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Using Linked Data to Mitigate Colonial Subject Bias

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Using Linked Data to Mitigate Colonial Subject Bias

"... the challenge is to use one culture's words to describe another culture's concepts; if we lack the concept it is unlikely we have fashioned the words necessary to convey it accurately."

Rupert Ross, *Dancing With a Ghost*.

F. Tim Knight

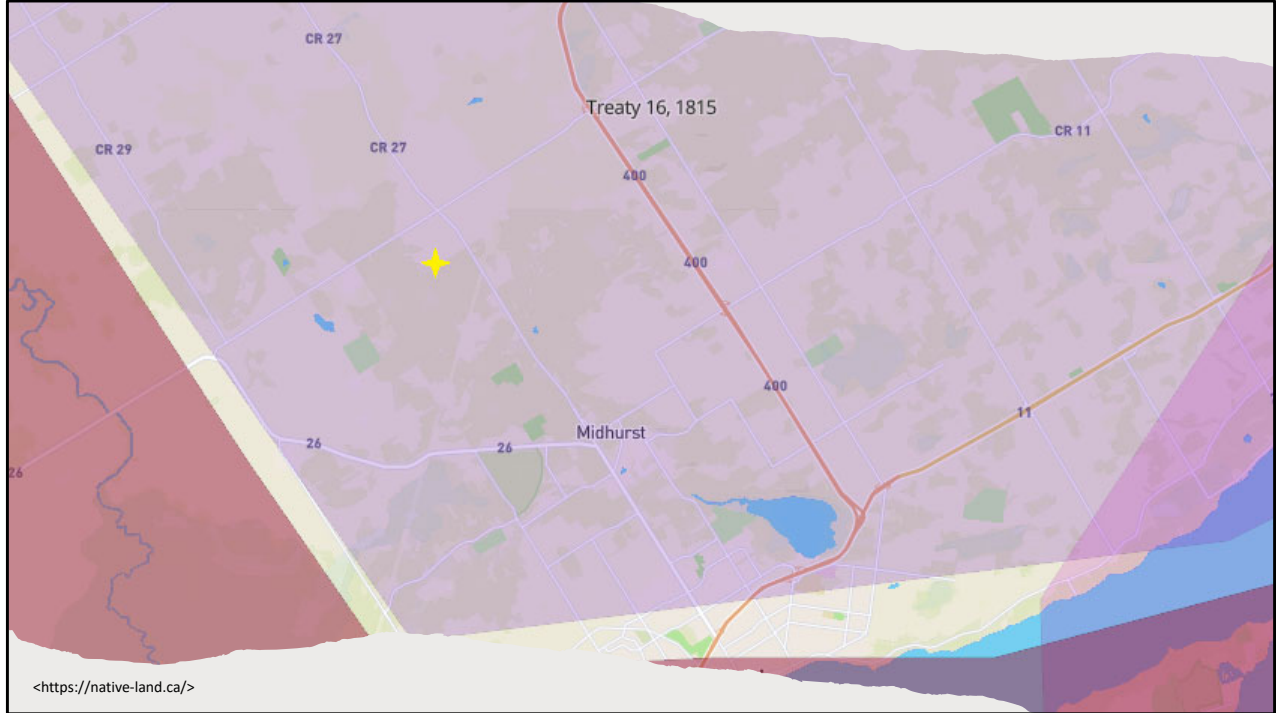
Associate Librarian

Osgoode Hall Law School Library, York University



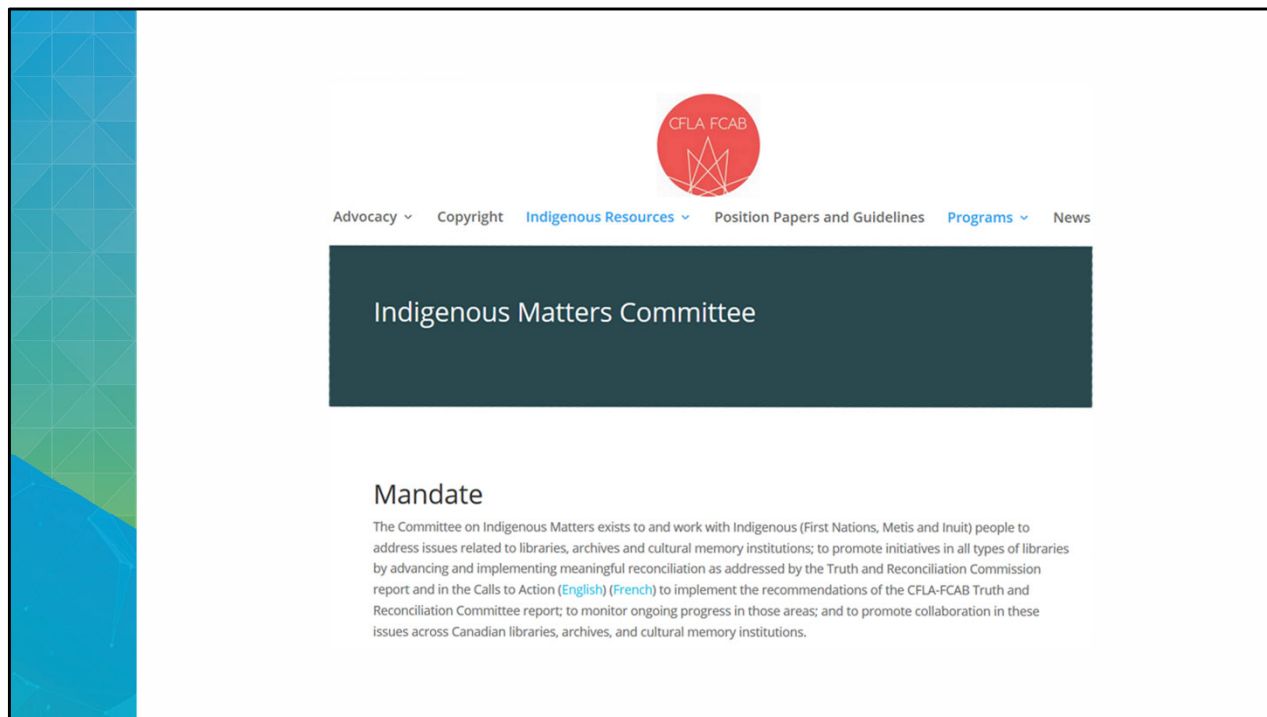
I wanted to start with this quote by the Crown Attorney Rupert Ross who worked for many years with remote Indigenous communities in northern Ontario, Canada. He explained that one of the challenges he experienced was trying to use “one culture’s words to describe another culture’s concepts; if we lack the concept it is unlikely we have fashioned the words necessary to convey it accurately” (1992, 64).

