition of term vs definition of word

**term** : specialized lexical unit *designating* domain knowledge

**Definition in terminology** : emphasis on what the denoted object *is*,  
i.e. on a term's extralinguistic (ontological) meaning

A. Rey (1979):

- Aristotelian definition by *genus proximum et differentia specifica*
- what is defined is not words, but terms organized in structured systems which reflect a conceptual organization of some sort, formal and consistent

**Definition in lexicography** : emphasis on contextual meaning variation,  
i.e. meaning in discourse / usage

'You shall know a word by the company it keeps.' J. R. Firth (1957, 11)

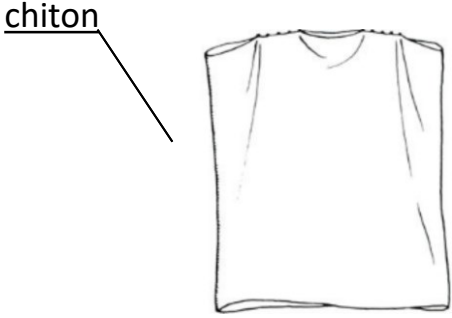
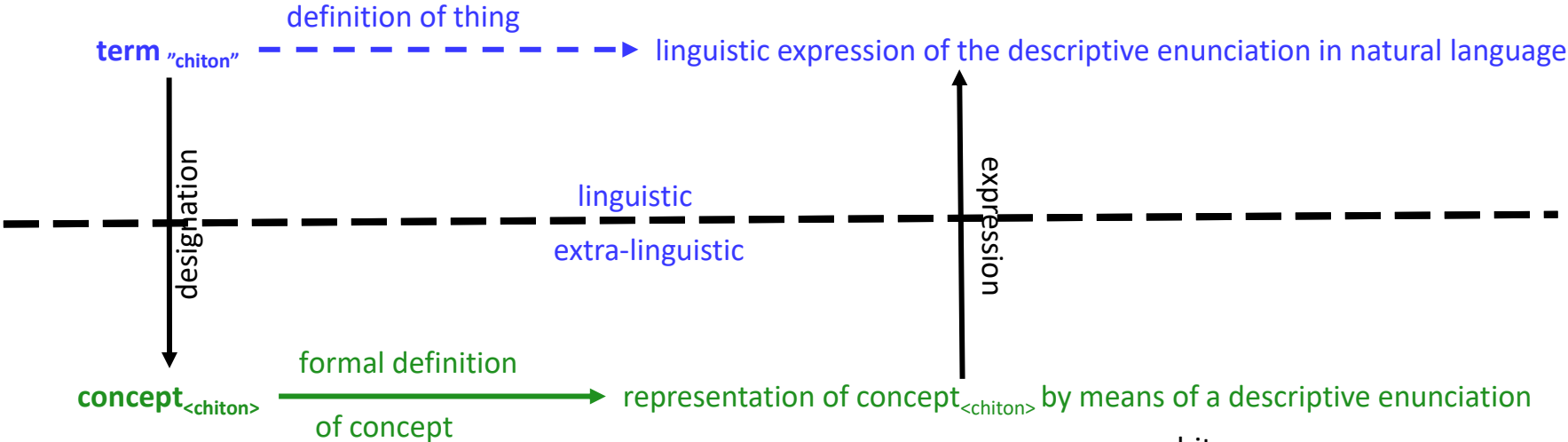
Firth, John R. 1957. A synopsis of linguistic theory 1930–1955. In *Studies in linguistic analysis*, 1–32. Oxford: Blackwell

A. Rey (1979):

- concerns only the signs of a (natural) language
- does not focus on concepts and classes of things, but on word senses and classifies usage of these signs in discourse
- makes explicit the meaning(s) of words in discourse

Rey, Alain (1979) : *La Terminologie, noms et notions*, Paris, Presses Universitaires de France, Que Sais-je ?, n° 1780

# Term and Concept



## Formal definition of chiton in Tedi

<Garment without sleeves more than one part with sewing attached multiple attachments around body>

## Formal definition of chiton exported in OWL/Protégé

```
<!-- http://www.semanticweb.org/ontologies/2019/2/
untitled-ontology-31#Garment_without_sleeves_more_than_one_part_attached_multiple_attachment_with_sewing_around_body -->

<owl:Class rdf:about="http://www.semanticweb.org/ontologies/2019/2/
untitled-ontology-31#Garment_without_sleeves_more_than_one_part_attached_multiple_attachment_with_sewing_around_body">
  <rdfs:subClassOf rdf:resource="http://www.semanticweb.org/ontologies/2019/2/untitled-ontology-31#Around_body_garment"/>
  <rdfs:subClassOf rdf:resource="http://www.semanticweb.org/ontologies/2019/2/untitled-ontology-31#Attached_garment"/>
  <rdfs:subClassOf rdf:resource="http://www.semanticweb.org/ontologies/2019/2/untitled-ontology-31#Garment"/>
  <rdfs:subClassOf rdf:resource="http://www.semanticweb.org/ontologies/2019/2/untitled-ontology-31#Garment_with_sewing"/>
  <rdfs:subClassOf rdf:resource="http://www.semanticweb.org/ontologies/2019/2/untitled-ontology-31#Garment_without_sleeves"/>
  <rdfs:subClassOf rdf:resource="http://www.semanticweb.org/ontologies/2019/2/untitled-ontology-31#More_than_one_part_garment"/>
  <rdfs:subClassOf rdf:resource="http://www.semanticweb.org/ontologies/2019/2/untitled-ontology-31#Multiple_attachment_garment"/>
  <note xml:lang="en">LSJ A. garment worn next the skin, tunic. I. in early times, only of a man&apos;s tunic</note>
  <status xml:lang="en">preferred</status>
  <rdfs:comment xml:lang="en">Sleeveless garment consisting of more than one part sewn together and fastened on the shoulders.</rdfs:comment>
  <rdfs:label xml:lang="en">chiton</rdfs:label>
  <rdfs:label xml:lang="fr">chiton</rdfs:label>
</owl:Class>
```

