Big Ten Academic Alliance Geospatial Information Network
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Diverse Collections Working Group Summary Report

December 2021

Executive Summary

- The purpose of the Diverse Collections Working Group was to define and assess diversity in our current geoportal collections and make recommendations for future collection development activities prioritizing diversity.
- Working group members carried out a series of short-term projects focused on assessing map languages, reviewing geospatial data tags to support subject description and search, and creating educational resources related to critical cartography and geospatial data ethics.
- Documentation, preliminary outcomes, and recommendations associated with these short-term projects constitute a primary deliverable of the working group and can serve as a foundation for advancing this work through our existing project team and committee structures.
- The main recommendation of the working group is that BTAA Geospatial Information Network standing committees and future working groups articulate at least one annual goal aimed at advancing diversity, equity, inclusion, and accessibility through geoportal activities and content.

Charge

The Diverse Collections Working Group (hereafter referred to as DCWG) was charged in October 2020 by the Collection Development Committee. Group membership was finalized in December with the group's first meeting occurring in January 2021.

An important motivator in charging the DCWG was a line in the collection development policy, in which it is noted that we "aspire to collect and provide access to geospatial resources that represent diverse perspectives, abilities, and experience levels." We recognized that the degree to which we are meeting this aim or prioritizing diversity in our geoportal collection development decisions was not well known.

At its outset, the purpose of the DCWG was to:

1. Identify a process for defining and assessing diversity in our current geoportal collections, and carry out that assessment
2. Make recommendations for how diversity can be more purposefully considered in our future collection development

Group Membership

- Jay Bowen (Iowa)
- Danny Dotson (Ohio State)
- Cathy Hodge (Iowa)
- Melinda Kernik (Minnesota)
- Theresa Quill (Indiana)
- Josh Sadvari (lead; Ohio State)
- Cecilia Smith (Chicago)

Process

The DCWG conducted nine virtual meetings between January - December 2021. In our early meetings, we brainstormed questions and ideas for the group to consider and their relation to our charge. A guiding question that influenced much of the rest of our work was “what makes a collection of maps and geospatial data diverse?”.

Item characteristics that we identified as ways to represent or enhance the diversity of our geoportal collections and associated resources included:

1. Coverage (spatial/temporal)
2. Countries of origin
3. Creator identities
4. Languages
5. Subject matter
6. Content levels (e.g., for intended audience of educational resources)

Rather than undertake a sweeping assessment of all items available in the geoportal, DCWG members brainstormed and scoped short-term projects to explore one or more of these aspects (and possible connections to other project team and committee activities) in greater detail. We acknowledge that this approach limited our ability to fully meet the first purpose for the group as noted in the charge (i.e., to carry out a diversity assessment of current geoportal collections), but we also feel that it positioned us to better address the second and more forward-focused purpose of the group (i.e., to make recommendations for future collection development activities).

The following section includes brief summaries for each of these short-term projects, as well as some preliminary outcomes and possible next steps.

Project Summaries and Preliminary Outcomes

1) Map Languages (Danny Dotson)

BTAA Geospatial Information Network members from each participating institution shared information about the languages represented across our cataloged print map collections. Unsurprisingly, out of approximately 1.7 million maps in this sample, over 85% are in English. However, this project can help us to identify instances in which our institutions may hold distinctive content based on the relative rarity of maps in particular languages, as well as possible collection strengths where institutions hold a relatively high number of maps in a given language. Both of these cases are worth further examination as candidates for potential local or collective scanning projects.

Language is one aspect of a diverse map collection that can be a starting point for approaching other intersecting aspects, such as spatial coverage or creator identities (i.e., a non-English language map created by an individual or organization local to the area of interest). It also opens up opportunities for local collaboration (e.g., with area studies colleagues to identify shared opportunities in support of research, teaching, and learning and associated map scanning priorities) and collective collaboration (e.g., shared prioritization for multi-institution scanning projects to increase discovery and access of distinctive non-English language maps).

There are relatively few non-English language maps in the geoportal currently (and these are not easily discoverable due to lack of language search/facet options), so map language provides one avenue to diversify our collections. For the most part, this will require participating institutions to make language a priority for future map scanning projects in ways that align with local collection development, research, and curricular interests. However, it also requires a critical reexamination and revision of our collection development policy, in which we specifically note an emphasis on English language content as a criterion in scoping the geoportal collection.