This is something I try to keep in mind when thinking about colonial subject bias.



My name is Tim Knight, I've been a cataloguer for thirty years or so and I'm Head of Technical Services at the Osgoode Hall Law School at York University in Toronto, Canada. I'm a settler with Irish and English heritage and my family has lived in what is now known as Canada for 5 or 6 generations.

I acknowledge that I have had the privilege and opportunity to be a guest on the lands of many Indigenous people. I currently live and work from home on Lake Simcoe Treaty No. 16 territory which is the land of the Chippewas of Georgina Island First Nation, the Chippewas of Rama First Nation, the Beausoleil First Nation as well as members of the Métis Nation of Ontario in region 7.



I've been involved with the Canadian Federation of Library Associations' Indigenous Matters Committee for a few of years and under the guidance and leadership of Camille Callison helped prepare the First Nations, Metis, Inuit and Indigenous Ontology which was launched in 2019. I continue to work with the Joint Working Group on Subject Headings and Classification to improve access in library catalogues.

TRUTH AND RECONCILIATION REPORT AND RECOMMENDATIONS

RESPECTFULLY SUBMITTED TO THE CFLA-FCAB BOARD OF DIRECTORS
BY CAMILLE CALLISON, CHAIR OF THE CFLA-FCAB TRUTH & RECONCILIATION COMMITTEE

Recommendations

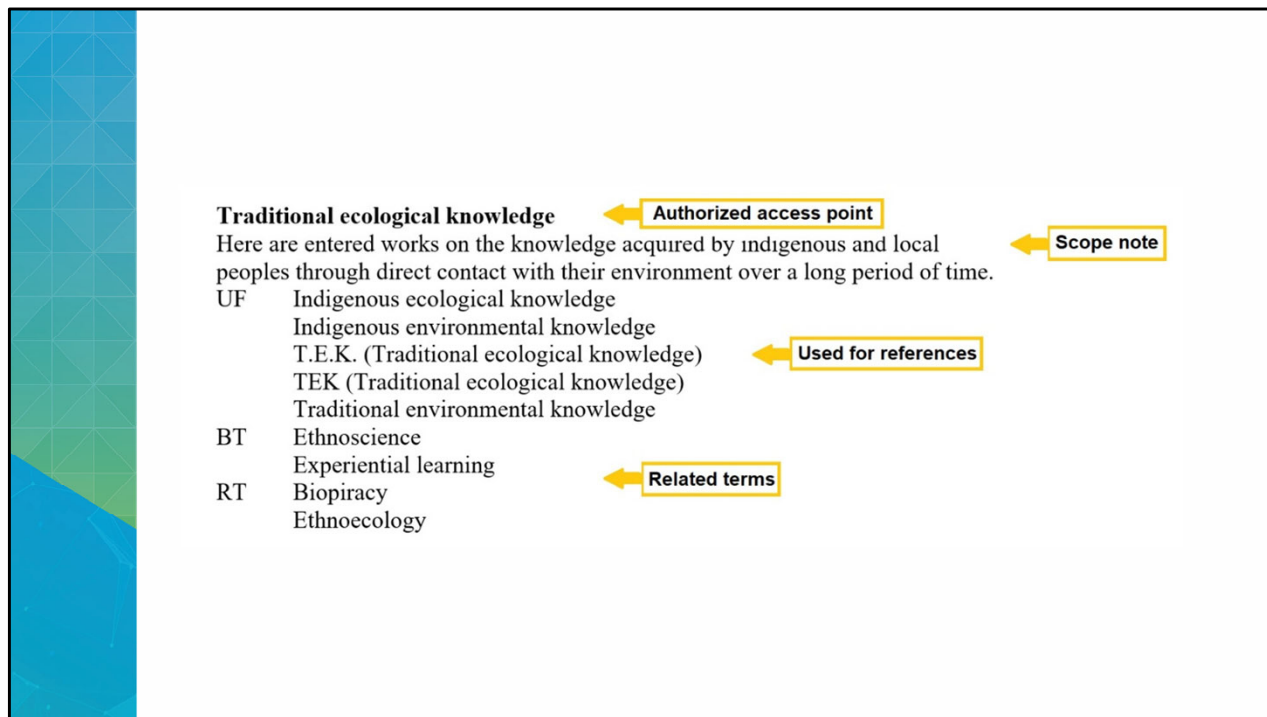
5. Decolonize Access and Classification by addressing the structural biases in existing schemes of knowledge organization and information retrieval arising from colonialism by committing to integrating Indigenous epistemologies into cataloguing praxis and knowledge management;

Today I will talk about an idea inspired by that work and the *Truth and Reconciliation Report and Recommendations* released by the Canadian Federation of Library Associations in April 2017. This report reflected on the earlier work of the Truth and Reconciliation Commission of Canada and provided several recommendations for libraries to consider. Recommendation number five called for the “decolonization of library access and classification” and proposed approaching this by “addressing the structural biases in existing schemes of knowledge organization and information retrieval [that arise] from colonialism by committing to integrating Indigenous epistemologies into cataloguing praxis and knowledge management” (Callison 2017, 6).