SubClass Of +

- attached
- Garment\_around\_body
- Garment\_with\_sewing
- Garment\_without\_sleeves
- More\_than\_one\_part\_garment
- multiple\_attachments

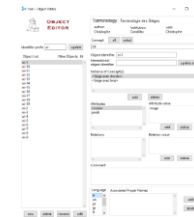


# Linking terminologies via a shared ontology

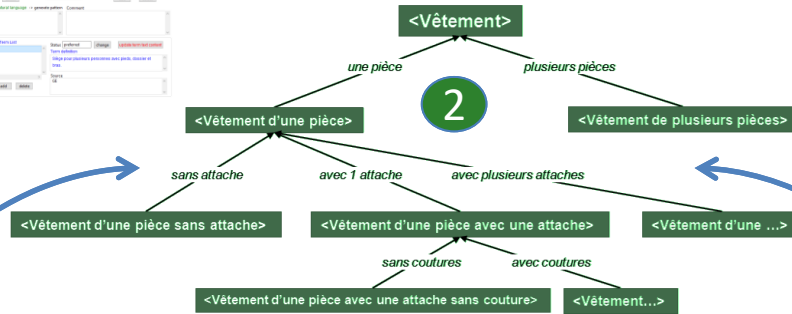
## Concept editor



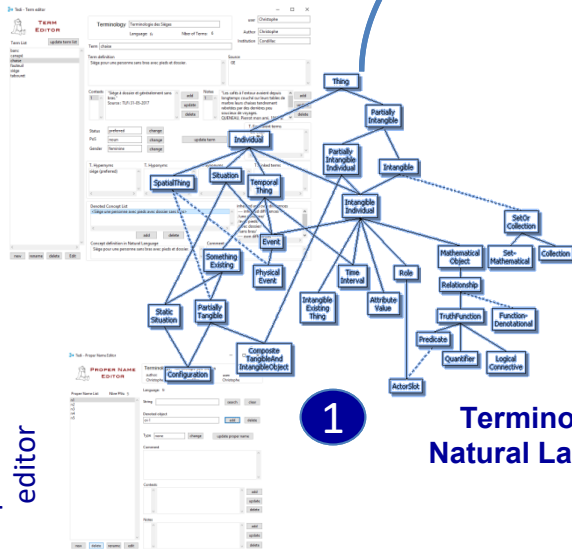
## Object editor



## Shared Ontology

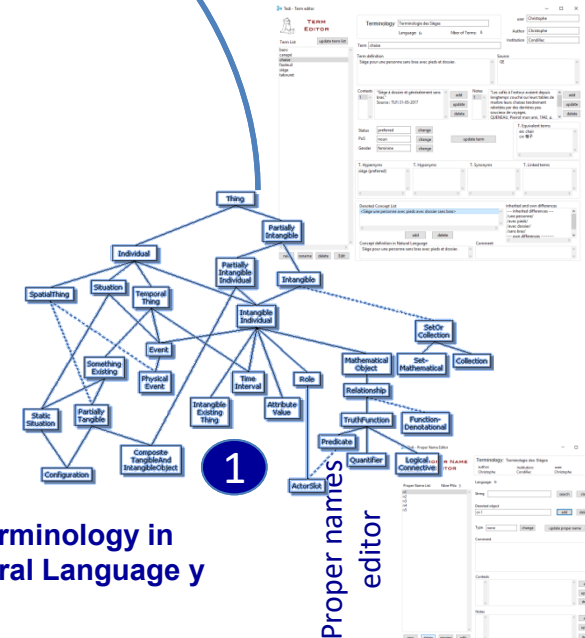


## Term editor



## Terminology in Natural Language x

## Term Editor



## Terminology in Natural Language y



Proper names editor

Proper names editor

# Tedi : ontoTerminology editor

## Editor of multilingual ontoterminologies

The main interface of the Tedi editor shows the following components:

- Header:** "update" button, "Version: 2.5", "edit parameters" link, "Multilingual Ontoterminology Editor" title, user profile "user" (edit), and "www.ontoterminology.com" link.
- Configuration:** "Onto Terminology Base" dropdown, "OTB folder" (c:\Users\user\Documents\Maria-Christophe\Tedi\OTB), "new OTB", "load OTB", "save OTB" dropdown, "OTB file" (Krater.otb), and "edit OTB" button.
- Ontoterminology List:** "Ontoterminology of Vases" selected.
- Metadata:** author (Maria), creation date (April 28, 2019), last update (December 27, 2020), domain (Containers), sub domain (Greek ceramic containers), other domains (Ceramic containers), default language (en), begin period (-700), end period (-323), and a "reset" button.
- Statistics:** "of cpts 24", "nbr of terms 47", "of objs 126", "nbr of PNs 43".
- Actions:** "new", "rename", "delete", "upgrade", "analyze", "edit ontoterm", "concept search", "term search", "import", "export", "update metadata", and "trace" buttons.
- Comment:** "Archaic and Classical Periods, from -700 BC to -323. The concepts of the ontology are linked with a skos:exactMatch to Getty Vocabularies, Wikidata and Kerameikos. The ontology of kraters is populated with all the kraters of the collection of the National Archeological Museum (NAM) in Athens representing".
- Dimensions:** "conceptual dimension" and "linguistic dimension" dropdowns, and a "close editor" button.

Concepts  
& Objects

Terms &  
Proper Names

The Concept Editor window displays a "Terminology" for "Ontoterminology of Vases". It includes fields for "begin period" and "end period", and a "Concept" field with "International concept name". Below this, there are sections for "Generic Concepts (tag)" and "Interrelated and non-attributes", each with a list of concepts and buttons for "add", "delete", and "edit".

The Proper Name Editor window shows a "Proper Name List" for "Ontoterminology of Vases". It includes a search bar, "Nbre PNs: 37", and a list of terms with their IDs (e.g., Beazley-218059, Beazley-218065). The "Proper name" field is set to "François vase". The "Type" is "none". There are "add", "delete", and "edit" buttons for each term in the list.