Possible next steps stemming from this project include:

- Ensuring that language metadata is present and accurate for geoportal records. We are excited that the Metadata Committee has already begun to act on this recommendation, including adding missing language values for 700+ datasets/maps during the December 2021 metadata sprint.
- Ensuring that all maps in participating institutions' catalogs contain language information. Outdated map language MARC codes should be updated.
- Agreeing to a controlled vocabulary for language, such as the one used for MARC records.
- Adding a new language facet to support refinement of geoportal search results based on this item characteristic.

2) Geospatial Data Tags and Subjects

ISO topic categories have historically been used as a standardized vocabulary for creating subject search terms in the geoportal. While ISO topic categories are widely recognized as a thesaurus for geospatial information resources and allow for the creation of subject facets, user testing has shown that these terms are too general to be useful when searching geoportal content. The two projects discussed below are geared toward the idea of possibly using other vocabularies to support search functionality in the geoportal, especially for enhancing discoverability of content on equity and social justice related topics.

a) Content and Format Review for Esri's Racial Equity GIS Hub (Melinda Kernik and Cecilia Smith)

Esri describes the Racial Equity GIS Hub as "an ongoing, continuously expanding resource hub to assist organizations working to address racial inequities." Resources on the Hub site are categorized as applications, data, and articles, and the primary audience appears to be local government and business leaders.

Data layers available through the Racial Equity GIS Hub are authored by Esri or "trusted partners" (e.g. CDC) but may derive from other sources, such as the Census Bureau, philanthropic organizations (e.g., Robert Wood Johnson Foundation), university research centers (e.g., University of Richmond Digital Scholarship Lab), news organizations (e.g., Washington Post), and more. Datasets are assigned into 10 different categories (Climate and Environmental, Criminal Justice, Economic, Education, Elections, Health, Housing, Language, Demographic, and Infrastructure). At the time of review, there were also approximately 200 unique tags associated with these datasets, with examples such as policy, race, at risk, income, vulnerable populations, air quality, food environment, segregation, social justice, and many more. In addition to datasets, the Racial Equity GIS Hub includes many examples of formats not currently included in the geoportal, such as web applications and story maps. In fact, there are nearly twice as many applications found in the Hub compared to datasets, originating from a much wider variety of sources.

Potential next steps highlighted through this project include:

- Using the Racial Equity GIS Hub's categories and tags as a foundation, refine a tag list through user testing to make equity and social justice related content in the geoportal more discoverable and enhance usability of the subject facet. General tags or categories (e.g., "racial justice") could also be used to draw attention to the existence of these data layers as a whole.
- Most of the datasets provided through the Racial Equity for GIS Hub are relatively current and from sources that are national in scope. Efforts among project members to increase resources for racial equity and social justice can focus on data from non-census sources and local sources, as well as historical data. This recommendation is already being acted upon, with an emphasis on possible partnerships with local public libraries and historical societies in discussions and funding applications associated with the next phase of the BTAA Geospatial Information Network's collective efforts.

- Targeted use of web applications, story maps, and dashboards as part of future efforts of the Communications Committee and Education and Outreach group can help to highlight data in context, raising awareness of geoportal resources and their use in projects to advance racial equity and social justice. Examination of these resources for their original sources may also point us to types of organizations not currently emphasized in geoportal collection efforts from which we might harvest metadata.

b) Content and Format Review for Current Data Providers (Josh Sadvari)

This project built on the work described above but with a focus on practices of current data providers in terms of their use of descriptive tags and creation of content in formats not currently harvested into the geoportal.

The starting point for analysis of descriptive tags was a spreadsheet of approximately 14,500 geoportal items harvested from 76 ArcGIS Hub sites. A keyword field was included, listing the descriptive tags for each item. Unique keywords and their frequencies were identified using the Document Terms tool provided by Voyant Tools. After removing all document terms with only one associated record, the dataset was reduced from 9,106 unique terms to 4,687. After additional filtering to remove information discoverable through other geoportal facets (e.g., formal geographic names, creator names, dates) and abbreviations or misspellings, the final sample of unique terms was 2,917. These terms were cross-checked against the list of tags associated with the Racial Equity GIS Hub, and possible alternate terms were identified as well. This process, albeit a subjective one, resulted in a list of approximately 630 terms (including the Racial GIS Equity Hub tags) with possible relevance to equity and social justice datasets. Examples of terms used by current providers that were not represented in the Racial Equity GIS Hub include accessibility, child care, culture, economic development, election map, health care, human trafficking, open space, opioid, police, public service, sustainability, water quality, and many more.

