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## A Bibliometric Analysis of Race-Related Research in LIS (Paper)

### Abstract

The purpose of this work in progress is to quantify the amount of attention given to questions of racial inequity experienced by BIPOC in LIS research. We find that despite a recent surge in BIPOC-related research output, the publications are low in numbers and tend to receive fewer citations than other work in the same research area. BIPOC-related research is present but unevenly distributed across several areas of the field. These trends may help create and sustain momentum towards addressing the persistent lack of diversity and equity in LIS.

### 1. Introduction

As a field in which 87% of the workforce is reported to be white (Schmidt, 2019), there is a strong need for Library and Information Science (LIS) to collectively examine how cultural, social, and political biases manifest in research literature. Racialized and critical LIS scholars have identified the need to adopt a critically focused social justice research agenda amid continuing struggles to reflect and include racialized communities in LIS research and practice (Espinal, 2001; Espinal et al., 2018; Hathcock, 2015; Honma, 2005; Hudson, 2017a; Gibson et al., 2020; Matthews, 2020). These scholars note a significant dearth of research evaluating current LIS approaches to fostering equity and social justice. Social justice is cyclically approached through unproblematized narratives that most often work to further entrench patterns of white normativity (Espinal, 2001; Matthews, 2020; Pawley, 2006; Schlesselman-Tarango, 2017; Schmidt, 2019).

Critical library scholars draw attention to diversity and inclusivity narratives as problematic add-ons to existing library frameworks and practices as opposed to centering the structural forms of marginalization and exclusion that are inherent to LIS spaces and practices (Espinal, 2001; Espinal et al., 2018; Hudson, 2017a; Hudson, 2017b; Gibson et al., 2017; Gibson et al., 2020). This results in a sustained inattention to confronting and centering race in LIS (Caidi et al., 2017; Gibson et al., 2017; Gibson et al., 2020; Gohr, 2017; Honma, 2005; Hudson, 2017a; Hudson, 2017b; Schlesselman-Tarango, 2017). The lack of racialized perspectives and approaches in LIS scholarship and practice reflect larger societal practices of

marginalization (Cooke & Sweeney, 2017; Schmidt, 2019; Adler, 2017; Gibson et al., 2020; Pawley, 2006).

LIS is a meta field (Bates, 2015) that covers a broad range of research areas. Little is known about the attention given across these areas to questions of racial inequity experienced by Black, Indigenous, and People of Color (BIPOC). We aim to provide empirical evidence of the extent of LIS scholarship that includes race and/or racial inequity as an area of focus by analyzing trends in the share of BIPOC-related papers in LIS from 1980-2020, and analyzing the distribution of this research across subareas of the field. We hope our work will help LIS scholars appreciate and reflect on the research pathways we have developed, identify the gaps to fill, and continue to progress towards a community of respect, inclusion, and engagement.

## 2. Data and Methods

We collected all research articles and reviews indexed in the Web of Science (WoS) and published from 1980-2020. We limited our publication set to journals classified within the “Library and Information Science” specialty of the National Science Foundation journal classification, resulting in 89,156 papers published in 163 journals.

To identify relevant papers, we compiled a list of terms related to BIPOC communities and racial injustice. These terms were collected from several glossaries covering concepts of diversity, inclusion, and inequity<sup>1</sup>. Non race-related terms (e.g., terms related to LGBTQA+) were removed, and missing terms were added by the research team in order for our list to be as exhaustive as possible. We then tagged terms to indicate whether they related to a specific community (e.g., Black, Indigenous) or multiple communities (e.g., BIPOC, visible minorities), as well as terms that refer broadly to race and racial inequality (e.g., racism, racial inequity) but do not contain a reference to a specific group or multiple groups. This prevents the classification of a term in multiple categories. We searched for each of the 101 terms from our list in the title, abstract, and keyword fields of the collected LIS literature. Several members of the research team then manually validated the results to eliminate false positives.

## 3. Results

### *Trend in BIPOC-Related Research in LIS*

We retrieved 639 distinct publications mentioning one of our terms, as presented in Table 1. Note that publications can contain multiple terms from different categories, so the sum for all term categories in Table 1 is greater than 639.

