

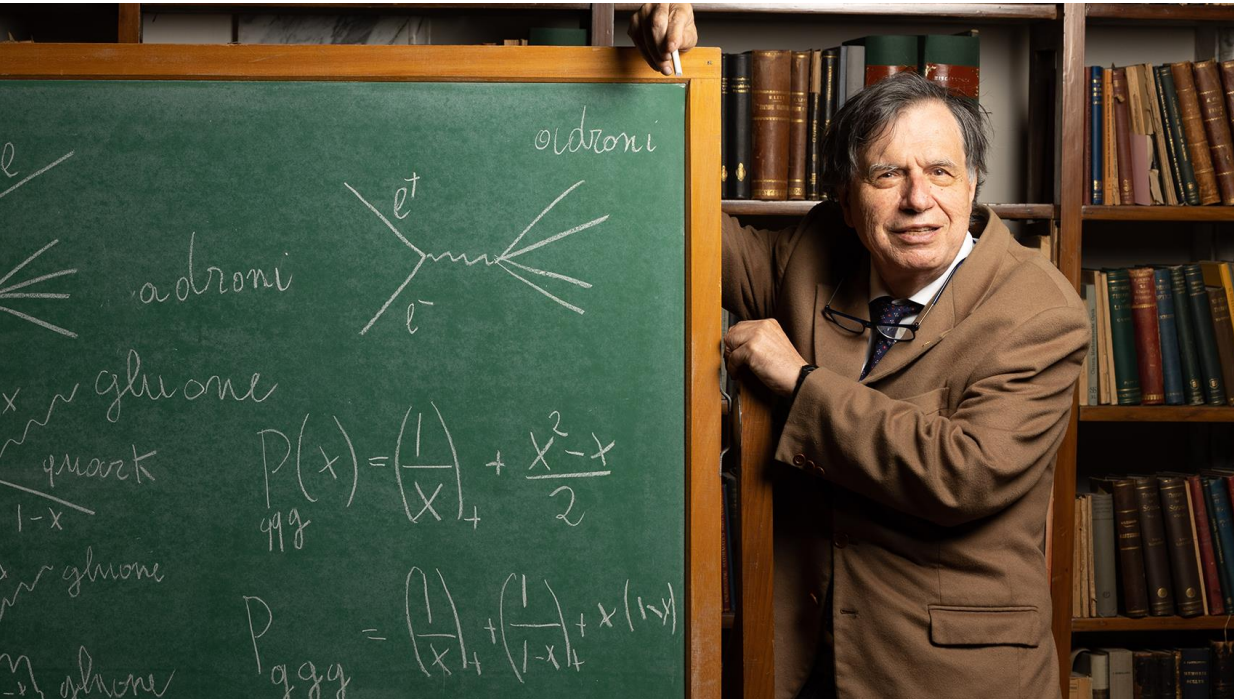


Simpler search in a complex world

Browsing ethnographic videos
by freely faceted classmarks

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(ILC research project & Io Stivale che Balla)*

Complexity and KO



oggi.i
t

“not reducing any
knowledge object
to a single
level of description”

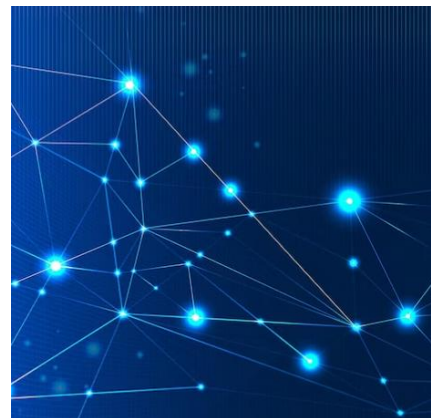
→ interdisciplinarity!

Giorgio Parisi,
2021 Nobel Prize for Physics

Interdisciplinary, sophisticated KOSs

- To express e.g. the benefit of a **certain dosage** of a chemical to a **certain combination** of condition, severity, age and sex,
- a powerful syntax is needed, as “the world is not built of triples”...