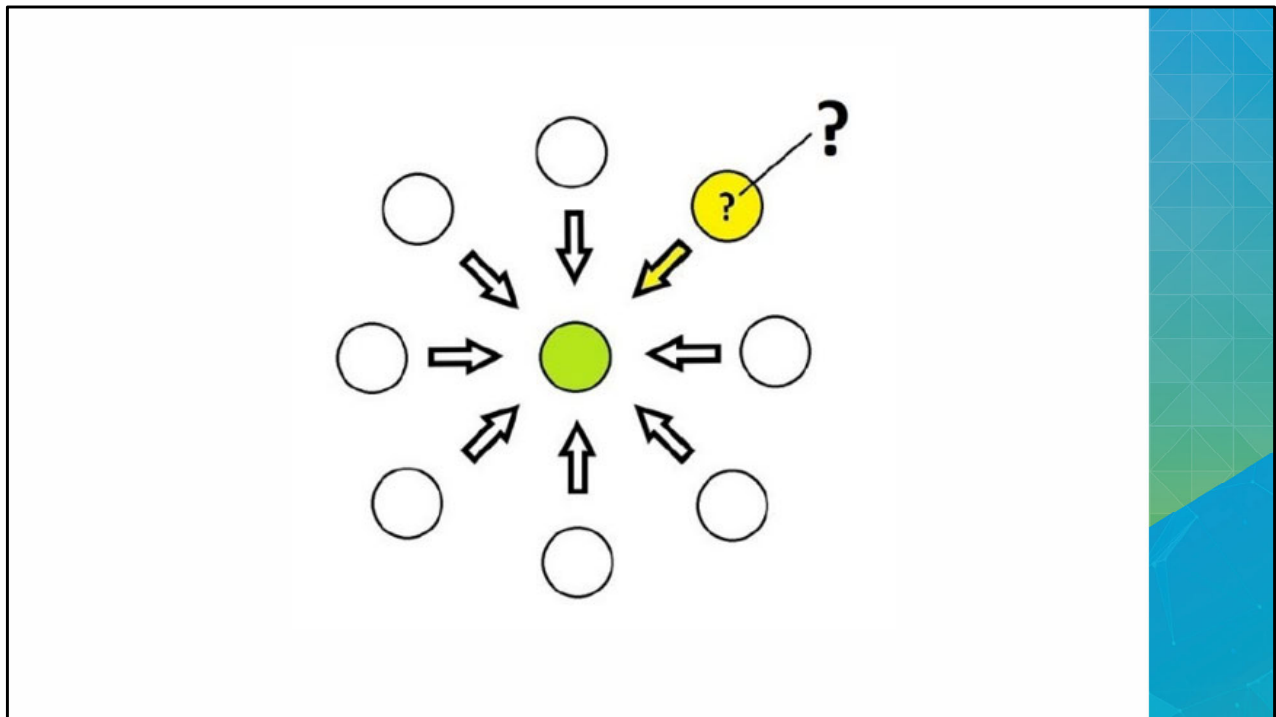


Realizing this recommendation will be difficult on many levels but perhaps the fundamental challenge is that libraries themselves are colonial institutions. The library is an embodiment of the colonial intent to “impose a new order” (Smith 2012, 72). There will therefore always be the “potential for intellectual colonization” (Olson 1999, 108) where the practice of cataloguing and classification itself is a technique of colonization (Duarte and Belard-Lewis 2015, 682). It is therefore unlikely that there *are* any modifications capable of transforming contemporary cataloguing praxis into anything other than a colonial process.

However, at least with subject headings, there may be a workaround which I will talk about today.