Table 1. Number of Articles Retrieved for Each Category of Terms

Term category	Number of papers
Black	165
Indigenous	122
Inequality	276
Multiple	176
Other POC	46

<sup>1</sup> Racial Equity Tools (<https://www.racialequitytools.org/glossary>); Ongig (<https://blog.ongig.com/diversity-and-inclusion/diversity-terms/>); Canadian Race Relations Foundation (<https://www.crrf-fcrr.ca/en/resources/glossary-a-terms-en-gb-1>); British Medical Journal (<http://dx.doi.org/10.1136/jech.2003.013466>); the Government of British Columbia (<https://engage.gov.bc.ca/addressingracism/glossary/>).

Figure 1 reveals the share of LIS publications mentioning BIPOC-related terms from 1980-2020, demonstrating that race and racial inequality is increasing in relative terms and suggesting a surge of attention to those topics within our field. However, the share of articles mentioning BIPOC or racial inequality-related terms remains quite low, representing at most about 2% of LIS literature.

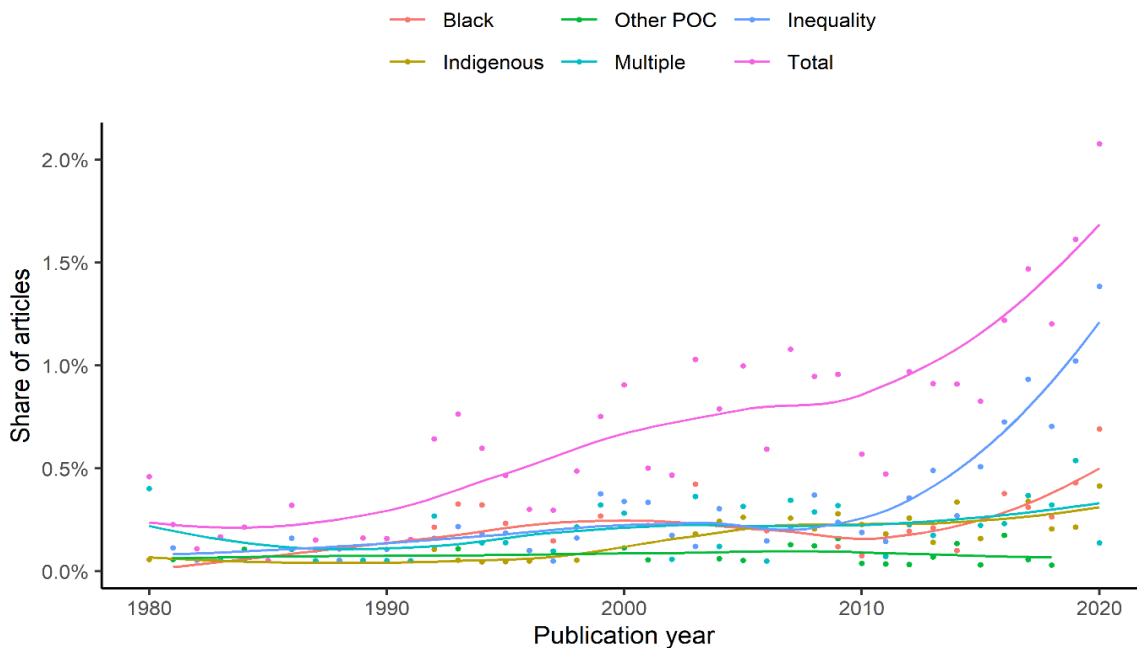


Figure 1. Share of LIS Publications Mentioning BIPOC Terms, 1980-2020

In examining specific groups mentioned within our dataset of LIS literature, research relevant to Black and Indigenous people is dominant. While the number of articles mentioning Black people has been increasing since the 1980s, the share of research relevant to Indigenous populations has only been increasing since the 2000s.

#### *Situating BIPOC-Related Research in the LIS field*

To position BIPOC-related research within the broader LIS context, we constructed a citation network of all LIS publications in the WoS, and identified distinct research areas using the Louvain community detection algorithm (Blondel et al., 2008). This algorithm extracts subgroups from the larger network of data using optimized modularity to find similarities within the data based on the higher quantity of interactions (in our case citations) between certain nodes that differentiates it as a group from the larger set of data. The network and research areas are presented in Figure 2.