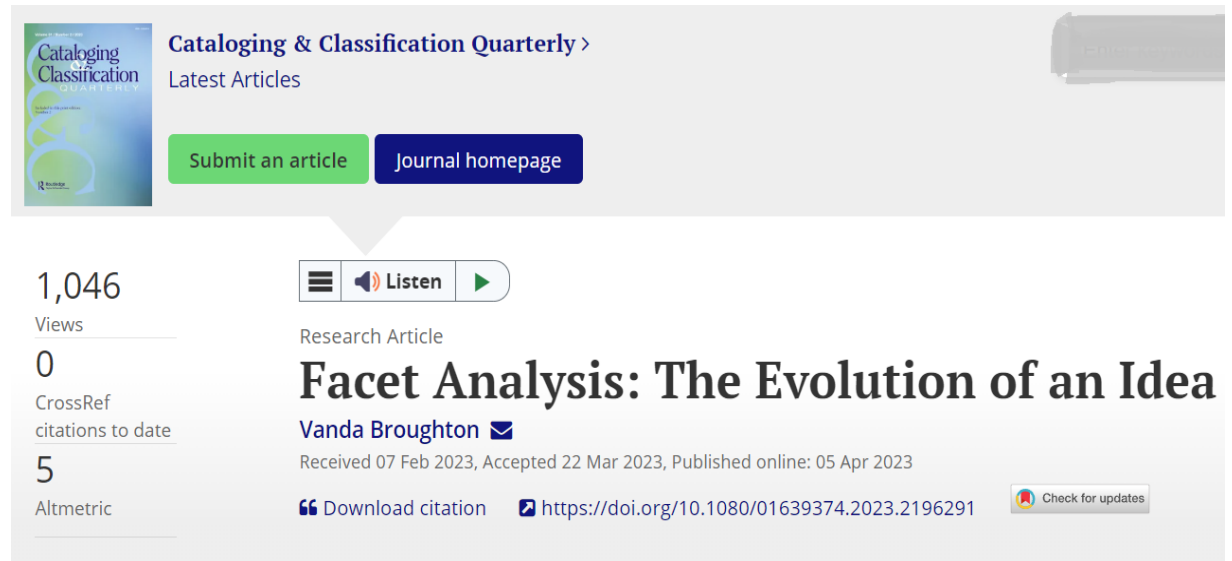
(Soergel 2021).



Faceted classifications

- “a way to represent and to organize, in a predictable manner, the increasingly **complex** content in documents”

(Broughton 2023)



The screenshot shows the top section of a journal article page. At the top left is the journal cover for 'Cataloging & Classification Quarterly'. To its right, the journal title 'Cataloging & Classification Quarterly >' is displayed, along with 'Latest Articles'. Below the journal title are two buttons: 'Submit an article' (green) and 'Journal homepage' (dark blue). On the right side of the top section, there is a 'Full text' button. Below the journal information, the article title 'Facet Analysis: The Evolution of an Idea' is prominently displayed. The author's name 'Vanda Broughton' is shown below the title, followed by the publication details: 'Received 07 Feb 2023, Accepted 22 Mar 2023, Published online: 05 Apr 2023'. To the left of the article title, there are statistics: '1,046 Views', '0 CrossRef citations to date', and '5 Altmetric'. To the right of the article title, there is a 'Listen' button with a speaker icon and a play button. Below the article title, there are links for 'Download citation' and the DOI 'https://doi.org/10.1080/01639374.2023.2196291'. At the bottom right, there is a 'Check for updates' button.