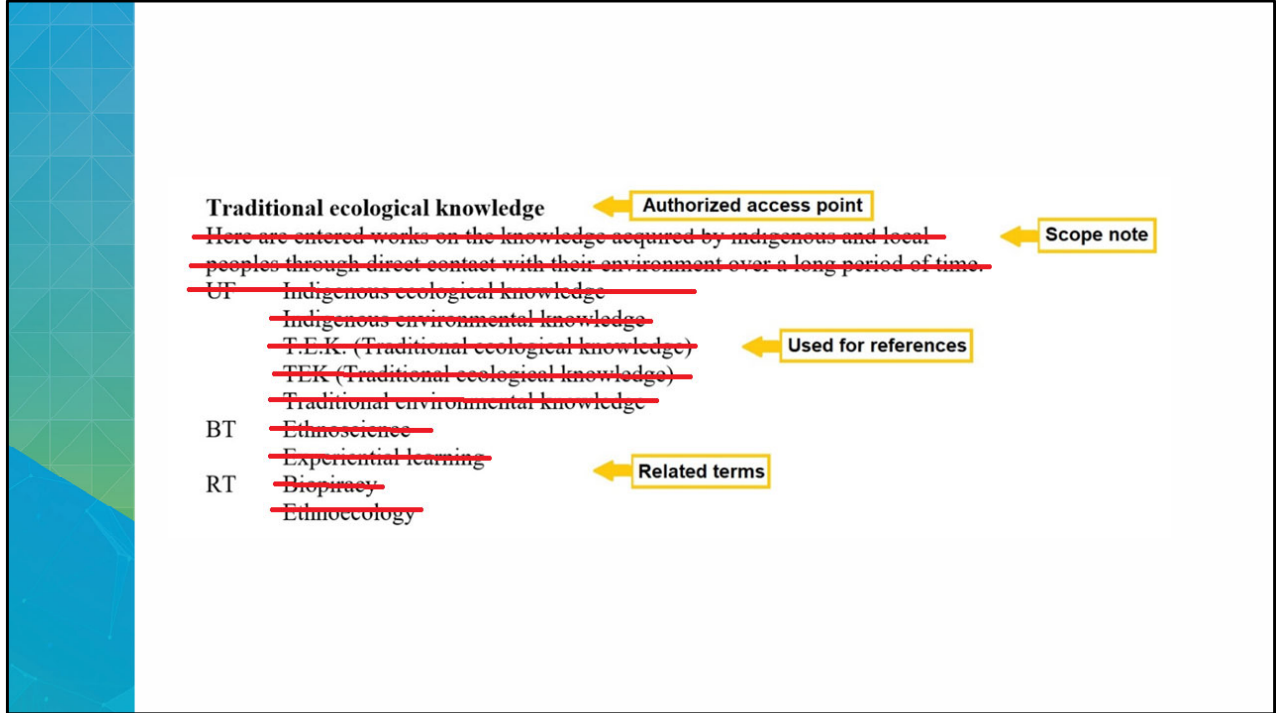


Take for example a typical Library of Congress subject authority record like this one. There’s an ‘authorized access point’ in other words “the authority”; there are a few ‘used for references’, some ‘related terms’ and a ‘scope note.’




As you know, authority records are meant to function as a guide for library catalogue users directing them from an unauthorized heading to an authorized one. In this illustration the authorized or preferred term is represented by the green circle in the middle. The user's query is the large question mark which, if it matches one of the used for references, will direct the user to use the authorized heading.

However, there are a couple of problems with this scenario.



First, contemporary library service platforms do not provide access to any of this information in the authority record. So there *is* no opportunity to match a user’s query to one of the used for terms, or perhaps to one of the related terms that would help with navigation through the subject hierarchy. Nor can they gain any relevant context from the information provided in the scope note.



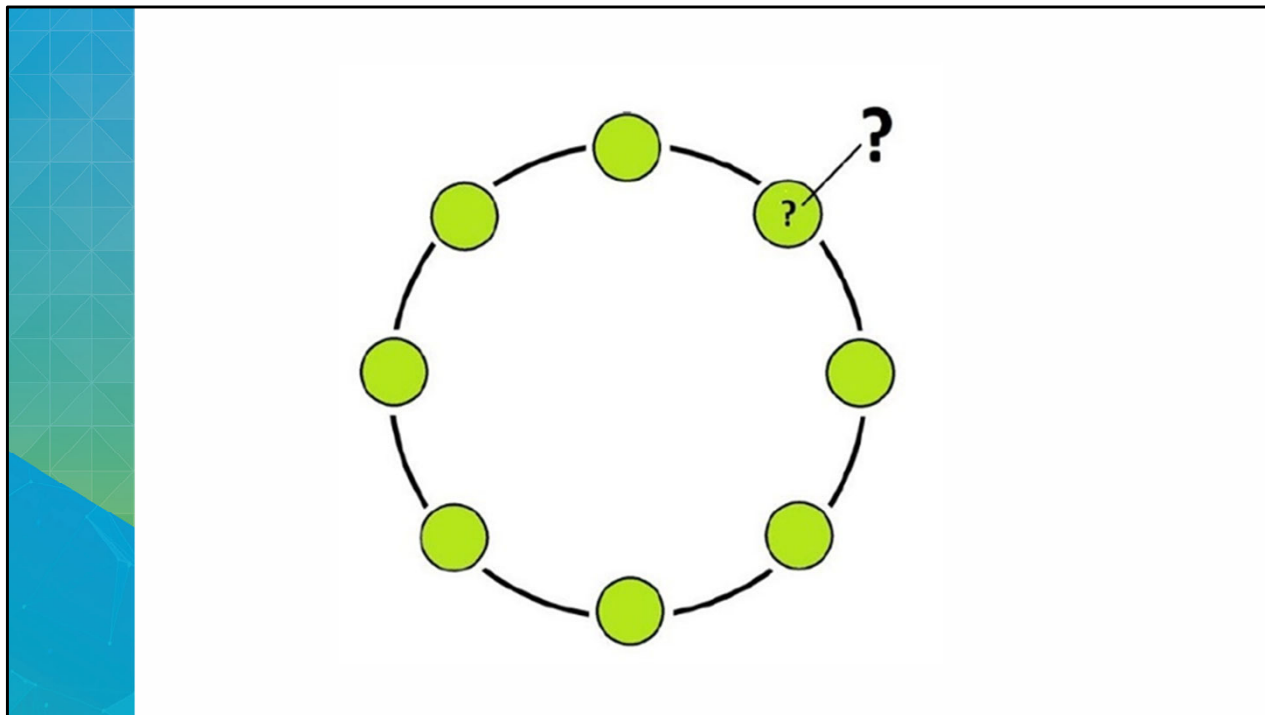
“Perhaps the most crucial issue one should realize about eurocentric publications is the support and encouragement they receive from government institutions and the media to fulfill their role as falsifiers of Aboriginal history. The eurocentric power structure, made of governments, universities, and the media, clearly believes that it is in its best interest to not only sustain but deepen Aboriginal oppression. When the Establishment attacks Native people, it encourages racism and eurocentricism” (Adams 1995, 32).

And secondly, the authorized access point is derived, by and large, from a Eurocentric, colonial literature which, as Harry Adams wrote in his book “A Tortured People” is a literature that “not only sustains but deepens Aboriginal oppression.”

What I will suggest is a different approach, one that does not impose an authority, but offers a “dynamic space” (Olson 2000, 66) where meaning, and the relationships that link users to information resources, could instead be actively negotiated.



The first step would be to abandon the “record-centric” (Alemu et al. 2012; Smiraglia 2009) view of bibliographic and authority data. This view has been held over from 19th century cataloguing practices and is reinforced today by the MARC record which perpetuates, as Donna Ellen Frederick characterized, an “imaginative barrier for some librarians” (Frederick 2017, 6). Instead the library community would do better to think of the “disaggregation” and then “re-aggregation” of library data (Dunsire 2008) and focus on data elements rather than the creation of records.



