

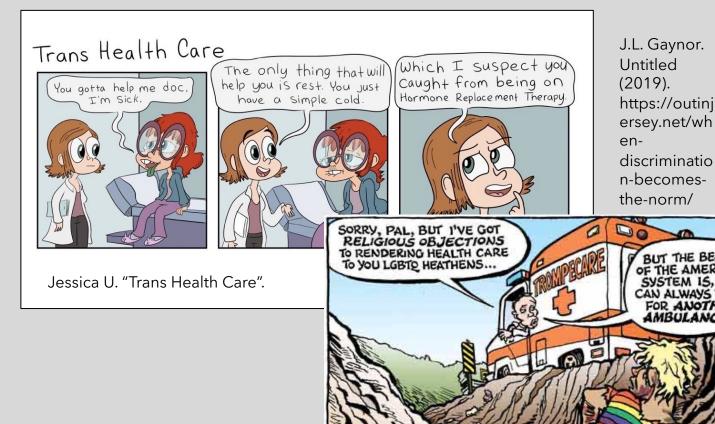
About Me

- Postdoctoral fellow at Yale University.
- Thesis focused on the Gender, Sex, and Sexual Orientation (GSSO) ontology, a vocabulary of over 14,000 LGBTQIA+related terms (part of the OBO Foundry, available here: http://www.ontobee.org/ontology/GSSO).
- Consultant for Canada Health Infoway, DICOM, HL7, Mayo Clinic, Merck, NAS, OutHistory, Queensland Health, and SNOMED CT.
- Board member at Homosaurus, the Trans Metadata Collective, and AMIA Inclusive Language Guidelines Task Force.



LGBTQIA+ Language and Health Care

- Linguistic stigmatization
- Language barriers
- Verbal abuse
- Perceived and actual languagebased discrimination
- Slurs
- Former and current pathologizing and medicalizing language
- Contemporary versus noncontemporary terminologies



LGBTQIA+ Language and Health Care

Snelgrove JW, Jasudavisius AM, Rowe BW, et al. "Completely outat-sea" with "twogender medicine": a qualitative analysis of physician-side barriers to providing healthcare for transgender patients. BMC Health Serv Res 2012;12:110. doi:10.1186/1472 -6963-12-110 Powell A. The problems with LGBTQ health 2018.https://news .harvard.edu/gaze tte/story/2018/03/ health-careproviders-needbetterunderstanding-of-Igbtq-patients-

harvard-forumsays/ (accessed

12 Nov 2020).

[D]espite trying to find ways to improve my expertise, I just didn't know where to go or who to talk to, or where to get the information [about trans people], and I felt really bad because some of my initial attempts to help these people—I sent them to people I wish I hadn't sent them to.

-Anonymous Clinician (2012)

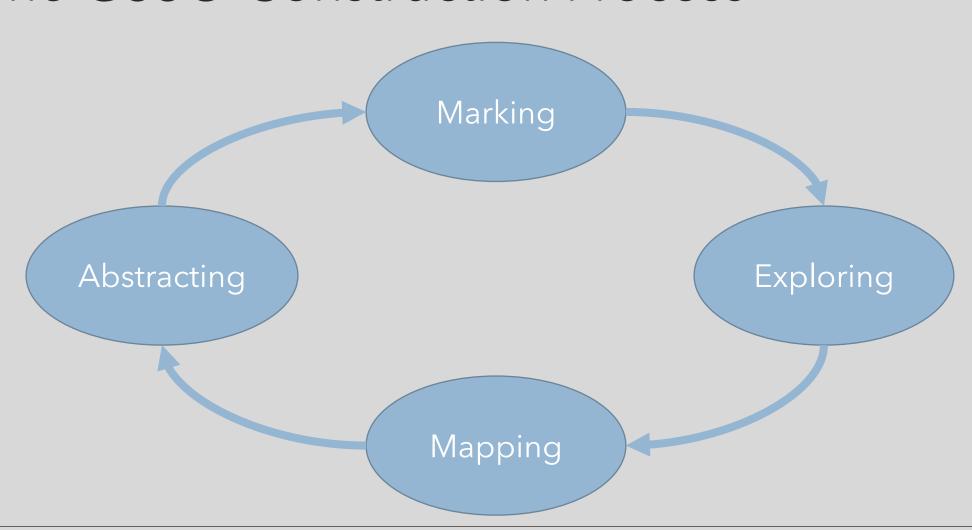
The biggest challenge is that the health care system is woefully unprepared to take appropriate care of LGBTQ people... It's a dawning idea that needs to gain traction, that there's also a whole field of sexual-gender minority health that providers need to have an understanding of.