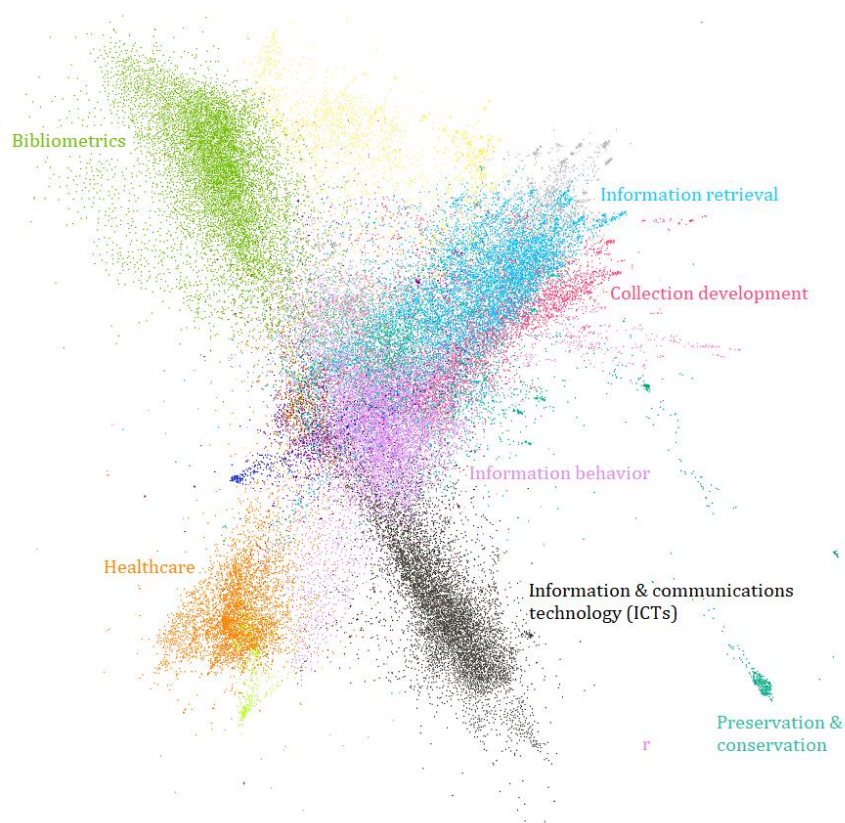


Figure 2 Giant Component of the LIS Publication Network

Table 2 shows the raw and relative frequency of BIPOC-related publications in each of the LIS research areas identified in our network. The papers are concentrated in a few areas, like librarianship and information behavior. The last column shows the average relative citation (ARC) of the BIPOC-related publications. A value above 1 indicates publications that receive more citations relative to other publications in the same group. BIPOC-related research was mostly found to receive a lower average rate of citation than other research in the same area.

Table 2 Number, Share, and Average Relative Citation of BIPOC Publications in Each of the LIS Research Areas

Group	All publications	BIPOC publications		
		N	%	ARC
Information behavior	7,265	159	2.19	0.96
Healthcare	4,480	84	1.88	1.61
Librarianship	1,629	75	4.6	0.64
Knowledge organization	2,529	68	2.69	0.69
ICTs	7,071	35	0.49	0.5
Bibliometrics	7,504	32	0.43	0.63
Health information	867	12	1.38	0.17
Digital libraries	2,015	10	0.5	0.74
Collection development	223	9	4.04	0.16
Preservation	348	7	2.01	0.5
Information retrieval	2,413	7	0.29	3.03
Information Literacy	188	6	3.19	0.62
Social media analytics	602	1	0.17	1.01
Health information systems	483	0	0	N/A
Scholarly publishing	413	0	0	N/A
History and literature	28	0	0	N/A

### *Zooming in on the BIPOC-Related Publication Network*

The BIPOC-related articles were then isolated and the steps from the previous process repeated to provide an overview of the literature and its interconnectedness. Excluding the isolated nodes in the network leaves a giant component of 398 publications (Figure 3) which the Louvain community detection algorithm divided into nine clusters.