Controlled vocabularies or “subject languages” (Svenonius 2000), for example, could be reimaged as a collection of terms that I like to think of as a ‘term circle’ (Knight 2020). In a term circle each term represents the concept equally. There is no single term considered to be preferred or more important than any other. And, rather than using literary warrant to derive these terms, they might instead be established in a collaborative way through a combination of professional and library user perspectives.

When a catalogue user searches the information system their search might again match on one of the terms in the term circle. However, instead of directing the user to a single preferred term all of the available terms in the term circle are considered a match and used to retrieve the set of relevant resources.

SKOS ENCODED IN RDF/XML

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

This might be accomplished by using the Simple Knowledge Organization System, or SKOS, which has become a popular vehicle for expressing controlled vocabularies as linked data. SKOS is a particularly good match for Library of Congress Subject Headings (LCSH) because it maps cleanly to the MARC subject authority format.

SKOS ENCODED IN RDF/XML

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

SKOS uses a mix of human readable content, for example text strings in the *prefLabel* ...

SKOS ENCODED IN RDF/XML

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
      peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

... text strings in the the *altLabel*, ...

SKOS ENCODED IN RDF/XML

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

... or text strings in the *note* field.

SKOS ENCODED IN RDF/XML

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

SKOS also uses Uniform Resource Identifiers or URIs which are actionable by machines. Seen here for example in the *rdf:about* field is the URI to the LCSH subject authority ...

SKOS ENCODED IN RDF/XML

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

... and there are URIs provided in the *rdf:resource* fields to related authorities.

SKOS ENCODED IN RDF/XML

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

RDF triple data statements are generated by associating the unique *rdf:about* field with the other data elements used to identify the concept.

EXAMPLES OF TRIPLES

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

```
http://id.loc.gov/authorities/subjects/sh2003006652 has the prefLabel
Traditional ecological knowledge
```

Here, for example, is a triple that might be disaggregated from the above code.

The subject heading with URI ending in 6652 *has the preferred label* 'Traditional ecological knowledge.'

EXAMPLES OF TRIPLES

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

```
http://id.loc.gov/authorities/subjects/sh2003006652 is related to
http://id.loc.gov/authorities/subjects/sh2008000307
```

Or here's another.

The subject heading with URI ending in 6652 *is related to* the subject heading with URI ending in 0307.

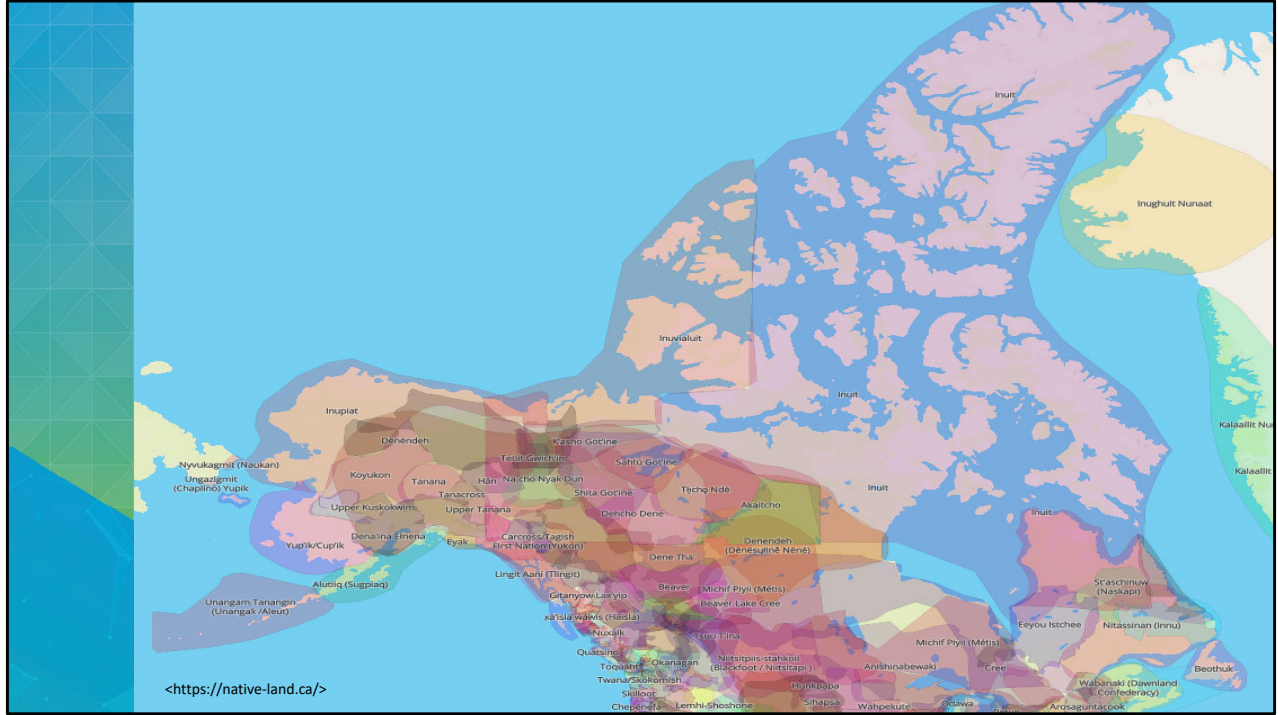
SKOS ENCODED IN RDF/XML

```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh2003006652">
    <skos:prefLabel xml:lang="en">Traditional ecological knowledge</skos:prefLabel>
    <skos:altLabel xml:lang="en">Indigenous ecological knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">Indigenous environmental knowledge</skos:altLabel>
    <skos:altLabel xml:lang="en">T.E.K. (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">TEK (Traditional ecological knowledge)</skos:altLabel>
    <skos:altLabel xml:lang="en">Traditional environmental knowledge</skos:altLabel>
    <skos:note>Here are entered works on the knowledge acquired by indigenous and local
    peoples through direct contact with their environment over a long period of time.
    </skos:note>
    <skos:inScheme rdf:resource="http://id.loc.gov/authorities/subjects"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh85046437"/>
    <skos:broader rdf:resource="http://id.loc.gov/authorities/subjects/sh96010624"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2008000307"/>
    <skos:related rdf:resource="http://id.loc.gov/authorities/subjects/sh2001000104"/>
  </rdf:Description>
</rdf:RDF>
```