Cataloging & Classification Quarterly >
Latest Articles

Submit an article Journal homepage

1,046 Views
0 CrossRef citations to date
5 Altmetric

Listen

Research Article

Facet Analysis: The Evolution of an Idea

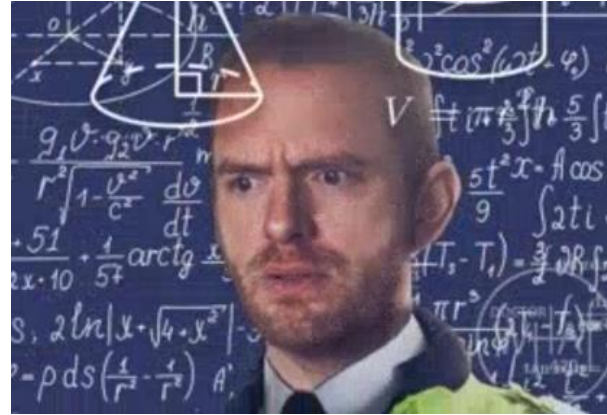
Vanda Broughton ✉

Received 07 Feb 2023, Accepted 22 Mar 2023, Published online: 05 Apr 2023

Download citation <https://doi.org/10.1080/01639374.2023.2196291> Check for updates

Faceted classifications

- Too demanding for indexers?
Too demanding for users?
(Maniez 1990)



- Often not exploited in retrieval interfaces
(cfr. Haynes in this conference
on ISKO STAC Metadata WG)

Integrative Levels Classification (ILC) dev. vers.

- *a* forms
- *b* quantum fields
- *c* spacetime
- *d* particles
- *e* atoms
- *f* molecules
- *g* continuum bodies
- *h* celestial bodies
- *i* rocks
- *j* land
- *k* genes
- *l* cells
- *o* agency
- *p* consciousness
- *q* language
- *r* production
- *s* services
- *t* communities
- *u* polities
- *v* legal entities
- *w* customs
- *x* creative arts
- *y* scholarship

ILC facet kinds

- free: *wlge50xb* “Easter feasts, through sculpture”
← *xb*
- parallel: *wlge92ff* “Easter feasts, typical of Lombardy”
← *uUff*
- bound: *wlge5c* “Easter feasts, procession”
← *w5c*

- *wlge92ff5c50xb*
- “Easter feasts, of Lombardy, procession, through sculpture”

ILC as SKOS

- 0-9 categories as subproperties of *skos:related*
- facets as subclasses of *rdf:Property*
- faceted compounds not included

JD
77,4

Migrating a complex classification scheme to the semantic web: expressing the Integrative Levels Classification using SKOS RDF

926

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Need for friendly applications


- Show the potential of freely faceted classification
- by demos on intuitive, popular domains (e.g. movies, fiction...)
- through easy-to-use interfaces
- publicly available on the Internet


imdb.com

Known for:

 **Manhattan**
★ 7.8
Writer
1979



 **Annie Hall**
★ 8.0
Writer
1977

 **Deconstructing Harry**
★ 7.3
Writer
1997

 **Hannah and Her Sisters**
★ 7.8
Writer
1986

Credits

Edit

 [Writer · 82](#) [Director · 57](#) [Actor · 48](#) [Soundtrack · 6](#) [Music Department · 2](#) [Additi](#) 

Expand below

Faceted demonstrator, 2004

The screenshot shows a web browser window titled "The FACET Project" with the URL http://rapid.isd.glam.ac.uk/FACET/live/demo_QueryBuilder.asp#. The page header includes "Home | Demonstrations | Publications". The main content area is titled "Demonstration - Query Builder (instructions)".

On the left, there is a "Legend" sidebar with categories: Properties (blue), Times (green), Agents (red), Processes (orange), Materials (yellow), and Objects (purple). Below the legend are four buttons: "Find in Thesaurus", "View Hierarchy", "View Expansion", and "Add to Query".

The main interface is divided into two main sections:

- Left Panel:** A tree view showing a hierarchy of terms. The selected term is "coffers (furniture)". Below the tree, there is a description: "Small chests for the storage of valuables which may also serve as seats or tables. (Variations: coffer (furniture); Chests; coffers; coffres; coffrets)". There is also a "See also arks" section.
- Right Panel:** A "Query Terms" section with a "Run Query" button. It contains three terms, each with a "Remove" button and a "Term Expansion" control (a radio button set from "Min" to "Max"). The terms are: "burnishing (polishing)", "ebony", and "coffers (furniture)".

