Vagueness in Metadata

Nicole Majka^{1,2}, Gabriele Schwiertz¹ & Felix Rau¹

¹ University of Cologne

² Bangor University



Outline

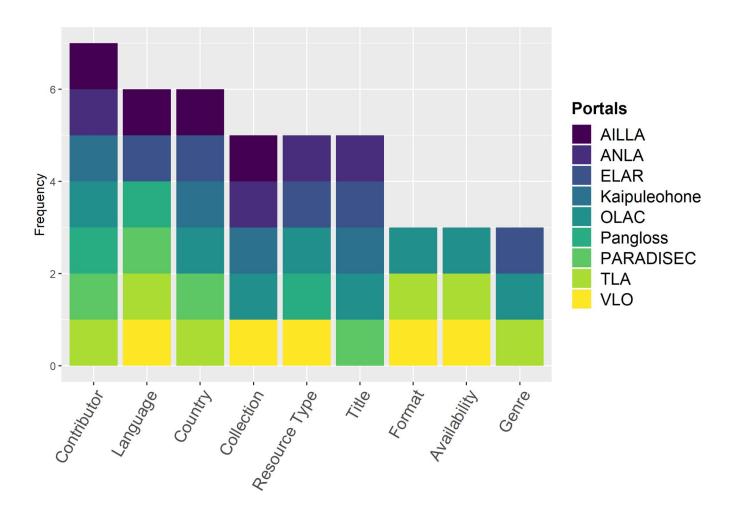
- 1. Two surveys into metadata usage
- 2. Example: Language
- 3. Example: Location
- 4. What is vagueness?
- 5. How does vagueness impact findability and reliability?
- 6. Solutions



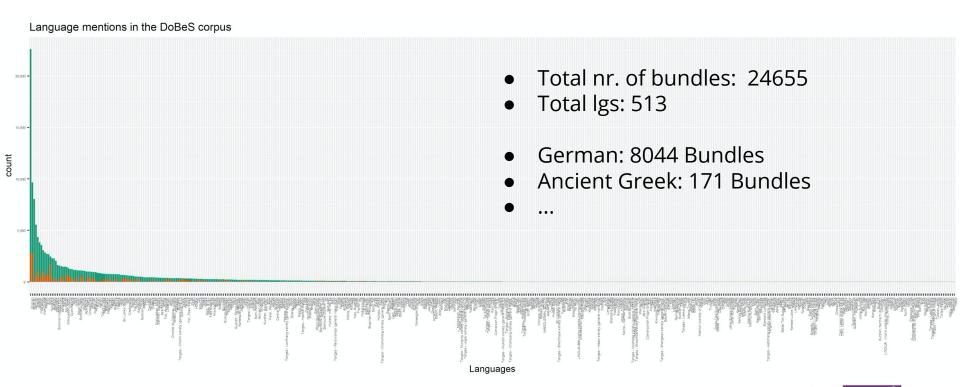
2 surveys into metadata usage



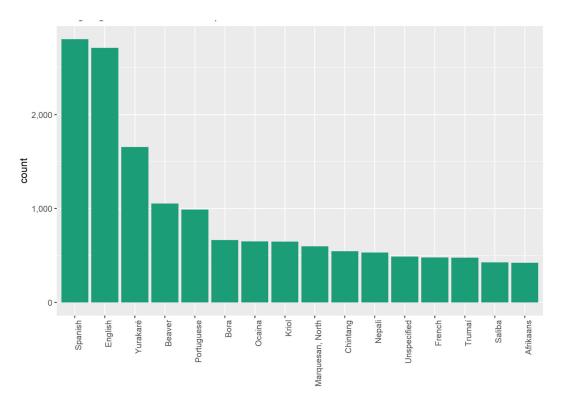
Portal Survey



IMDI Survey: Languages



IMDI Survey: Top 10 Languages



Trying to be more specific: ContentLanguages

- Spanish
- English
- Yurakaré
- Beaver
- Portuguese
- Bora
- Ocaina
- Kriol
- ...



2 examples: Language & Location



Example: Language

Semantics of Language

- Content Language: language the resource is in
- Subject Language: language the resource is about
- Actor Language: language used or known by a participant
- Translation Language: language the resource has been translated into

Example: Language

Type of Language	Schema.org	DataCite	OLAC	IMDI	IDS	HZSK	BLAM
Subject Language	(√)	(√)	✓	✓	√	√	✓
Content Language	√	✓	✓	✓	(√)	√	
Actor Language	√			✓	√	√	
Translation Language	✓			√	(√)	✓	√

Example: Location

Semantics of Location:

- Location of the resource: Where is the resource stored?
- Recording location: Where was the resource recorded?
- Location of subject language or dialect
- Location of Actor: Where does the participant come from? Where does the participant live?