In addition, a sample of 18 current data provider sites representing state, county, and city administrative levels was reviewed for content being disseminated in formats such as web mapping applications, story maps, and dashboards. It was found that approximately 500 web mapping applications were being made available through these providers, but that very few seemed to be directly related to equity and social justice topics. It was also discovered on some ArcGIS Hub sites that web mapping applications were accessible via the main page but with no corresponding item record in the portal, which would pose a logistical hurdle to harvesting such content into the geoportal.

Potential next steps highlighted through this project include:

- Further analysis and refinement of the tag list generated from the current data provider spreadsheet to support user testing for identification of equity and social justice related datasets.
- Based on results of user testing, consider developing a thesaurus of terms that could be used for various purposes including enhancing the subject facet, grouping resources into thematic collections, metadata sprints (e.g., standardizing data provider tags to our

preferred thesaurus), and direct outreach to data providers (e.g., encouraging use of these terms to enhance discoverability through the geoportal).
- Forego prioritizing harvesting of web applications from current data providers, though select examples could be used as part of ongoing Communications Committee and Collection Development and Education Outreach Committee activities.

3) Critical Cartography and Data Ethics Resources (Jay Bowen and Theresa Quill)

Critical cartography is a way of engaging with maps that asserts that maps cannot be neutral, and that traditional cartography reflects and perpetuates power structures; typically reflecting the worldview and priorities of a dominant group. Best stated by Crampton and Krygier (2005), "critical cartography assumes that maps *make* reality as much as they represent it...Maps are active; they actively construct knowledge, they exercise power and they can be a powerful means of promoting social change."

Critical cartography asks creators and readers of maps to critically interrogate maps as they would any other source of information, including by examining potential biases of the creator and data. A goal of this project was to identify and create resources to help mapmakers and readers with this process, resources that could also assist in teaching and researching equity and social justice topics through geospatial data, maps, and mapmaking.

Early outcomes of this work include a critical cartography reading list with resources to support both undergraduate and graduate research and curricular needs. Additionally, as the resources on this list were being explored, a draft ethics statement was prepared in the spirit of the AAG Statement on Professional Ethics, URISA's GIS Code of Ethics, and the many considerations posed by the authors of the collected readings:

Ethics for Establishing and Sustaining Social Justice and Equity through Geospatial Data and Mapping

1. *Promote geospatial data and analysis relevant to diversity, equity, inclusion, and accessibility.*
2. *Address gaps in the availability of certain kinds of geospatial data which prevent efforts to study, analyze, understand, and ameliorate particular injustices.*
3. *Share and prioritize free and open source geospatial data and technology with the aim of extending geospatial technologies and techniques to those missing or underrepresented in relevant professions and fields of study.*
4. *Promote GIS and mapmaking practices that serve, represent, and include underrepresented groups, identities, and classes in the interests of diversity, equity, inclusion, and accessibility.*
5. *Raise critical awareness of how maps, cartographic practices, and geospatial data can be used to threaten or serve underrepresented, vulnerable, or oppressed people, and encourage the critical interpretation and use of existing maps and geospatial data.*

Potential next steps stemming from this project include:

- Creating shared lesson plans and other educational resources using the critical cartography reading list.
- Examining course listings at our institutions for targeted promotion and collaboration with instructors.
- Formalizing an ethical statement and integrating into other BTAA Geospatial Information Network activities as appropriate (e.g., updating language in our collection development policy related to diversity as a criterion for scoping the collection).

Working Group Deliverables

A primary deliverable of this group is the documentation, preliminary outcomes, and associated recommendations stemming from the short-term projects described above. These materials can serve as a foundation for such projects to be continued and a focus on diversity, equity, inclusion, and accessibility (DEIA) to be purposefully integrated throughout our practices, locally and collectively, related to the BTAA Geospatial Information Network. We acknowledge that we only scratched the surface of this topic and how it can inform our future work. We did not “fix” diverse collections but started conversations to move us in the right direction.