The Object Editor window shows the "Terminology" for "Ontoterminology of Kraters". It displays the "Object identifier" as "Beazley-20276" and the "International object identifier" as "Beazley-20276". It includes a section for "Attributes" with a table for "attribute value" and buttons for "add", "delete", and "update".

The Axis of Analysis Editor window shows the "Terminology" for "Ontoterminology of Vases". It includes a section for "International act name" with "Type of Foot" and "Difference (essential characteristic) List" (with a note: "/with a ring foot"/ "/with a square foot/"). It also has "begin period" and "end period" fields.

The Term Editor window shows the "Terminology" for "Ontoterminology of Vases". It includes a section for "Concepts" with a table for "Concept" and buttons for "add", "delete", and "edit". It also has a section for "Interrelated and non-attributes" with a table for "Interrelated and non-attributes" and buttons for "add", "delete", and "edit".

# Methodology

**1**

**Resources :**

- Corpus
- Dictionaries
- Thesauri
- ...

**List of terms**

**2**

**Axes of analysis**

**Characteristics :**

- essential
- descriptive

**3**

**Putting into relation**

**term** ↔ **concept**

**"zeira"** ↔

**5**

**Linguistic Dimension**

- ✓ "term"
- ✓ Definition of term (natural language)
- ✓ Connotative information

✓ Terminological relations

**4**

**Conceptual Dimension**

- ✓ <Denomination of concept>
- ✓ Definition of concept :
  - formal
  - constructive

✓ Conceptual Relations

# Term editor

Tedi - Term editor



## Term Editor

web help

Terminology

Greek Garment

Language: en

Last update: 28 août 2018

user

author

institution

status  
POS  
gender

Term List

Number of Terms: 254

Term

Term definition -> generate pattern definition ?

Short and non-pleated garment for man, usually worn around the body directly on the skin, this sleeveless garment consists of two sewn pieces of cloth attached on the left shoulder, leaving naked the right shoulder and part of the chest.

Status

PoS

Gender

notes

contexts

Source

Contexts

1 Xenophon Memorabilia 2.7.5.5 Τί γάρ; ἔφη, ἱμάτια τε ἀνδρεία καὶ γυναικεία καὶ χιτωνίσκοι καὶ χλαμύδες καὶ ἐξωμίδες; Σφόδρα γ', ἔφη, καὶ πάντα ταῦτα χρῆσιμα.

Notes

1 LSJ s.v. ἐξωμ-ίς, ἰδος, ἦ, (ὥμος) A.= χιτῶν ἑτερομάσχαλος, tunic with one sleeve, leaving one shoulder bare, worn by slaves and the poor, Id.V.444 (cf. Sch.ad loc.), Lys.662, X.Mem. 2.7.5, etc.; by Lacopizis, Del VHQ 3A.

Orthographic variations

Inflected forms

T. Equivalent terms

terminological equivalents

terminological hypernyms

T. Hypernyms

T. Hyponyms

T. Synonyms

T. Linked terms

terminological synonyms

Denoted Concept List

inherited and own differences

--- inherited differences ---  
/with sewing/  
/male/  
/around body/  
--- own differences -----  
/more than one part/

denoted concept

Concept definition in Natural Language

Comment

# Concept editor

Tedi - Concept system editor



## Concept Editor

web help

Hierarchical Concept List

update cpt list

- <Garment>
  - <Garment around body>
    - <Garment around body for man>
      - <Garment male around body more than one part with sewing without sleeves attached to the body>
      - <Garment around body for woman>
      - <Garment more than one part with sewing without sleeves attached to the body>
      - <Garment with sleeves with sewing without sleeves attached to the body>
    - <Garment around head>
    - <Garment around waist>
  - <Garment for man>
  - <Garment for woman>
  - <Garment more than one part attached around the body>
  - <Garment with sewing>
    - <Garment with sleeves more than one part with sewing without sleeves attached to the body>
    - <Garment without sewing around body with sleeves attached to the body>
    - <Garment without sewing>
    - <Garment without sleeves more than one part with sewing without sleeves attached to the body>
    - <Garment without sleeves one part with sewing without sleeves attached to the body>
    - <Garment without sleeves one part without sewing without sleeves attached to the body>

new delete rename fast edit cpt

Concept List Nbr of Cpts: 20 Nbr of Obj: 37

- <Garment around body for man>
- <Garment around body for woman>
- <Garment around body>
- <Garment around head>
- <Garment around waist>
- <Garment for man>
- <Garment for woman>
- <Garment male around body more than one part with sewing without sleeves attached to the body>
- <Garment more than one part attached around the body>

explicit concept name

### Terminology

Greek Garment



axis of analysis editor

attribute editor

relation editor

Concept <Garment male around body more than one part with sewing without sleeves attached to the body>

International concept name <Garment male around body more than one part with sewing without sleeves attached to the body>

Generic Concepts (isa)

--- inferred ---

--- declared ---

<Garment with sewing>  
<Garment around body for man>

add delete

inherited and own differences

--- inherited differences ---  
/with sewing/  
/male/  
/around body/  
--- own differences ---  
/more than one part/

add delete

inherited and own attributes

--- inherited attributes ---  
type of fibre  
--- own attributes ---

add delete

has-part (concepts)

--- inherited parts ---

--- own parts ---

add delete

Relations

causal  
dependentOf  
equivalentTo  
hasFunction  
madeOf  
relatedTo  
sequential

linked to (concepts)

add delete

Concept definition in natural language -> generate pattern

male, around body, more than one part, with sewing, without sleeves, attached, one attachment, knee-length, unpleated, under,

Comment

update cpt txt content

Language Associated Term List

en  
fr  
ar  
cn  
de  
es  
gr  
it  
nt

exomis

add delete

Status preferred change

update term text content

Term definition

Short and non-pleated garment for man, usually worn around the body directly on the skin, this sleeveless garment