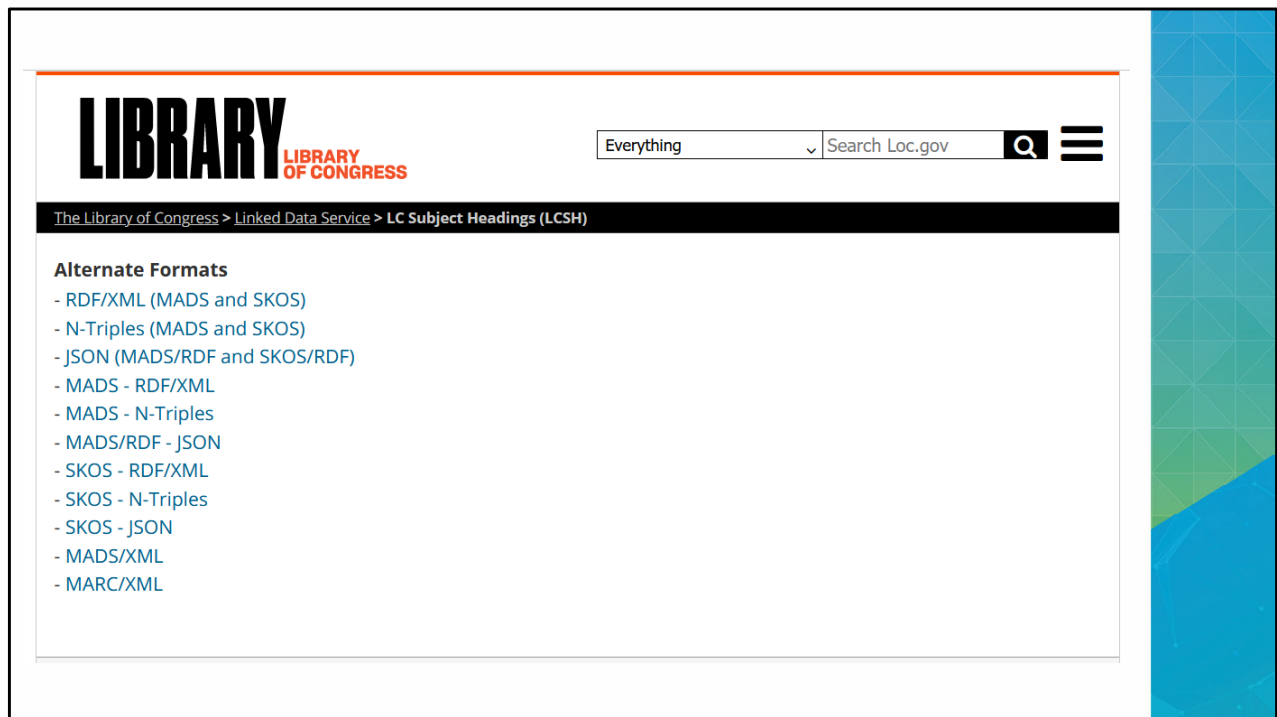
One important feature of SKOS is the potential to facilitate multilingual displays by assigning preferred labels in different languages. Here, for example, the preferred label is in ‘English’ as expressed to the machine with the XML language attribute *xml:lang* with the ISO language code ‘en’ for English.

Corey Harper and Barbara Tillett touched on this as a way that subject authorities might be shared globally using the “geographic context of the system” to trigger an appropriate language heading, or allowing an “end-user to select the language and script used to display information about entities irrespective of the system’s default preference” (Harper and Tillett 2007, 14).

Could something similar be used to express concepts respectfully and in a “good way” (Ball and Janyst 2008) using terms preferred by Indigenous communities?



In a survey distributed at five Indigenous-related conferences and gatherings in Canada and the U.S. Deborah Lee found there was no consensus when it came to selecting a term that might replace the LCSH subject heading ‘Indians of North America’. She concluded that the choice of a preferred term would therefore need to be “localized based on the users of each particular library” (Lee 2011, 1).



It's clear that mustering the resources required for individual libraries to research, consult, and establish new alternative subject headings would be challenging at best. And switching costs to move away from LCSH would be enormous on many levels. However, given that the Library of Congress now provides LCSH in a variety of linked data formats it should be possible to develop a hybrid knowledge organization system that builds on and connects to the existing, albeit flawed, LCSH infrastructure (Spero 2008). By using SKOS in combination with a term circle approach to subject headings this localization could be achieved by associating terms that Indigenous communities prefer to use along with those provided by the Library of Congress.

