

# Representational Belonging in Collections

## A Comparative Study of Leading Trade Publications in Architecture

Emilee Mathews

*This study stems from a simple question: how do libraries reflect the communities they serve? The research analyzes a subset of periodical literature to measure how women are reflected, specifically women of color, in architecture library collections. It focuses on four major publishing outputs of architecture literature to sample the ratio of women leaders in featured architectural firms. These commonly used periodicals were chosen to measure which firms are presented to an architectural readership. The findings document variation in demographic representation, but evidences that across the board firms covered in these publications have proportionately less women of color in their leadership teams. Librarians will find takeaways for both collection development and management and public services.*

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This study stems from a simple question: how do libraries reflect the communities they serve? As the American Library Association (ALA) statement "Diverse Collections: An Interpretation of the Library Bill of Rights" states, "Library workers have an obligation to select, maintain, and support access to content on subjects by diverse authors and creators that meets—as closely as possible—the needs, interests, and abilities of all the people the library serves."<sup>1</sup> Put another way, Drabinski explicitly discusses the impact collection development librarians have: "We buy one book to the exclusion of probably thousands of others. And in the process we build our libraries as one kind of world, one that can never encompass all the possibilities of how we might organize ourselves in social, cultural, political, and, critically, material space."<sup>2</sup> Together, these assertions suggest that resources should be carefully curated to ensure broad inclusion, but with many library collections numbering in the thousands if not millions, how can we measure libraries' adherence to this value?

The vast scale of the printed word precludes easy answers. However, it does provide a productive avenue of exploration. To supply one possible response to the originating question, this study assesses the architectural field and focuses on trade periodicals, literature specifically geared toward the specialized information needs of a professional in a specific field. Architectural publishing abounds in trade periodicals—out of forty-six journals deemed core to the discipline by the Association of Architecture School Librarians, twenty-three (50 percent) are trade periodicals.<sup>3</sup> Architecture serves as an excellent focus because there is extensive documentation of demographic representation across a number of factors, most widely, gender and race and as such, there are existing datasets with which to compare new findings. In December 2018, the *New York Times*

published the opinion piece “Where are all the Female Architects?” in which the author details the dearth of women architects in the US: 50 percent of architecture students are women, yet women only make up 20 percent of licensed architects.<sup>4</sup> Even more so, the Directory of African American Architects, actively maintained by the National Organization of Minority Architects (NOMA), lists only five hundred Black women who are licensed architects, or 0.4 percent of the profession: fifteen times less than the overall population of Black women in the United States.<sup>5</sup>

Architecture clearly has some inequities built into the profession and looking to architectural education could provide a way to increase diversity in future professionals. Nevertheless, higher education continues to struggle with rectifying structural systems of bias. This was particularly visible in late May and early June 2020, when, after the killing of George Floyd, many institutions issued solidarity statements.<sup>6</sup> Student organizations and faculty groups in turn demanded meaningful reform, such as increasing the proportion of marginalized racial groups in the faculty body and the curriculum.<sup>7</sup> Of particular interest to this study is the statement issued by Black architecture students at Columbia University’s Graduate School of Architecture, Planning, and Preservation program, who listed the following as third in their list of twelve demands:

Support Sustained Access to and Development of Legitimate Scholarly and Professional Resources. Appraisal of the tools and resources made available to support academic and professional growth must be an immediate and ongoing endeavor. *Remediation of the lack of black voices present in the scholarly and design materials available at Avery Architectural & Fine Arts Library is essential to this.*<sup>8</sup> (italics added)

How architecture school library collections serve as a resource to its students while mirroring the profession is thrown into stark relief. Reflecting diverse voices—or lack thereof—in the architectural library’s collection is important to equitably educate aspiring architects about the profession to provide a plethora of role models.