Source

terms

generic concepts inferred and declared

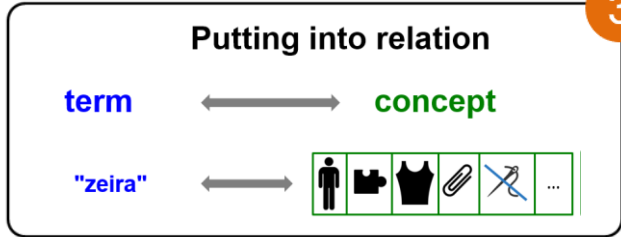
essential characteristics inherited and declared

descriptive characteristics inherited and declared

relations

# Putting into relation « term » - <Concept>

3



a term denotes a set of essential characteristics « stable » enough to carry a name in language

list of concepts possessing the selected characteristics

Tedi Dialog

## SELECT A DIFFERENCE LIST

Matched concept list: 2

Difference list	Selected diff. list	exact match -----	concept diff. list
/ankle-length/ /knee-length/	/for man/ /around body/ /without sleeves/	<Garment male around body more than one part with sewing without sleeves attached one <Garment without sleeves one part without sewing attached one attachment male around l	/without sleeves/ /one part/ /without sewing/ /attached/ /one attachment/ /for man/ /around body/
/more than one part/ /one part/			
/pleated/ /unpleated/			
/with sewing/ /without sewing/			
/attached/ /wrapped/			
/over/ /under/			

select concept    cancel    create concept

Language	Associated Term List	Term definition
en	chlamys	Garment for men without sleeves, consisting of one part, without sewing, attached by means of a fibula, with one point of attachment.
fr		
ar		
cn		
de		

list of possible essential characteristics (compatibility, dependency)

list of terms denoting the selected concept

# Object editor

Tedi Object Editor



**Terminology:** Ontoterminology of Vases  
 author: Maria Institution: Condillac user: Maria

Object List ! Nbre Objects: 126  
 search clear  
 Identifier prefix Beazley- update Type **volute krater**

**Tedi External Links Editor**

Terminology: Ontoterminology of Vases  
 Object: François vase

External links ? Values

foaf:depiction	https://u
rdfs:seeAlso	https://er

**Select a link**

- cancel-
- foaf:depiction
- owl:sameAs
- rdfs:comment
- rdfs:label
- rdfs:seeAlso
- new link-

add external link edit value delete link-value open url

Comment

Language Associated Proper Names ?

en François vase add  
 fr delete  
 ar edit  
 cn

**OBJECT EDITOR**

Terminology: Ontoterminology of Vases  
 author: Christophe Institution: Condillac user: Maria

Object List ! Nbre Objects: 126  
 search clear  
 Concept all select by concept names select by terms ?  
 All  
 Identifier prefix Beazley- update Type

Object identifier [place-38.0281126064,22.8528202479] links-image: v  
 International object identifier [place-38.0281126064,22.8528202479] update object  
 Instance of Concept(s) begin period -700 end period -323  
 <Place>

add delete edit associated terms ?

Attributes latitude longitude  
 Attribute value  
 add delete

Relations Relation value  
 add delete

Comment  
 Perachora (Heraion) Corinth Greece  
 Pleiades URI: https://pleiades.stoa.org/places/570288

Language Associated Proper Names ?  
 en Perachora add  
 fr Heraion Perachora delete  
 ar  
 cn

**Unlabeled Canvas**

**illustration**

URL Image open  
 https://pleiades.stoa.org/places/570288

Text Image

URL Video clear read

Text Video

Web Reference open

Comment

accept cancel

# Exports

export

[http://www.ontologia.fr/OTB/SPARQL\\_Queries.pdf](http://www.ontologia.fr/OTB/SPARQL_Queries.pdf)

## How to Query in SPARQL an Ontoterminology built with Tedi and exported in RDF



Technical Report: TR-Tedi-RDF-2020-11-v3

<http://ontoterminology.com/>

Date: 14/11/2020 24/12/2020 26/12/2020

Last version: [http://www.ontologia.fr/OTB/SPARQL\\_Queries.pdf](http://www.ontologia.fr/OTB/SPARQL_Queries.pdf)

Christophe Roche - <http://christophe-roche.fr/>

Maria Papadopoulou - <http://o4dh.com/ maria-papadopoulou>

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4. Competency Questions in SPARQL.....	6
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CQ2: List of English terms and definitions using OTV vocabulary?.....	7
CQ3: List of English terms and own differences of the corresponding concepts?.....	8

## Different export formats :

- Exchange and sharing of ontoterminologies
- Exploitation for different applications
- CSV, HTML, RDF/OWL (Protégé)

```
<owl:Class rdf:about="Garment_around_body_male_one_part_without_sewing_without_sleeves_attached_
one_attachment_knee-length_over_unpleated">
  <rdfs:Label xml:lang="en">chlamys</rdfs:Label>
  <rdfs:Label xml:lang="en">allix</rdfs:Label>
  <rdfs:Label xml:lang="en">chlamys_ephestris</rdfs:Label>
  <rdfs:Label xml:lang="fr">chlamyde</rdfs:Label>
  <rdfs:Label xml:lang="fr">chlamyde_ephestris</rdfs:Label>
  <rdfs:Label xml:lang="gr">χλαμύς</rdfs:Label>
  <rdfs:Label xml:lang="gr">άλλιξ</rdfs:Label>
  <rdfs:Label xml:lang="gr">χλαμύς_έφεστρίς</rdfs:Label>
  <rdfs:subClassOf rdf:resource="Garment_for_man"/>
  <rdfs:subClassOf rdf:resource="Garment_without_sewing"/>
  <rdfs:subClassOf rdf:resource="Garment_around_body"/>
  <rdfs:subClassOf rdf:resource="Garment_without_sleeves"/>
  <rdfs:subClassOf rdf:resource="Unpleated_garment"/>
  <rdfs:subClassOf rdf:resource="knee-length"/>
  <rdfs:subClassOf rdf:resource="over"/>
  <rdfs:subClassOf rdf:resource="one_part"/>
  <rdfs:subClassOf rdf:resource="attached"/>
  <rdfs:subClassOf rdf:resource="one_attachment"/>
</owl:Class>
```