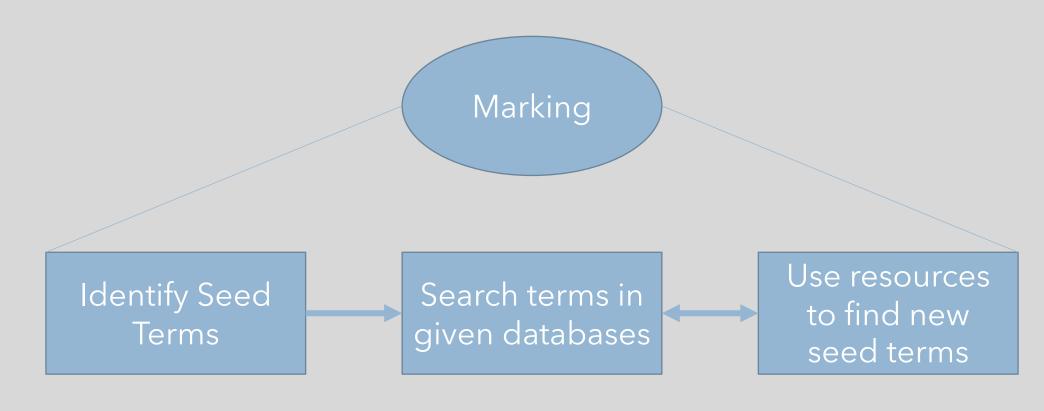
-Kenneth Mayer, Fenway Institute (2018)



Introducing the GSSO

- The Gender, Sex, and Sexual Orientation (GSSO)
 ontology is the first transdisciplinary ontology,
 including LGBTQ+ slang and medical terms side-by side.
- Includes thousands of unique and individually curated terms not present in any other vocabulary systems.
- The GSSO is the first ontology to include a "drilldown" methodology for easy access to data sources.
- The GSSO is more accurate, complete, concise, adaptable, clear, computationally efficient, and consistent than existing platforms