The browser's status bar at the bottom shows "Done" and "Internet".

Hypermedia
Research Group,
University of South
Wales

ILC1-based interface, 2006



the BioAcoustic Reference Database

by [CIBRA: Centro interdisciplinare di Bioacustica e ricerche ambientali](#)
at the University of Pavia, in collaboration with [ISKO Italia](#)

Freely faceted search interface

choose **facets**: [only part of the records are classified!]

taxon: (anyone)

insects other invertebrates

ray-finned fish amphibians reptiles birds

mammals

cetaceans marine mammals

rodents bats elephants

primates humans

function: (anyone)

alarm threat localization

courtship individual recognition social contact

signals: (anyone) structure analyzed

vibrational infrasounds ultrasounds

related topics: (anyone)

behaviour echolocation

population abundance and distribution

...and/or type the surname of an **author**:

...and/or a word/phrase in the **title**:

...and limit to publication dates

between and

...then

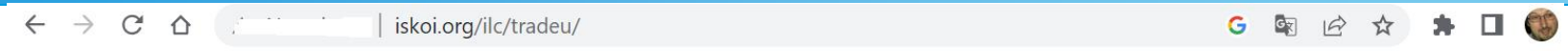
and wait some seconds

The bibliographic database currently consists of **3837** records. It covers bioacoustics mainly of whales and dolphins (plus other taxa until year 2000).

* in memory of
Gianni
Pavan



ILC-3 based interface, 2023



Traditional Europe

A selected videography indexed by ILC

Click on one, two or three entries, following the top-down order, then on the "search" button:

customs: games · initiation · marriage · Carniva · Easter · May Day · Christmas

region: Britain · Ireland · Germany · Benelux · France · Spain · Portugal · Italy

symbols: clothes · effigies · flags · plant parts · animals

rites: dressing up · procession · itinerant begging · bonfire · meal

instruments: song · percussion · drums · stringed · wind

wlge%92f%

search

resume



This is an experimental demonstrator of the [Integrative Levels Classification](#) research project in collaboration with [Lo Stivale che Balla](#)

truncation added
so "Italy" finds
"Lombardy" and
more facets can
be interposed



Results

← → ↻ 🏠 | iskoi.org/ilc/tradeu/video.php?cl=w1ge%2592f%25

Traditional Europe

Results

Out of 62 audiovisual documents in the directory, 2 (sorted by classmark) include the chosen combination.