That is not to say that this work did not result in any concrete action. As noted above in the project summaries, the Metadata Committee has begun efforts to include enhancement of language metadata for maps and datasets into their sprint structure. Recommendations related to an increased focus on local and historical sources have been integrated into a diversity plan articulated in a recent IMLS preliminary proposal, and our discussions about possible partner institutions for the next phase of the project have broadened to include more types of community organizations, such as state and public libraries, archives, and historical societies. A critical cartography reading list and draft ethics statement have also resulted from our project work. As an example of how this work has also influenced local practices, two working group members (Dotson and Sadvari) have begun a collaboration with Ohio State’s Japanese Studies Librarian to review our collection of Japanese language maps to better understand their alignment with research and curricular interests and to propose a map scanning project accordingly. We hope this can serve as a model for other such collaborations and invite other project members to share their own local efforts to advance diversity, equity, inclusion, and accessibility on an ongoing basis.

As the work of our group continued beyond the short-term projects described above, we brainstormed “radical” ideas (i.e., a significant departure from our current practices). Examples of such ideas included developing a process for community-driven collection development, a BTAA Geospatial Information Network student research fellowship to support projects addressing equity and social justice topics across our geographic region, embedding prompts related to relevant data literacy concepts at the point of discovery, and creating shared digital exhibits on topics with geographic relevance and/or deriving from our collections. All of these ideas would require project member buy-in and integration into existing committee practices to

implement. We emphasize again the importance of starting these conversations as a deliverable of the DCWG, with the aim of integrating such work into our ongoing collective efforts.

Finally, the work of the DCWG has led to engagement with our broader professional community in several ways:

1. On October 27, the DCWG delivered a presentation titled "Collections, Collaboration, and Crowdsourcing: The BTAA Geoportal's Diverse Collections Working Group" at the WAML virtual conference.
2. On November 8, ongoing work of the DCWG was highlighted as part of the BTAA convening titled "Community Action in Practice: Networks of Trust in BTAA Library Initiatives."
3. Inspired by the work of the DCWG, two members (Quill and Sadvari) proposed and will be co-editors for a special issue of the *Journal of Map & Geography Libraries* on the topic of "Practicing Map and Geospatial Information Librarianship through the Lens of Diversity, Equity, Inclusion, and Accessibility" (anticipated publication in Fall 2022).

Moving Forward

Though the DCWG was originally charged by the Collection Development Committee (now Collection Development and Education Outreach, CDEO), it should be clear from the information presented above that the work of supporting diverse collections and diversity, equity, inclusion, and accessibility more broadly touches all aspects of the BTAA Geospatial Information Network. As the DCWG continued to meet throughout 2021, we increasingly recognized this. Work that began with a fairly narrow scope expanded to include short-term projects, ideation, and professional engagement geared toward the idea that we must continually evaluate and evolve our policies, practices, and platform with an aim toward advancing DEIA through our local and collective efforts.

With that in mind, the main recommendation that we have arrived at as a group is that:

Beginning in 2022, BTAA Geospatial Information Network standing committees and future working groups should articulate at least one annual goal aimed at advancing diversity, equity, inclusion, and accessibility through geoportal activities and content.

Logistically, the Steering Committee should provide support in creating and prioritizing these goals, identifying where this work intersects across multiple groups, sharing progress, overcoming challenges, and holding ourselves accountable.

There are a number of resources that we can look to in support of identifying, articulating, and accomplishing these goals:

- **Diverse Collections**

    - The ALA document on Diverse Collections: An Interpretation of the Library Bill of Rights lists six best practices that can inform our work:
        - Selecting content in multiple formats
        - Considering resources from self-published, independent, small, and local producers
        - Seeking content created by and representative of marginalized and underrepresented groups
        - Evaluating how diverse collection resources are cataloged, labeled, and displayed
        - Including content in all of the languages used in the community that the library serves, when possible
        - Providing resources in formats that meet the needs of users with disabilities

- **Science & Technology Librarianship**
    - Science Librarianship and Social Justice
        - A recent series of columns in *Issues in Science and Technology Librarianship* "aims to open a dialog around equity, diversity, and inclusion (EDI) concepts, definitions, and examples in both library and science contexts…"
        - Many of these concepts are directly applicable (and the examples provided are analogous) to map and geospatial library work and can inform our approach to local and collective activities.

- **General Resources**
    - ALA: Equity, Diversity, and Inclusion
    - ACRL: Equity, Diversity, and Inclusion
    - SLA: Diversity Inclusion Community Equity (DICE)
    - Disrupting Whiteness in Libraries and Librarianship: A Reading List
    - Diversity, Equity, and Inclusion at AGU
    - Diversity & Inclusion at AAG