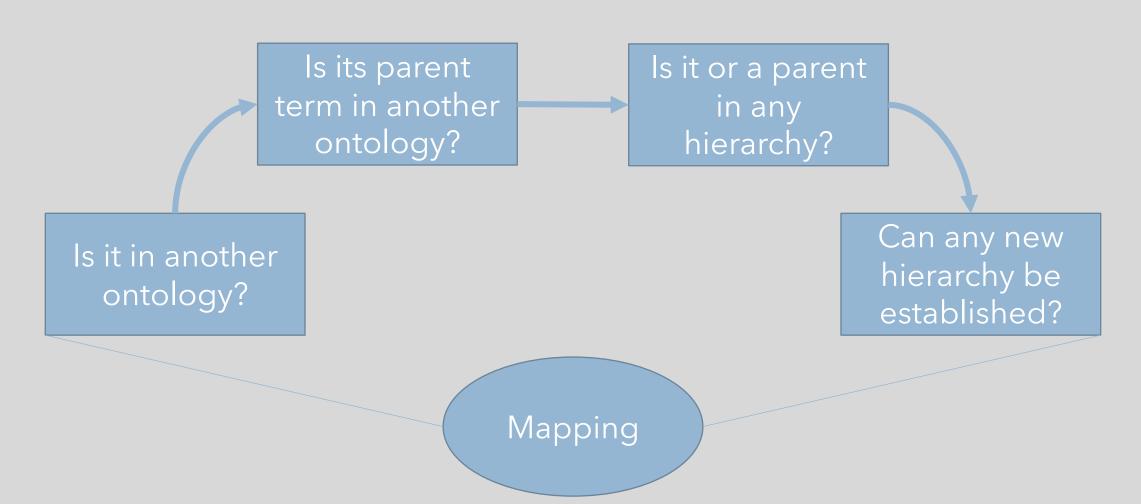


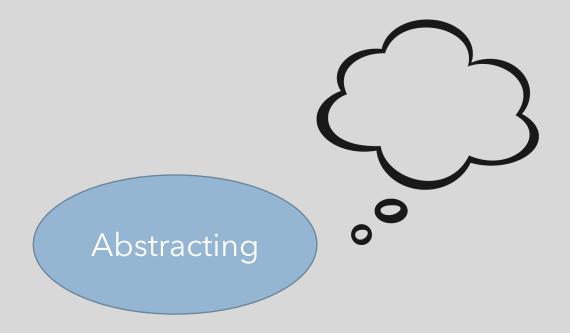


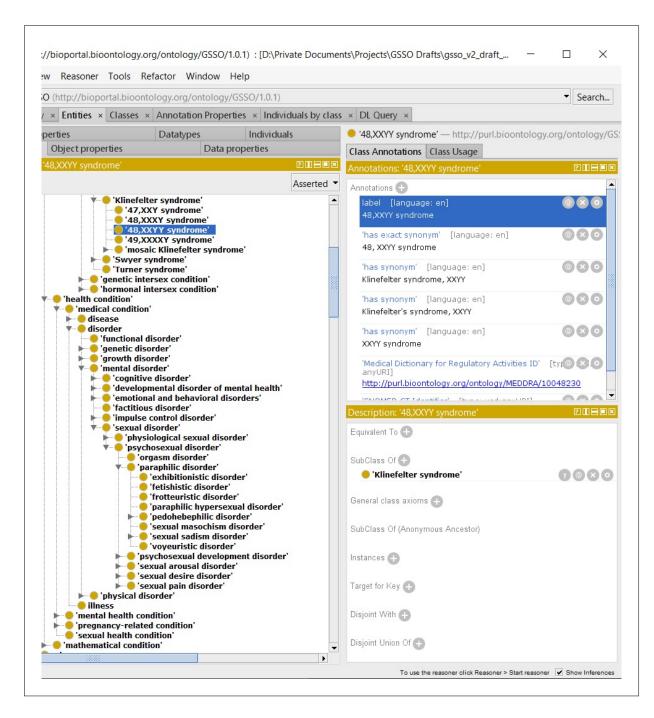
Determine relevant databases

Determine relevant search results

Exploring







Protégé

- Free
- Open-source
- Supports multiple ontology formats
- Supports W3C standards
- Hundreds of plugins
- Active user community

Releases

Version 1.0 (June 2019)

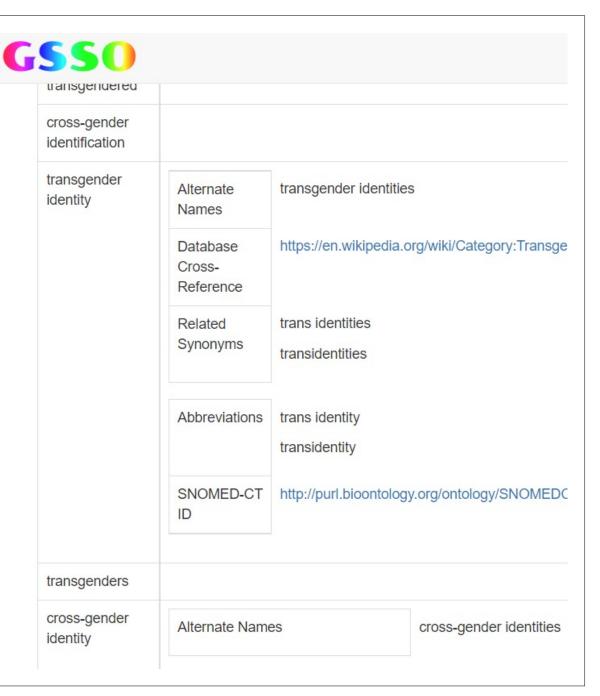
- Static website served in JavaScript with simple search interface only
- 6,250 classes and 0 instances
- 1,063 definitions
- 1,416 database cross-references
- 2.6 average number of annotations

Version 2.0 (June 2020)

- Dynamic model-view-controller (MVC)
 Angular application with complex search functions and additional features
- 7,121 classes and 2,939 instances
- 7,121 definitions
- **14,193** database cross-references
- 7.4 average number of annotations

Ontology Name	Version 1.0	Version 2.0
ChEBI	4	213
DO	62	193
FMA	43	327
GO	32	152
Homosaurus	NM	430
HPO	30	137
ICD-9-CM / ICD-10-CM	58	362
LCC / LCSH	NM	1,276
MedDRA	129	595
MeSH	261	904
NCIT	261	1,034
Totals	1,416	14,193

EMPHASIZING INTEROPERABILITY: DATA CROSSREFERENCES



Emphasizing Interoperability: Not Rebuilding the Wheel

- All properties are recruited from existing platforms, including RDFS, DCMI, Wikidata, and the Gene Ontology, among others.
- We focused on connections between the most consistently and heavily accessed vocabularies and ontologies in health care-related fields, using NCBO BioPortal, OntoBee, and the EMBL-EBI Ontology Lookup Service (OLS).