This study seeks to investigate how library collections instantiate diversity to determine whether collections are reflective of the communities they serve. The author selected four key trade publications: *Architectural Record*, *Architectural Review*, *Detail*, and *l’Architecture d’Aujourd’hui*, concentrating on papers published in 2019, as the most recent volumes available covering a full year. These publications are core to the field of architecture and frequently used by currently practicing and aspiring architects.<sup>9</sup> The journals were chosen as sources of precedent research, while striking a balance of different countries and

differing editorial scopes. Further, they each feature current and upcoming projects by leading architecture firms, a tool that the field uses widely for keeping abreast of trends while gaining inspiration for their own design work. With respect to Drabinski’s assertion that collections reflect a worldview, trade periodicals create a worldview of what is important to a field. By concentrating on architecture firms in trade publications, the study takes the pulse of the field outside of the most famous architects (often referred to as “starchitects”).

## Literature Review

The literature under review encompassed both architectural discourse and LIS, as this study draws from and adds to both fields.

### Women in Architecture

Women’s exclusion from the architecture field is a well-known issue: Stratigakos’ book provides a historical trajectory, placing the origin of modern debate in 1872.<sup>10</sup> Stratigakos discusses a major moment in women’s inclusion in architecture—in 2004, Zaha Hadid was the first woman awarded the Pritzker Prize (frequently referred to as architecture’s Nobel Prize). This major win was met with gendered discussion of her physical characteristics vastly beyond that which any other winner of the prize received.<sup>11</sup> Another well-known controversy was the Pritzker Prize awarded to Robert Venturi in 1991, which did not credit Venturi’s firm partner Denise Scott Brown. Scott Brown’s essay “Room at the Top” chronicles the jurors’ refusal to award her credit, despite the intensively collaborative nature of their joint practice.<sup>12</sup> In 2013, a petition was formed for the Pritzker Prize to retroactively award Scott Brown the prize alongside Venturi; however, the organization refused to do so.<sup>13</sup>

In the UK, the leading trade publication *Architects’ Journal* has run an annual “Women in Architecture” survey to gather information on women’s experiences and to measure change over time. In their first survey report in 2011, they document widespread experiences of discrimination and pay inequity as women are less likely to be promoted through the “glass ceiling,” resulting in stagnating career opportunities and wages, and many operating under the belief that they cannot have both a career and a family.<sup>14</sup> In 2019, discrimination and pay gap inequity continues to be a systemic issue across architecture firms.<sup>15</sup>

The core organizations serving the architectural profession across the US have released multiple studies in the last decade. Nicholson’s “Where Are the Women? Measuring Progress on Gender in Architecture,” which combines

multiple datasets from organizations across the profession, shows a complex picture, with both improvements and stagnation.<sup>16</sup>

A report produced by National Council of Architectural Review Board (NCARB) and the National Organization of Minority Architects (NOMA) documents that people of color have more difficulty in achieving licensure because of lack of support from firms, and is felt especially by women of color.<sup>17</sup> They also document a strong lack of Black people in firm leadership. Nicholson recently published a report on Black people in architecture, surveying across the school pipeline to architecture licensing. He similarly finds that there are a number of roadblocks to success in the profession, including student debt particularly felt by Black women.<sup>18</sup>

The Missing 32% project was started in 2014 to highlight inequality in the profession, and to address the fact that women made up approximately 50 percent of architecture students, but only 18 percent of practicing architects, according to data available at that time.<sup>19</sup> The project was started to better understand how and where this retention gap happened. After the symposia and findings from the Missing 32% project, the San Francisco chapter of the American Institute of Architects created the “Equity by Design: Voices, Values, Vision!” survey and published initial findings in 2019.<sup>20</sup> With 14,360 responses across the field of architecture, it is the largest survey of its kind, and showed that White respondents were more likely to be promoted earlier in their career than people of color, and that of those who had childcare responsibilities, women had more than men.<sup>21</sup>

Notably, however, compared to other countries, the US and the UK’s numbers are not necessarily typical of women architects. Tavella compares statistics across ten countries, primarily in Europe, and finds that the proportion of women architects varies significantly, with Greece the highest at 58 percent, and Austria the lowest at 18 percent.<sup>22</sup> Out of the ten countries under discussion, the UK and the US come in at eighth and ninth respectively, both at 25 percent.