# Chlamys in Tedi

The screenshot shows the Tedi Term Editor interface for the term 'chlamys'. The interface includes a 'Terminology' section with 'Greek Garment' and 'Language: en'. The 'Term' field contains 'chlamys'. The 'Term definition' is 'Garment for men without sleeves, consisting of one part, without sewing, attached by means of a fibula, with one point of attachment.' The 'Status' is 'preferred', 'PoS' is 'noun', and 'Gender' is 'none'. The 'Contexts' section shows a list of contexts in Greek with an 'update' button highlighted. The 'Notes' section contains a note about the term's origin. The 'Orthographic variations' section shows 'chlamys' with options to 'new', 'rename', 'delete', or 'comment'. The 'Inflected forms' section is empty. The 'T. Equivalent terms' section is empty. The 'T. Hypernyms' section shows 'garment (preferred)'. The 'T. Hyponyms', 'T. Synonyms', and 'T. Linked terms' sections are empty. The 'Denoted Concept List' section shows '<Garment without sleeves one part without sewing attached one attachment m'. The 'Concept definition in Natural Language' and 'Comment' sections are empty.

generation of a pattern of definition in NL

status  
POS  
gender

notes

contexts

# Chlamys in Protégé

Class hierarchy: Garment\_around\_body\_male\_one\_part\_without\_sewing

- owl:Thing
  - Garment
    - ankle\_length\_garment
    - Around\_body\_garment
    - Attached\_garment
    - Garment\_around\_body\_male\_one\_part\_without\_sewing**
    - Garment\_for\_man
    - Garment\_for\_man\_without\_sewing\_around\_body\_without
    - Garment\_for\_woman
    - Garment\_male\_around\_body\_more\_than\_one\_part\_with
    - Garment\_with\_sewing
    - Garment\_with\_sleeves
    - Garment\_without\_sewing
    - Garment\_without\_sewing\_around\_body\_under\_one\_part
    - Garment\_without\_sewing\_around\_body\_without\_sleeves
    - Garment\_without\_sleeves
    - Garment\_without\_sleeves\_consisting\_of\_one\_part\_without
    - Garment\_without\_sleeves\_more\_than\_one\_part\_attached
    - Knee\_lentgh\_garment
    - More\_than\_one\_part\_garment
    - Multiple\_attachement\_garment
    - Multiple\_attachment\_garment
    - One\_part\_Garment
    - One\_point\_of\_attachment\_garment
    - Over\_garment
    - Pleated\_garment
    - Under\_garment
    - Unpleated\_garment
    - Wrapped\_garment

Annotations: Garment\_around\_body\_male\_one\_pa

Annotations +

- rdfs:label [language: fr] chlamyde
- rdfs:label [language: en] chlamys
- rdfs:comment Garment for man without sleeves with one point of attachment consisting of one unsewn part.
- status preferred

Description: Garment\_around\_body\_male\_one\_pa

Equivalent To +

SubClass Of +

- Garment
- Garment\_without\_sewing
- Garment\_without\_sleeves
- One\_part\_Garment
- One\_point\_of\_attachment\_garr

General class axioms +

SubClass Of (Anonymous Ancestor)

Instances +

# OTV - OntoTerminology Vocabulary

<http://ontoterminology.com/export>

**Description: Term**

Equivalent To +

SubClass Of +

● **OTVCore**

General class axioms +

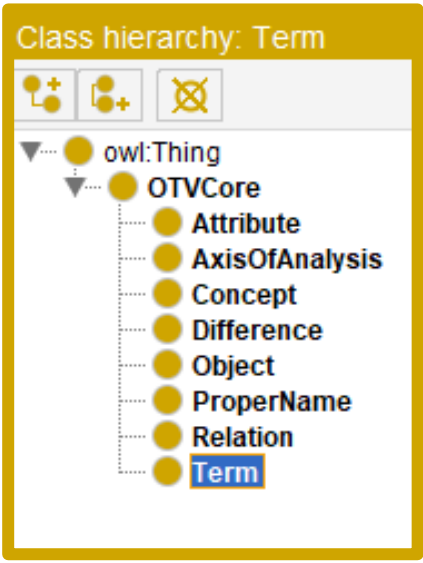
SubClass Of (Anonymous Ancestor)

Instances +

Target for Key +

Disjoint With +

- **Concept**
- **AxisOfAnalysis**
- **Attribute**
- **ProperName**
- **Difference**
- **Object**
- **Relation**



```

1 <?xml version="1.0" encoding="utf-8"?>
2 <!-- Ontoterminology vocabulary (otv) -->
3 <!-- Concept Theory of Terminology (C.T.T.) -->
4 <!-- http://ontoterminology.com/ -->
5
6 <!-- 24th December 2020 -->
7
8 <!-- ***** OTV VOCABULARY *****
9 |
10 | *****
11 |
12 | The OTV Vocabulary is defined as an OWL Ontology including
13 | OWL Classes, OWL Object Properties, and OWL Annotation Properties
14 |
15 | == OWL Classes ==
16 |
17 | <owl:Class name="otv:Concept"
18 |   comment="an ontoterminology concept is an instance of the otv:Concept class"
19 |   extension="{ ontoterminology concepts }"/>
20 |
21 | <owl:Class name="otv:AxisOfAnalysis"
22 |   extension="{ ontoterminology axes of analysis }"/>
23 |
24 | <owl:Class name="otv:Difference"
25 |   extension="{ ontoterminology differences }"/>
26 |
27 | <owl:Class name="otv:Relation"
28 |   extension="{ ontoterminology relations }"/>
29 |
30 | <owl:Class name="otv:Attribute"
31 |   extension="{ ontoterminology attributes }"/>
32 |
33 | <owl:Class name="otv:Object"/>
  