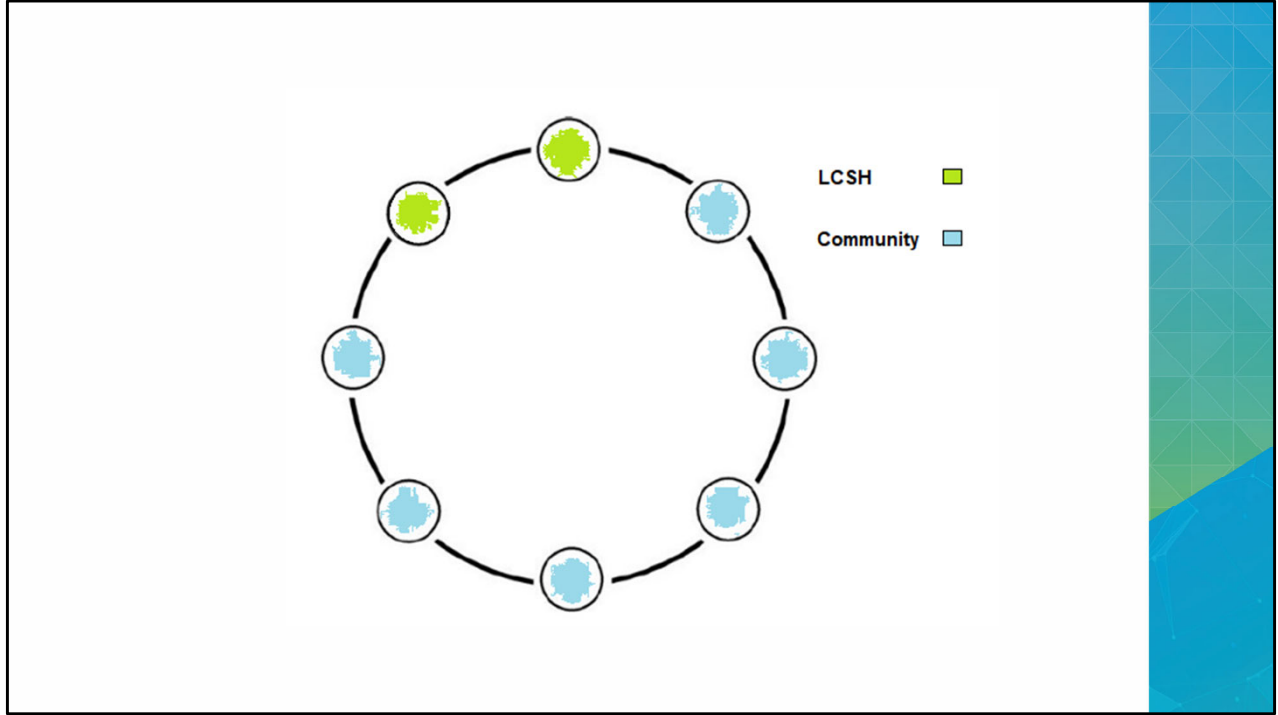
An XML attribute representing different worldviews could be established making it possible to identify Indigenous worldviews and mitigate colonial bias in LCSH.

THE WORLDVIEW XML ATTRIBUTE

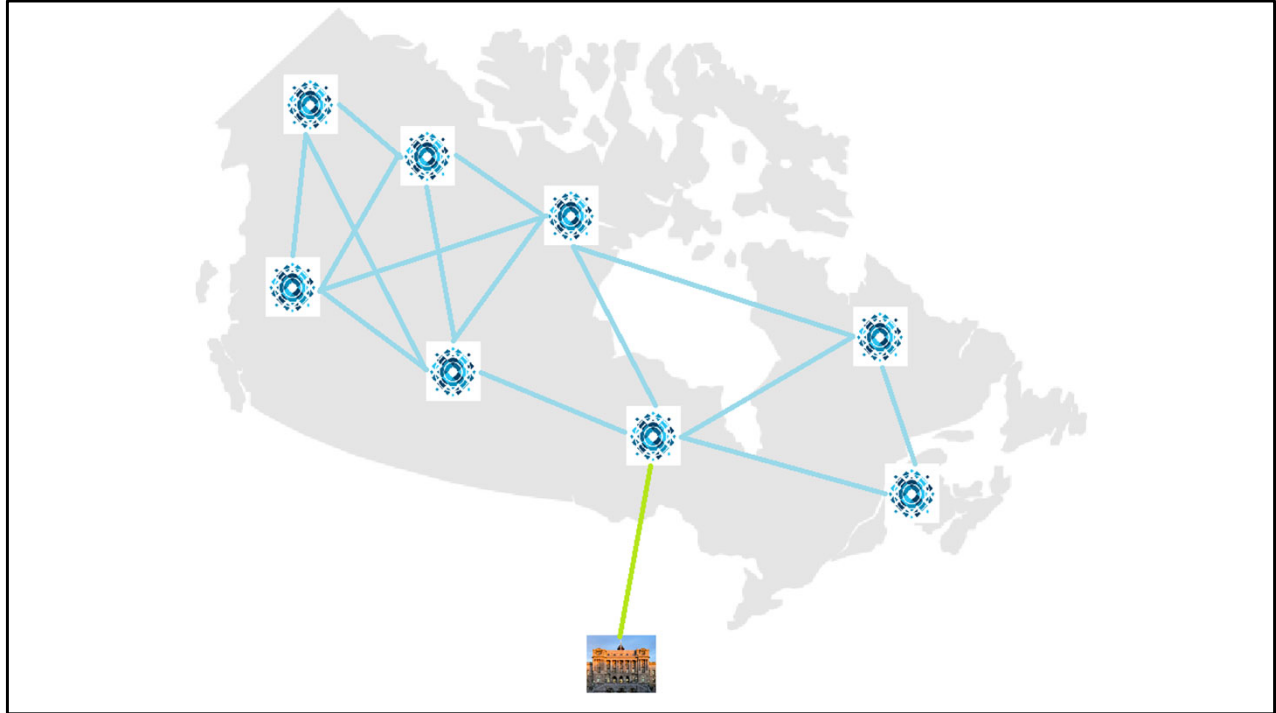
```
<rdf:RDF>
  <rdf:Description rdf:about="http://id.loc.gov/authorities/subjects/sh85092455">
    <skos:prefLabel xml:lang="en" xml:worldview="Western">North America</skos:prefLabel>
    <skos:prefLabel xml:lang="en" xml:worldview="Anishinaabe">Turtle Island</skos:prefLabel>
    <skos:prefLabel xml:lang="en" xml:worldview="Haudenosaunee">Turtle Island
  </skos:prefLabel>
  </rdf:Description>
</rdf:RDF>
```

This process would be similar to presenting multilingual preferred labels based on geographic location or user preference. ‘Turtle Island’, for example, appears in the creation stories of some Indigenous communities and is a term used to describe North America (Lee 2011, 2).