### Collections Diversity Audits

Diversity audits of collections have gained more traction in librarianship recently in response to heightened awareness of equity issues in libraries. Diversity audits measure how diverse the collection is and may consider authors, the main characters, and the subject. There are many methodologies that may be used to conduct one. Ciszek and Young’s paper provides a literature review of papers on assessment initiatives in large academic collections in which they group study methodology along two axes: collections versus user-centered and quantitative versus qualitative.<sup>23</sup> Quantitative methods of measuring collection diversity include Worldcat

analysis (generally of subject headings and classification), comparison to standard bibliography, and development of diversity codes. The comprehensive annotated bibliography from Semenza, Koury, and Shropshire is also a valuable resource.<sup>24</sup>

A professional commitment to the importance of diversity and inclusion is increasingly emphasized in recent scholarship. Cruz provides perspective through a detailed literature review of the connections between ideals and action.<sup>25</sup> Morales, Knowles, and Bourg discuss at a broad, philosophical level the importance of diversity across libraries and librarianship, but also connect it with the importance of collections: “To ensure that library collections truly do reflect the profession’s stated commitment to diversity, academic librarians must actively and aggressively collect resources by and about underrepresented groups.”<sup>26</sup> In her role as university librarian at the Massachusetts Institute of Technology, Bourg led the libraries to issue an interesting white paper on explicitly connecting social justice to collections, with recommendations across collecting, including vendor and publisher choices.<sup>27</sup>

Diversity audit literature spans multiple functional areas of librarianship and collection development and management is a core area of consideration, given that collections are an integral aspect of library resources. Bishop’s seminal essay uses the metaphors of windows and mirrors to discuss the importance of providing children books that readers can both see themselves reflected in, plus books that help them understand others’ experiences.<sup>28</sup> Williams and Deyoe’s recent study analyzes diverse children’s books holdings across public libraries.<sup>29</sup>

Blume discusses the importance of gaps in demand-driven acquisition (DDA) through analyzing subject headings of DDA titles purchased.<sup>30</sup> In terms of methodology, only one diversity audit focuses on online resources, specifically on diverse content in databases. The methodology used a defined set of diversity-related keywords, and searched each database for those keywords, with the assumption that higher levels of keywords correlate to more diverse content.<sup>31</sup> While published twenty years ago, Vega García’s study offers valuable insight on how periodicals have been collected by members of the Association of Research Libraries.<sup>32</sup> Delaney’s study similarly uses bibliographies to analyze holdings.<sup>33</sup>

Berthould and Finn bring this focus to the intersection of collection development and cataloging. They explain that

collections are outward-facing. . . . If we are serious about commitments to social justice, inclusion, accessibility, and representation, our collections absolutely should reflect this. Our collections have the potential to be a tangible embodiment of the very noble things we say we want to do. As such, we

must critically assess our current practices and begin to develop guiding principles that will shape praxis.<sup>34</sup>

Caswell, Cifor, and Ramirez discuss an archive of South Asians in the US, and specifically how a set of individuals of that same identity perceive it through semi-structured interviews. Findings highlight respondents' increased perceptions of self-worth and belonging connected to seeing people of similar backgrounds reflected in the archive. The authors pair those findings with terms such as *symbolic annihilation*, which is borrowed from media theory to characterize the lack of representation to the point of not existing within a space, and what they term as *representational belonging*—its opposite.<sup>35</sup> Still within the realm of special collections and archives, Bowers, Crowe, and Keeran take on the importance of addressing collections specifically in the context of a campus highly implicated with settlers' massacre and erasure of Native Americans.<sup>36</sup>

Acquiring materials and providing description and access are important; however, which collections are used in outreach and events are also a key area to ensuring diversity values are upheld. Mortensen provides a methodology from the public library perspective, measuring across youth story time, film series, and book clubs. To create the dataset, the team variously researched the protagonists, authors, or directors, looking at biographies and other sources of demographic information, and spent no more than seven to eight minutes before indicating that the individual's demographic characteristics were unknown.<sup>37</sup>

A number of papers focus on the reflection of specific marginalized identities in collections and the impact on those communities, such as Schiff's elucidation of Roma representation in film.<sup>38</sup> Roy discusses the continued need to proactively provide resources and services for indigenous communities, with special attention paid to developing collections. Her recommendations include following awards and publishers for high-quality resources.<sup>39</sup> Alexander likewise points to reputable publishers with established reputations in selecting indigenous authors to add to the collection.<sup>40</sup>

Within disciplinary specialties, a few papers have been written across arts and humanities fields. Stone measures the gender and race of a subset of published playwrights by researching each playwright through their websites and interviews.<sup>41</sup> Kristik evaluates literature collections by determining diversity book awards and using those lists as an evaluation tool.<sup>42</sup>

Only one published diversity audit article targets art and design collections.<sup>43</sup> The study focuses on print monographs and analyzed each author's identity. Significantly, they also discuss the importance of involving faculty members and other members of the community in improving diversity of collections.