Example: Location

Type of Location	Schema.org	DataCite	OLAC	IMDI	IDS	HZSK	BLAM
Location of Resource	✓				√		
Recording Location	✓	√	✓	✓	✓	✓	✓
Location of Language or Dialect		√	√	√	(√)	✓	✓
Location of Actor	√				√	√	

What is vagueness?

What is vagueness?

In the title, we use vagueness to cover the four types:

- vagueness
- generality
- uncertainty
- ambiguity



Vagueness and Generality

Vagueness:

1 grain of rice is not a heap, 1+1 grains, 2+1, 100000 +1, 1000000 + 1, ...

DataCite Language "The primary language of the resource."

Generality:

"I saw a reptile." vs. "I saw a snake."

German (deu), Alemannic (gsw), Swiss German (gsw), Bernese (gsw)

Uncertainty and Ambiguity

Uncertainty:

"This is probably edible." (introduced mostly through optional fields)

Ambiguity:

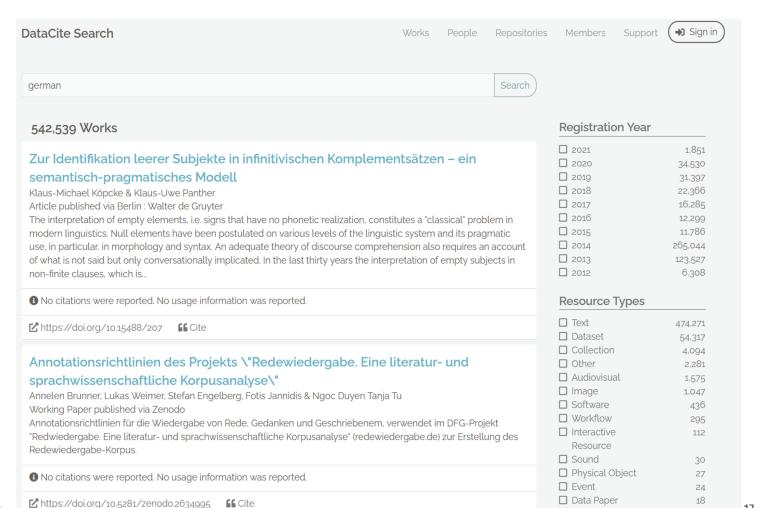
"Yesterday, I went to the bank."

Kui (uki) India Kui (kvd) Indonesia Kui (kdt) Thailand/Laos/Cambodia Dravidian Timor-Alor-Pantar

Austroasiatic



How does vagueness impact findability and reliability?



□ Model

Findability

DataCite (Language)

Обучение деловой переписке на немецком языке специалистов с дополнительной квалификацией «Переводчик в сфере профессиональной коммуникации»

Journal Article published via Hayчно-методический электронный журнал «Концепт»

В статье рассматриваются актуальные проблемы обучения деловой переписке на немецком языке специалистов с дополнительной квалификацией «Переводчик в сфере профессиональной коммуникации». Выделен комплекс основных тематических аспектов, подлежащих обучению, объясняются цели и задачи авторского курса, приводятся рекомендации по соблюдению речевых, стилистических и грамматических особенностей написания делового письма на немецком языке согласно правилам, установленным Немецким институтом стандартизации (DIN), а также примеры стилистических различий при составлении писем на немецком и русском языках. Раскрываются приемы и методы работы, приводятся примеры...

1 No citations were reported. No usage information was reported.



Findability – DataCite (Language)

Registration Year		Resource Types		Affiliations	
□ 2021 □ 2020 □ 2019 □ 2018 □ 2017 □ 2016 □ 2015 □ 2014 □ 2013 □ 2012	1,851 34.530 31.397 22.366 16,285 12,299 11,786 265,044 123,527 6,308	☐ Text ☐ Dataset ☐ Collection ☐ Other ☐ Audiovisual ☐ Image ☐ Software ☐ Workflow ☐ Interactive ☐ Resource ☐ Sound	474,271 54,317 4,094 2,281 1,575 1,047 436 295 112	□ Ludwig- Maximilians- Universität München □ Helmholtz Centre Potsdam - GFZ German Research Centre for Geosciences □ TU Wien □ Leibniz Institute for Farm Animal Biology □ National Research Institute for Agriculture, Food and Environment	202 21 19 12
		☐ Physical Object ☐ Event ☐ Data Paper ☐ Model ☐ Service	27 24 18 6	☐ University of ☐ Clermont Auvergne ☐ Aarhus University ☐ Institute for ☐ Advanced ☐ Sustainability ☐ Studies ☐ University of ☐ Bamberg	8 8 7
PARADISEC at 100 Vagueness				☐ University of	5

Reading

Findability

OLAC (Language)





Powered by the DLA

n.a. n.d. MPI corpora: Evolutionary Processes in Language and Culture: EOSS.