Shown here is an example of a simple LCSH authority record for North America expressed as a term circle and encoded in SKOS RDF/XML. An XML attribute called *xml:worldview* has been applied to the preferred labels. There are three SKOS preferred labels: ‘Western’ has been added as the worldview value for the preferred label coming from the original LCSH authority. And two additional preferred labels using ‘Turtle Island’ have been added with worldview attributes for the ‘Anishinaabe’ and ‘Haudenosaunee’ communities. Like the multilingual language labels mentioned earlier, these preferred labels would appear for anyone who prefers to see labels expressing the worldview for their Indigenous community.



In that way a term circle combining LCSH terminology, and terminology supplied by members of Indigenous communities, could be presented. This could then be used to both display respectful labels *and* search for relevant resources in the information retrieval system.

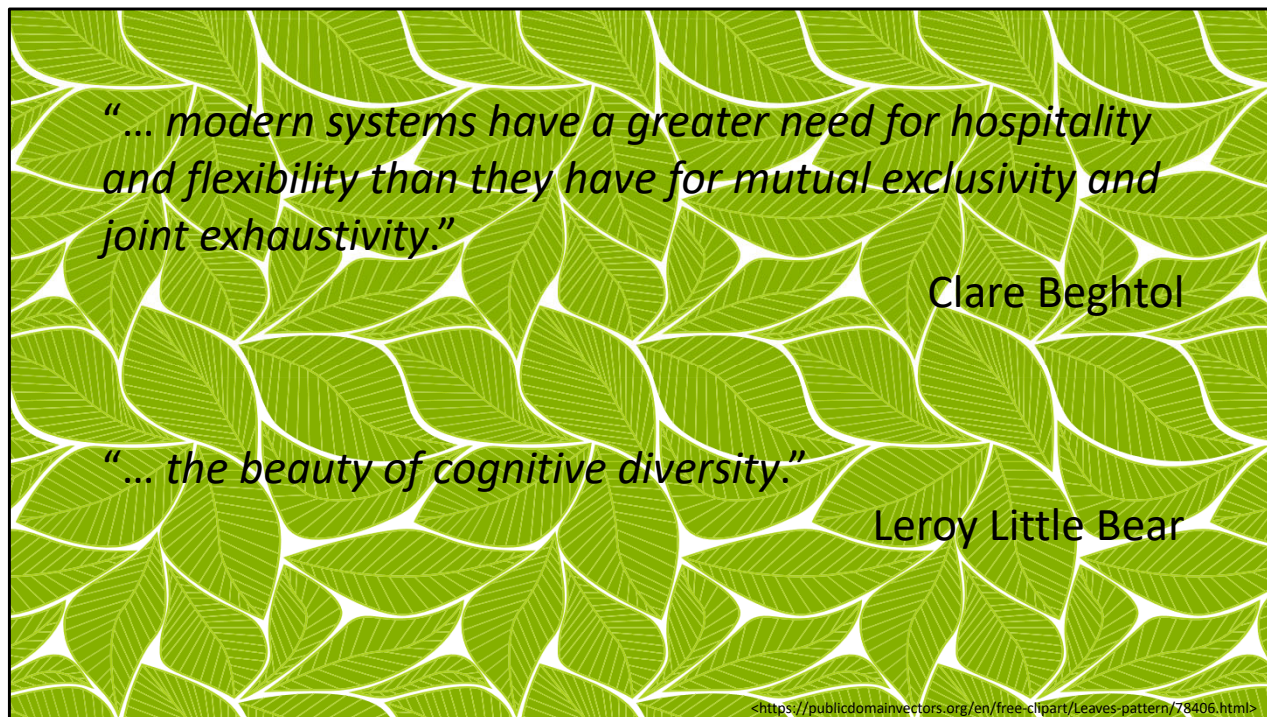


From a technical perspective pilot projects could be built using the Wikibase open-source software. Wikibase is considered particularly useful when “data and data models are highly specialized or there are considerations that require greater control over the data” (Allison-Cassin et al. 2019, 38). These are both important aspects of Indigenous led subject language curation. Wikibase is also the software used to power Wikidata and a proven choice for providing the necessary infrastructure for multiple instances of community created subject languages (Allison-Cassin 2018; Allison-Cassin et al. 2019; Miller 2018). Once established, these pilot projects could serve individual Indigenous communities or they could be stitched together to create a network of Indigenous subject headings.



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Placing control into the hands of Indigenous communities not only provides a “cognitively just” (Moulaison Sandy and Bossaller 2017) approach to subject access it also begins to address the Indigenous principles of ownership, control, access and possession and can facilitate control over data creation processes and how and when information can be used.



Classification schemes and subject languages are interfaces that attempt to connect library users to information and resources. However, as Clare Begthol once observed, “modern systems have a greater need for hospitality and flexibility than they have for mutual exclusivity and joint exhaustivity” (1998, 8). The model proposed in this paper provides a hospitable and collaborative approach to subject access. Rather than imposing an authoritative, colonial view of the world, the term circle encourages flexibility, an active role for library users, and supports and embraces what Leroy Little Bear called the “beauty of cognitive diversity” (Little Bear 2000, 80).

Thank you for your attention!

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Thank you for your attention.

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