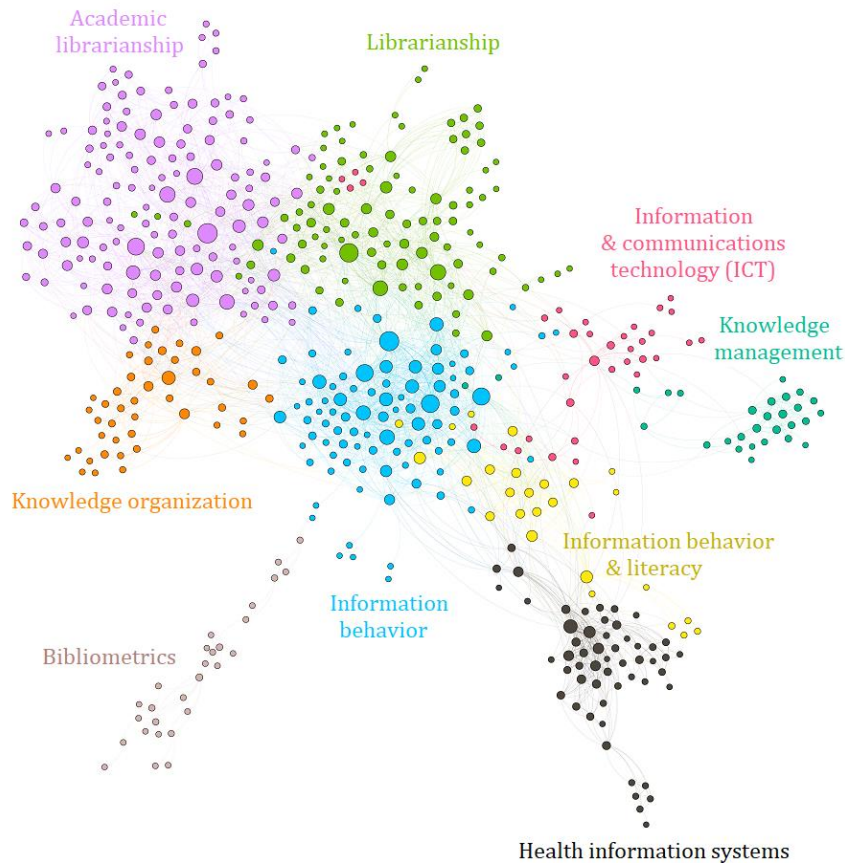


Figure 3. Giant Component of the Citation Network of BIPOC-Related Research in LIS

#### 4. Discussion and Conclusion

While the yearly output of BIPOC-relevant articles has more than doubled in both raw and relative terms since the 1990s, the overall share of BIPOC-related research in LIS remains low enough to suggest that considerations of race and racial inequity remain largely ignored by the field. Noting those trends may be helpful when discussing issues regarding systematic discrimination, but they are only truly valuable when they can be used to maintain and create momentum towards change and address the persistent lack of diverse perspectives and approaches across LIS scholarship and practice.

Information literacy and librarianship are “frontline” research areas that often relate directly to public service; this proximity to the public could partly explain their greater focus on social equity and inclusion than other LIS research areas. Similarly, knowledge organization and information behavior may have an increased focus on diversity due to the growing appreciation of diverse ways of knowing, calls to decolonize classification systems, and greater academic integration of Indigenous Knowledge.

Consideration of race is found to be minimal or nonexistent in more technical research areas more likely to focus on race-agnostic information systems. Still, the lack of racial consideration within these areas may indicate an uncritical approach to the status quo that further marginalizes BIPOC perspectives through their exclusion and perpetuates white privilege in systems of knowledge and social structures (Dei, 2014).

## *Limitations and Future Research*

The citation indexes of the WoS used in this study have limited coverage of scholarly journals (Mongeon & Paul-Hus, 2016) and contain a limited number of document types, potentially excluding important modes of knowledge dissemination. We mitigate these limitations by largely focusing on proportions rather than raw counts in our results.

While this study focuses on racial inequality, future research will include additional social justice concepts, and will extend analysis to other disciplines to provide a benchmark in which to better situate the LIS field.

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