AphasiaBank German CAP Corpus

Bates, Elizabeth, 2004-03-30, TalkBank,

German Rigol Corpus

Rigol, Rosemarie, 2007-03-05, TalkBank,



go 🥼

Findability

OLAC (Language)





German Rigol Corpus

Findability – OLAC (Language)

▼ Subject language	browse
German	8825
Swiss German	880
Polish	625
German Sign Language	542
view more	

▼ Content language	browse
German	9452
Swiss German	873
English	863
• Polish	690
view more	

Findability – OLAC (Language)

ggnheli -- picture story by an adult native speaker of German (control group)

Helga; Thomas Schmalzgrüber; Christine Dimroth (compiler); Thomas Schmalzgrüber (annotator). n.d. MPI corpora: Acquisition: L2 Acquisition: APN.

Vvedenie v altařskoe iazykoznanie

Ramstedt, G. J. (Gustaf John), 1873-1950. n.d. Moskva: Izd-vo inostrannoi lit-ry.

imitation-33 -- child learner of L2 German

Christine Dimroth (compiler); Sarah Schimke (compiler). n.d. MPI corpora: Acquisition: L2 Acquisition: Imitation.

imitation-35 -- child learner of L2 German

Christine Dimroth (compiler); Sarah Schimke (compiler), n.d. MPI corpora : Acquisition : L2 Acquisition : Imitation.

Findability – OLAC (Language)

Title: Vvedenie v altaĭskoe iazykoznanie

Online: No

Archive: Graduate Institute of Applied Linguistics Library (see archive description)

Contributor: Ramstedt, G. J. (Gustaf John), 1873-1950 (author)

Publisher: Moskva: Izd-vo inostrannoĭ lit-ry

Description: Added t.p. in German

Translation of Einführung in die Altaische Sprachwissenschaft

Content language:

Subject language:

Russian German

Russian

German

Language family:

Indo-European Germanic West Germanic

DCMI type:

Text

LCSH subject: Altaic languages

Russian language--Translations from German German language--Translations into Russian

Complete OLAC record: h

http://www.language-archives.org/item/oai:gial.edu:16609

Link for this page: http://dla.library.upenn.edu/dla/olac/record.html?id=gial_edu_16609



Solutions

Solutions

- Improve formats → archives
 - crisp definitions: primary language → subject language, ...

vagueness

use non-literals: GlottoCodes, ISO 639-3 codes, ...

ambiguity

- Agree on controlled vocabularies → research community
 - o researcher-controlled vocabularies (Glottolog, ORCID, Wikidata)

ambiguity

- support for vocabularies in tools
- Improve practices → archives, researchers
 - avoid optional fields for core categories in metadata scheme

uncertainty

awareness of/following best practices

PARADISET A KO A PRINCE TO THE PARADISE TO TO THE

only map fitting categories



Thank you

Slides:

https://tinyurl.com/PARADISECvagueness

Schwiertz, Gabriele, Rau, Felix, and Majka, Nicole 2021. "Vagueness in Metadata" http://doi.org/10.5281/zenodo.4506936

Contact (Twitter):

@fxru (Felix Rau)



References

- Alexopoulos, P. (2020). Semantic Modeling for Data. O'Reilly: Sebastopol.
- DataCite Metadata Working Group. (2019). DataCite Metadata Schema
 Documentation for the Publication and Citation of Research Data. Version 4.3.
 DataCite e.V.
- Dickgießer, S. (2009). Metadaten-Schemata in der Datenbank für Gesprochenes Deutsch (DGD 2.0). Institut für Deutsche Sprache Mannheim.
- ISLE Metadata Initiative. (2003). Metadata Elements for Session Descriptions. Version 3.0.4.
- Rau, F. (2018). Basic Language Archive Metadata.
 https://github.com/fxru/blam-metadata.
- schema.org. https://schema.org/



References

- Simons, G., Bird, S., Spanne, J. (2008). OLAC Metadata Usage Guidelines.
- Sorensen, R. (2018). "Vagueness." In The Stanford Encyclopedia of Philosophy, edited by Edward N. Zalta, Summer 2018. Metaphysics Research Lab, Stanford University.

https://plato.stanford.edu/archives/sum2018/entries/vagueness/.