```

**Annotations: Term**

Annotations +

rdfs:label

Term

rdfs:comment

The class of OTV Terms

rdfs:isDefinedBy

<http://www.ontologia.fr/OTB/otv.rdf>

**Object property matrix:**

Fit columns to content

Object Property

- owl.topObjectProperty
  - difference
  - instanceOf
  - isA
  - denotedByProperName
  - denotedByTerm
  - denotedConcept
  - denotedObject
  - belongsToAxis
  - ownDifference
  - containsDifference
  - inheritedDifference

Domain	Range
Concept	Difference
Object	Concept
Concept	Concept
Object	ProperName
Concept	Term
Term	Concept
ProperName	Object
Difference	AxisOfAnalysis
Concept	Difference
AxisOfAnalysis	Difference
Concept	Difference

search:

- allix
- anaxyrides
- chiton
- chiton arrhaphos
- chiton cheiridotos
- chiton chortaios
- chiton orthostadios
- chiton poderes
- chitoniskos
- chlaina
- chlamys
- chlamys ephestris
- cloak
- ependytes
- exomis
- garment
- himation
- himation nymphikon
- kandys
- peplos

### himation

**Definition:** Sleeveless Garment consisting of one piece of cloth with sewing wrapped around body.

**Status:** preferred

**Context(s):**

- 1) IG II<sup>2</sup> 1514, line 47 ἰμάτι[ι]ον ἀνδρεῖον, Ἀργονιάς ἀνέθηκεν .
- 2) IG II<sup>2</sup> 1514, line 17 Ναυσίς ἰμάτιον γυναικεῖον πλατυαλουργές περι[κ]υμάτιον .
- 3) Aristoph. Eccl. 333  
*Βλέπυρος*  
*οὐκ, ἀλλὰ τῆς γυναικὸς ἐξελήλυθα*  
*τὸ κροκωτίδιον ἀμπισχόμενος οὐνδύεται.*

*Ἀνήρ*  
*τὸ δ' ἰμάτιόν σου ποῦ 'στιν;*

*Aristophanes, Ecclesiazusae*  
*F.W. Hall and W.M. Geldart, Ed*  
*Accessible online:*  
<http://www.perseus.tufts.edu/hopper/text?doc=Perseus:abo:tlg,0019,010:333&lang=original>

4) Aristoph. Cl. 179  
*Strep.*  
*Well. What then did he contrive for provisions?*

*Dis.*  
*He sprinkled fine ashes on the table, and bent a little spit, and then took it as a pair of compasses and filched a cloak from the Palaestra.*  
*Accessible online: <http://www.perseus.tufts.edu/hopper/text?doc=Perseus:abo:tlg,0019,003:179&lang=original>*

**Note(s):**

- 1) LSJ (*Perseus*) ἰμάτιον [ι\_μα^~], τό, in form a Dim. of ἴμα (i.e. εἶμα),  
*A a piece of dress; in usage always of an outer garment, formed by an oblong piece of cloth worn above the χιτών, Ar.Ec.333, IG22.1524.205, al., D.24.114, etc.; "λαμπρόν ἰ. ἔχων" Epich.[277]; θοιμά crasis for τὸ ἰμ., Ar.Nu.179, al.; "θοιμάτιον καθείς ἄχρι τῶν σφυρῶν" D.19.314; "ματίων ἔλξεις" Pl.Alc.1.122c; of the Roman toga, Plu.Brut.17, Cor.14: hence ἐν ἰματίοις, of civilians, = togati, Id.Cam.10; Ἑλληνικόν, opp. the toga, Luc.Merc.Cond.25.*
  2. ἰμάτια, τά, generally, clothes, Hdt.1.9, Pl.Plt.279e, D.27.10; by crasis, "θοιμάτια" Hippon.83.1, Ar.V.408 (lyr.), Lys.1093; of grave-clothes, ἐν εἰμ. τρισί [θάπτειν] IG 12(5).593.2 (Iulis, v/vv B.), cf. Plu.Soc.3. metaph., "ἰμάτια πόλεως τεχνή" Eust.1871.50.
  3. metaph., "ἰμάτια πόλεως τεχνή" Eust.1871.50.
  - II. generally, cloth, Hdt.4.23, D.S. 14.109, Ael.VH8.7, Iamb.VP21.100. [ἰμ- in Att. Inscr., IG12.427, 386.18, 22.1514.16, etc.; εἰμ- ib.12(5) l.c. (εμ- lap), 5(1).1390.16, al.(Andania, i B.C.), which is easily explain, v. εἶμα, εἰματισμός.]
- Accessible online: <http://www.perseus.tufts.edu/hopper/morph?l=i%28ma%2Ftion&la=greek&can=i%28ma%2Ftion0#lexicon>*

**Equivalent(s):**

- fr: himation (none)
- gr: ἰμάτιον (preferred)

**Concept:** <Garment without sleeves one part without sewing wrapped around body>

**essential characteristic(s):** /one part/, /without sleeves/, /around body/, /without sewing/, /wrapped/,

**a kind of:** <Garment without sewing>, <Garment around body>, <Garment without sleeves>, <One part garment>.

**Web reference:** <http://arachne.uni-koeln.de/item/marbilder/4803541>

**Illustration:** 602063 attische Lekythos des Theseus-Malers - 000300148705, Scene 1: Komos



# Definitions by *genus et differentia*

- Volute-krater definition in the Beazley Archive



## Volute-krater



genus

essential characteristic

instance

The volute-krater is named after its handles. The François Vase is a famous and early example, but the typical Athenian form occurs only later in the sixth century, with the handles tightly curled so that they look like the volutes on Ionic columns. The shape is also found in metal. Over the course of the fifth and fourth centuries, examples become slimmer, and Apulian volute-kraters from South Italy are particularly elaborate.