As far as the author is aware, this project adds a critical new perspective in two ways: first, no diversity audit has specifically focused on architecture collections; and second, no other literature has analyzed periodical paper content. Only one diversity audit focused on online resources, and specifically examined diverse content in databases through keyword searches.<sup>44</sup> Vega García's study tracks periodicals holdings, not their specific content.<sup>45</sup> Thus, the project adds new knowledge to begin to fill an existing gap in the field and provides recommendations for architecture librarianship, but which also can be leveraged more broadly.

## Method

Building on Caswell, Cifor, and Ramirez's findings, this study theorizes that a similar set of tenets exist in regards to symbolic annihilation and representational belonging. While they focused on primary source collections, trade literature is also about identity, as it is targeted to a specific profession and intended to provide insight on the concerns of a professional within that field.

This study sought to answer a specific research question: "What is the representation of women, specifically women of color, in architecture library collections?" It did so by analyzing a sample of trade journals that are core to architecture library collections and frequently used for precedent research. The National Architectural Accrediting Board (NAAB) defines one of the key learning outcomes for students, Use of Precedents, as the "ability to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects."<sup>46</sup> Precedents are important not only while studying architectural history, but also are core to the pedagogy of design studios, in which architecture students are trained to design their own contributions to the built environment.<sup>47</sup> Trade periodicals in architecture are an important source of precedent research, as they extensively document projects. In the author's experience as a reference librarian who has frequently worked with students seeking precedents, architectural trade literature is a rich source for such material, and indeed this experience serves as a major impetus for the focus of this study.

## Journals Analyzed

The author extensively reviewed these journals for papers that featured architectural works by firms. For each identified firm, demographic research was undertaken to determine the proportion of women, specifically women of color, in leadership across the architecture firms highlighted. The study focused on architecture firms because those trained

in architecture are more likely to work for a firm.<sup>48</sup> The focus on leadership reflected the field's documented problem with retaining and promoting diverse individuals.<sup>49</sup> As Pitts et al. point out, "The relative homogeneity of leadership within the profession may contribute to a number of difficulties for those from diverse backgrounds entering the field, from implicit bias to difficulty finding mentors who can address identity-specific career development concerns on the basis of personal experience, to difficulty envisioning oneself in leadership positions in the future."<sup>50</sup>

The journals considered are *Architectural Record*, *Architectural Review*, *l'Architecture d'Aujourd'hui*, and *Detail*. *Architectural Record* will forthwith be referred to as *Record* to reduce repetition and also avoid confusion with *Architectural Review*, a similarly named publication, which will hereafter be referred to as *Review*. *L'Architecture d'Aujourd'hui*, commonly referred to as 'AA', will also adhere to this title for simplicity; *Detail* will remain the same. All are listed as "Fundamental" (the most important category) in the Association of Architecture School Librarian's Core Periodicals list, which is articulated as "overall publication quality, robustness, reputation, and longevity."<sup>51</sup> They were selected as mainstream publications that document current architectural projects from around the world, and thus sources for precedent research.<sup>52</sup> They were also selected to provide a balance of geographic location and editorial premise.

Each of the four journals has a slightly different scope. *Record* provides global coverage of building types with a strong US presence, accompanied by high quality illustrations. Significantly, *Review* explicitly states its editorial position as socially relevant and critical while emphasizing a historical perspective.<sup>53</sup> 'AA' is directed by renowned architect Jean Nouvel, with its board comprising fellow prestigious figures in the profession such as Frank Gehry and Shigeru Ban.<sup>54</sup> In addition to themed issues, 'AA' frequently covers current projects and case studies by firms.<sup>55</sup> The German publication *Detail* almost exclusively focuses on current projects, with textual description and extremely high quality technical illustrations of the details of buildings.<sup>56</sup> Of the descriptions of editorial scope, *Review* seems to have the most socially driven, critical standpoint that not only discusses building projects, but also how the built environment affects society and vice versa.