w1ge92ff5d53a

Easter,
typical of Lombardia,
itinerant begging,
by voice

automatic display
of faceted captions



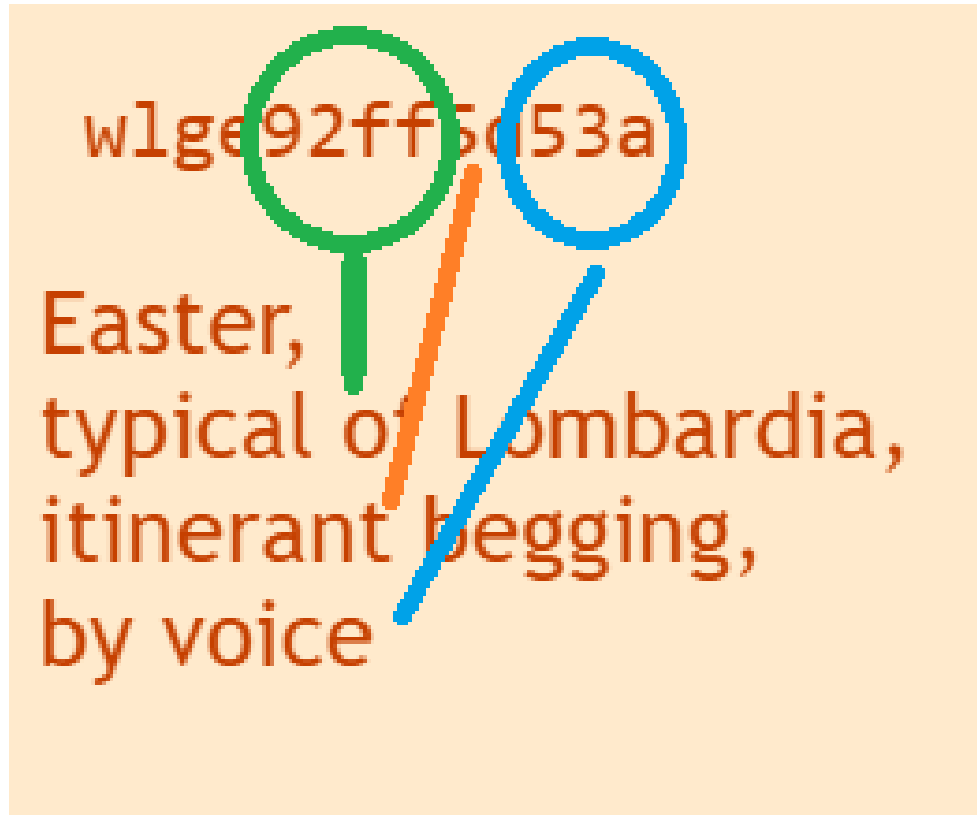
w1ge92fq75vo6ee5c5e5h50xf50xb53a53c53d

Easter,
typical of Campania,
birds,
invoking mother goddess,
procession,
offering,
ritual meal,

sorting by
classmark



Display of faceted captions



PHP code manages
parsing of
classmarks
and display of
appropriate
meanings

Display of faceted captions

If facet indicator ends by -0

→ **free facet**, focus taken from a-z

else, if facet indicator ends by -9 or is just one digit

→ **bound facet**, focus taken from main class itself

else

→ **parallel facet**, focus taken from class specified in schedules

```
if (substr($indicator,-1) == '0') // free facet
{
  $sqlfocus = "SELECT verbal FROM ilc WHERE notation = '".$focus."'";
  $rsfocus = mysql_query($sqlfocus, $db);
  while ($rowfocus = mysql_fetch_array($rsfocus))
  { echo " ".$rowfocus['verbal']; }
}
```

Very complex subjects



wlge92fq75vo6ee5c5e5h50xf50xb53a53c53d

Easter,
typical of Campania,
birds,
invoking mother goddess,
procession,
offering,
ritual meal,
paintings,
sculptures,
by voice,
by idiophones,
by membranophones

- concepts from different classes: birds, instruments, sculptures...
- which *particular themes* are relevant?

<http://www.iskoi.org/ilc/tradeu/video.php?cl=wlge%2592f%25>

Zero-match problem

Many possible combinations
→ likely no match

Instructions to select max 3 facets

If <2 results,
facets are automatically dropped
(better: generalized)
as a form of query expansion

← → ↻ 🏠 Non sicuro | iskoi.org/ilc/tradeu/video.php?cl=w1ge%2592f%2575%25

Traditional Europe

Results

Out of 62 audiovisual documents in the directory, 1 (sorted by classmark) include the chosen combination.
Partially matching documents are also shown (shortened query: w1ge)



w1ge92ezpd715b5fe53d53n50xr

Easter,
typical of Northern Portugal,
light sources,
dressing up,
effigy burning,
by membranophones,
by aerophones,
theatre plays



w1ge92ff5d53a

Easter,
typical of Lombardia,
itinerant begging,
music

Fully faceted classification

- Not the same as “faceted” navigation interfaces
- Not the only use of ILC: “tag-style” free classification is also possible
- Useful for specialized subjects



w1dc92ep7f5b50xn53n

Carnival,
typical of Navarre,
effigies,
dressing up,
dances,
by aerophones



w1dc92fd5b50xn

Carnival,
typical of Piemonte,
dressing up,
dances

Future work

- Index more videos
- Write code for subfacets
- Allow expansion by individual facets (automatic or by navigation)
- Online classmark builder based on same algorithm

Conclusion

- Find the right degree of complexity you need

...Thanks for your attention!