Source: <https://www.beazley.ox.ac.uk/tools/pottery/shapes/volute.htm>

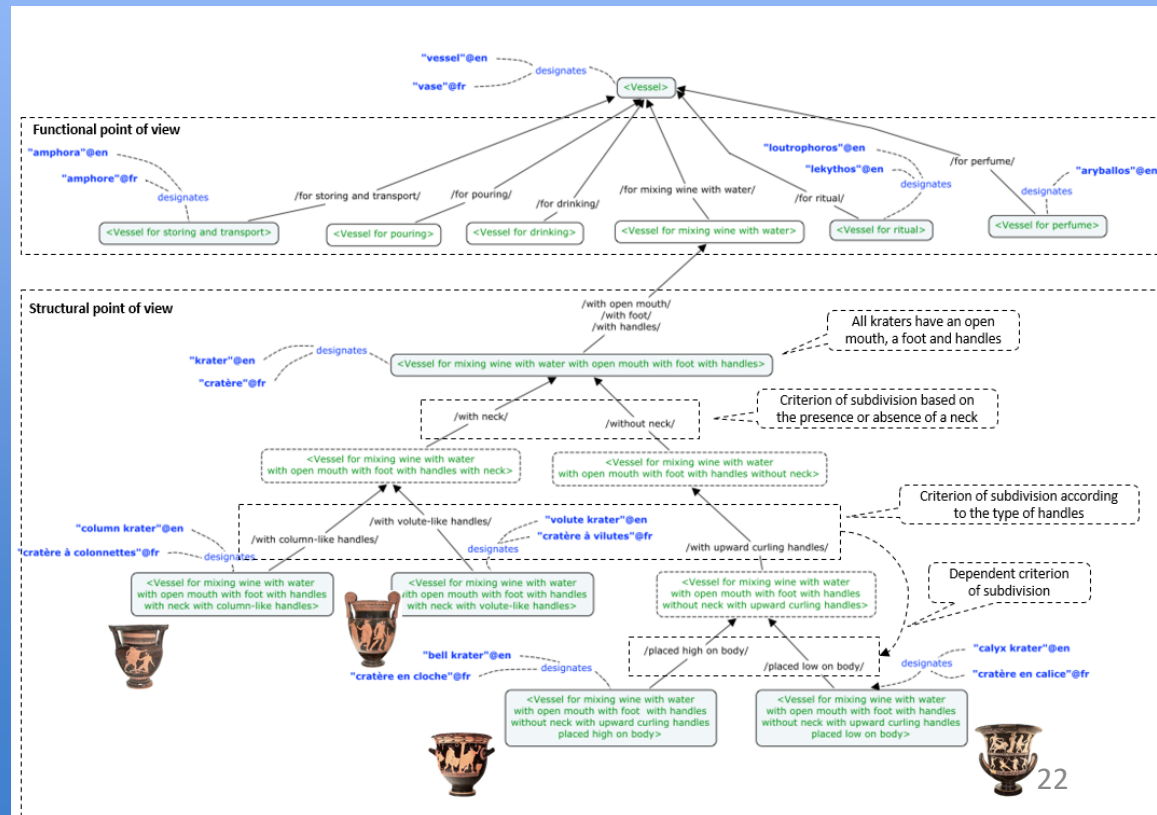


# Ontological definition of terms: what for?

- ✓ human-readable terminologies become interoperable (W3C)
- ✓ intuitive, tool-assisted concept theory for terminology building
- ✓ term definitions can be checked for consistency and completeness
- ✓ improved search options: on concepts, terms, characteristics

✓ the characteristics-based definition of concepts (and terms) provides a common basis for domain experts to agree on

✓ way of thinking and ease-of-use for domain experts is taken into account



search: 

amphora  
bell krater  
belly amphora  
calyx krater  
column krater  
hydria  
krater  
lekythos  
neck amphora  
panathenaic amphora  
panathenaic prize amphora  
pelike  
type A amphora  
type B amphora  
type C amphora  
vase  
volute krater

## calyx krater

**Definition:** Krater without neck, with upward curling handles placed low on the body.

**Status:** preferred

**Source:** Expert

**Note(s):**

- 1) "The handles of the calyx-krater are placed low down on the body, at what is termed the *cul*. Their upward curling form lends the shape an appearance reminiscent of the calyx of a flower, hence the name. The earliest known example was possibly made by Exekias in the third quarter of the sixth century. It continues to be produced, mainly in red-figure, becoming more elongated over the course of the fifth and fourth centuries." *Classical Art Research Centre, University of Oxford*. Accessible online: <https://www.beazley.ox.ac.uk/tools/pottery/shapes/calyx.htm> 2020 05 08
- 2) "The calyx-krater is one of the largest Attic vases, and is reminiscent of a bell-shaped flower. It is named for its convex lower body that has the configuration of the calyx of a flower, while the flaring upper body is suggestive of the bell-shaped corolla. It has large, robust, upturned handles situated opposite one another on the *cul*. The calyx-krater appears in Attic black-figure after the middle of the 6th c. BCE and is a popular shape until the end of red-figure."  
[http://kerameikos.org/id/calyx\\_krater](http://kerameikos.org/id/calyx_krater)

**Equivalent(s):**

- fr: cratère en calice (preferred)

- gr: κρατήρας καλυκοειδής (preferred)

**Concept:** <Vessel for mixing wine with water with handle(s) with foot with open mouth without neck with upward curling handles upward curling handles placed low on the body>

**essential characteristic(s):** /vessel/, /for mixing wine with water/, /with handle(s)/, /with foot/, /with open mouth/, /without neck/, /with upward curling handles/, /upward curling handles placed low on the body/,