## Data Collection

The *Avery Index to Architectural Periodicals* provided an effective method to isolate the individual papers from these publications by year. Once identified, these citations and related metadata were exported to a spreadsheet. For each paper that listed specific firms using Avery's specialized metadata field "Company/Entity," the author determined

what firms were discussed in the paper and documented those in a specific field (see figure 1). It is important to note that the dataset is limited to papers with one or more "Company/Entity," irrespective of whether an individual was listed in the "People" field. This was done to ensure that the dataset only measured architectural firms, not individual architects to keep within the identified scope.

The researcher hired graduate students from the Illinois School of Architecture to assist with data collection to ensure that they understood the culture of and terminology used by architectural firms to guarantee that the data are as accurate as possible. The author and research assistants gathered the following data about each firm by reviewing the firm's website, and social media accounts (i.e., Facebook, Twitter, Instagram, LinkedIn):

- Total number of employees. This was then coded into a variable of firm size using the AIA's definition of small (up to fourteen employees), medium (fifteen to forty-nine employees), and large (more than fifty employees).
- Type of services the firm offers. This was left as a free text field where research assistants supplied the terms that they saw reflected in the firm's self-characterization from their official website. The assistants' backgrounds in architecture ensured that they would be well-positioned to perform this specialized task.
- Racism statement. This documented whether a firm had issued a statement addressing anti-Black racism after the murder of George Floyd. This field had three choices: Yes, No, and Kind of. "Yes" meant that the firm had either issued a public statement accessible on its website or on its social media that explicitly acknowledged anti-Black racism. "No" indicated that there was no public-facing indication of acknowledgment. "Kind of" was used to indicate ambiguous gestures, such as that the firm in question had posted a black square in their social media (generally Instagram) but did not use hashtags or textual description to indicate any explicit rationale for doing so.

Additionally, data was collected on how many total leaders led each firm to generate percentages of women and women of color against this total. Generally, firms will specifically categorize leadership on their website, and leaders bear titles such as principals, partners, or associates. Of those identified as firm leadership, research assistants notated the number of women in leadership roles, and specifically the number of women of color in leadership. They pursued this research by initially registering all who at best visual inference present as women. For the purposes of data collection "woman" was defined as a feminine-presenting

## A disused canal in Zacatecas, Mexico, is transformed into an imaginative playground for neighborhood children

<b>Language:</b>	English
<b>Authors:</b>	<a href="#">Klimoski, Alex</a>
<b>Source:</b>	<a href="#">Architectural record</a> . 2019 Sept., v.207, n.9, p.39-40. photos
<b>Place of Publication:</b>	Illinois
<b>Publication Date:</b>	2019
<b>Document Type:</b>	journal article
<b>Subject Terms:</b>	<a href="#">Canals -- Alterations and additions -- Mexico -- Zacatecas</a> <a href="#">Playgrounds -- Fresnillo Playground. -- 21st century -- Mexico -- Zacatecas</a> <a href="#">Adaptive reuse -- Canals into playgrounds</a> <a href="#">Housing -- Public -- Alterations and additions -- Mexico -- Zacatecas</a>
<b>People:</b>	<a href="#">Montiel, Rozana, 1972-</a>
<b>Company:</b>	<a href="#">Rozana Montiel Architects</a>
<b>Avery Number:</b>	AB.Ar44
<b>Revision Date:</b>	20191004
<b>ISSN:</b>	0003-858X
<b>Abstract:</b>	Part of revitalization of 40-year-old public housing development, named Manuel M. Ponce, in Zacatecas, funded by Instituto del Fondo Nacional de la Vivienda para los Trabajadores (INFONAVIT).

**Figure 1.** Example of article highlighting an architecture firm in Avery Index to Architectural Periodicals.

person who uses she/her/hers pronouns. A “woman of color” was defined as meeting the definition of “woman” and also as having non-Caucasian skin tone or facial features.