**a kind of:** <Vessel for mixing wine with water with handle(s) with foot with open mouth without neck>,

**linked to:** <Place>, <Part upward curling handle>, <Foot>, <Handle>,

foaf:depiction <http://ontologia.fr/Images/GreekVase/Beazley-Calyx-Krater.png>  
foaf:depiction <http://www.beazley.ox.ac.uk/images/pottery/shapes/bellcropped.jpg>  
rdfs:seeAlso <http://www.beazley.ox.ac.uk/tools/pottery/shapes/calyx.htm>  
skos:exactMatch <http://www.wikidata.org/entity/Q15407662>  
skos:exactMatch <http://vocab.getty.edu/aat/300198858>  
skos:exactMatch [http://kerameikos.org/id/calyx\\_krater](http://kerameikos.org/id/calyx_krater)

**Web reference:** [Beazley Collection - Classical Art Research Centre - University of Oxford](http://www.beazley.ox.ac.uk/)

**Illustration:** Calyx krater from Classical Art Research Centre (Beazley)



[http://ontoterminology.com/wp-content/uploads/2020/11/krater.en\\_.html](http://ontoterminology.com/wp-content/uploads/2020/11/krater.en_.html)

**Objects of this type:** 63

Beazley-16377



foaf:depiction <http://ontologia.fr/Images/GreekVase/Beazley-16377.png>  
foaf:depiction [http://www.beazley.ox.ac.uk/XDB/ASP/imageViewerV2.asp?filename=Vases\SP\IF\Images200\Unatt75to99\16377\\_A1\image.tif](http://www.beazley.ox.ac.uk/XDB/ASP/imageViewerV2.asp?filename=Vases\SP\IF\Images200\Unatt75to99\16377_A1\image.tif)  
rdfs:seeAlso <http://www.beazley.ox.ac.uk/record/3FC608C0-97AA-470C-A2FB-4815FB62EB7B>  
rdfs:seeAlso <http://ark.dasch.swiss/ark:/72163/080e-75aaae260b2e1-c>

# Chinese Ming and Qing pottery

Date: November 16, 2021 - Time: 18:01:01 - Version: 2.5 - [www.ontoterminology.com/edi](http://www.ontoterminology.com/edi)

- search:
- arrow vase
  - arrow vase I
  - arrow vase II
  - awl-handle vase
  - cong-shaped vase
  - vase
  - vessel

**arrow vase**  
**Definition:** Vase with long neck and pierced handles.  
**Status:** preferred

**Equivalent(s):**  
 - zh: 贯耳瓶 (preferred)

**Concept:** <Vessel in clay for decoration with one mouth with neck with long neck with handles with pierced handles without lid without ring>  
**essential characteristic(s):** /in clay/, /for decoration/, /with one mouth/, /with neck/, /with long neck/, /with handles/, /with pierced handles/, /without lid/, /without ring/, a kind of: <Vessel in clay for decoration with one mouth>.

*rdfs:seeAlso* <https://art.thewalters.org/detail/26828/arrow-vase/>  
*rdfs:seeAlso* <http://masterpieces.asemus.museum/masterpiece/detail.nhn?objectId=11005>

**Objects of this type: 1**

oi-1  
*rdfs:seeAlso* <http://masterpieces.asemus.museum/masterpiece/detail.nhn?objectId=11005>



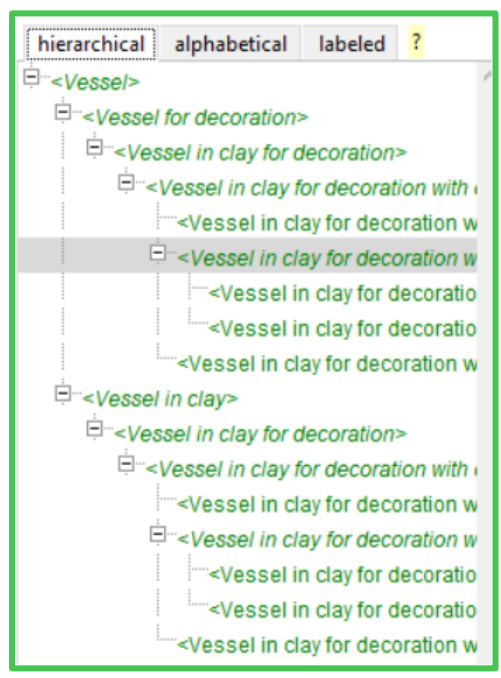
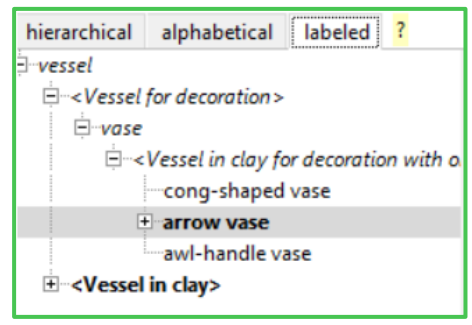
- alphabetical hierarchical ?
- arrow vase
  - arrow vase I
  - arrow vase II
  - arrow vase III
  - awl-handle vase
  - cong vase
  - cong-shaped vase
  - cup
  - cylindrical vase
  - double-gourd vase
  - double-gourd vase I
  - double-gourd vase II
  - double-gourd vase III
  - double-tube vase
  - elephant leg vase
  - flower-mouth vase

Term  check period begin period  end period

Term definition <- generate definition pattern ? ? ok

with one mouth, with neck, with long neck, with handles, with pierced handles, without lid, without ring.


Formal ? <Vessel in clay for decoration with one mouth> + /with neck/ + /with long neck/ + /with handles/ + /with  
 Definition pierced handles/ + /without lid/ + /without ring/





A decorative background consisting of a grid of small, dark gray squares. The squares are arranged in vertical columns of varying heights, creating a pattern that resembles a stylized city skyline or a digital grid. The squares are scattered across the entire page, with some forming solid blocks and others being more sparse.

# Thank you!

A dark, grayscale image of a classical statue's face, likely a woman, positioned at the bottom of the page. The statue's features, including the eyes, nose, and lips, are visible but somewhat obscured by the grid of squares. The lighting is dramatic, highlighting the contours of the face.

[maria.papadopoulou@univ-savoie.fr](mailto:maria.papadopoulou@univ-savoie.fr)