For each of these individuals, the research assistants determined what gender pronouns were used and if they self-identify as a member of a race through their professional biography on the firm’s website, personal website, LinkedIn, interviews published in magazines such as *Madame Architect*, or other web content via a Google search.<sup>57</sup> Searching was limited to ten minutes per person to ensure that the research assistants could complete workflows for the dataset (which included 726 total women across all four publications). If self-identification or reputable third-party identification of race or gender was not able to confirm the inferred characteristics, the demographics of the person in question were categorized as probable but unknown. Once demographic research was completed with all women in leadership positions for a specific firm, the total number of women and total number of women of color in the spreadsheet were indicated, inclusive of those coded as probable. Percentages were then generated from these numbers: the overall proportion of women in leadership, as well as that of women of color against overall leadership.

### Advantages and Limitations to the Methodology

The methodology of researching individuals’ demographic backgrounds and assigning an inferred characteristic if no positive affirmation is available is used in some, though not all, diversity audit data gathering approaches. Other methods include using bibliographies (Vega García, Delaney-Lehman), awards (Roy, Kristik), or identifying specialized, reputable publishers (Roy, Alexander). While these all have the virtue of using an authoritative list rather than introducing the author’s bias into the data gathering apparatus, they also have deficits: bibliographies quickly become outdated, and awards may only be used if the field in question has awards for this type of publication. Further, a study using these methods would only sample very few of the total published output. The methodology used for this study was chosen to be applicable to a broader set of individuals, rather than those who have been honored by an (necessarily) exclusive award system.

The methodology matches most closely what Ciszek and Young define as quantitative/collection-centered, using diversity codes.<sup>58</sup> Other LIS papers using this methodology

of identifying a set of authors and conducting demographic research on those individuals include those by Stone and Mortensen.<sup>59</sup> Outside of LIS literature, a recent study on artist diversity in art museums' permanent collections deploys a similar methodology, albeit on a larger scale, using data science methods and used Amazon Mechanical Turks for demographic research labor.<sup>60</sup> Other social research methods lend credence to this paper's methodology: McCormick et al. discuss the reliability of visual evaluation of demographic characteristics, and find although not perfect, it is fairly accurate.<sup>61</sup> Additionally, Contreras, Banaji, and Mitchell's paper demonstrates that race and gender are among the first visual characteristics that people notice about others.<sup>62</sup> However, Song problematizes the notion of connecting visibility and race, saying that "Visibility (signifying non-White) has been central to our understandings of a stigmatized ethnic minority status. But exactly who is considered visible in constantly changing and diversifying multi-ethnic societies, is less than clear."<sup>63</sup> Song importunes scholars to be more mindful of mixed race as she highlights the prevalence of considering minority status as tied to being visibly non-White. While Song points to socially constructed, complex notions of race, she does show its pervasiveness in categorizing others. Since this paper seeks to measure normative notions of gender and race through mainstream publications, the methodology is relatively suitable to the purpose at hand.

Additionally, the methodology was shaped to move toward anti-racist research methodology. Reflection on questions such as that which Sefa Dei poses, "What motivated me to undertake this study and why, and what did I envision as its result? How would my research benefit my subjects, and how would I balance my responsibilities to my academic profession, funding agencies, and the local communities I have worked with?" has helped the author flesh out the study's purpose and trajectory.<sup>64</sup> While the present study was not qualitative in nature, ensuring considering the study's impact throughout the research process has enabled a more thoughtful, nuanced approach to how to conduct a diversity audit and why.

Regarding timeframe, the data should be fairly accurate since it was collected in 2020 for papers published in 2019. However, not every company mentioned in 2019 publications were discoverable in 2020 as some lacked websites, and the websites of others were under maintenance while research was taking place in August–September 2020. Others split into different firms after the publication of the paper, or in some cases it was not discernable in which arm of a studio practice the project took place as some architects have multiple individual practices or participate in collaborative groups beyond firms. In these cases, the firms in question were excluded from the dataset.

The final dataset consisted of 354 firms with some

duplication as firms were counted each time they were covered, i.e., counted more than once if they were covered multiple times in the same magazine or the other three magazines. This choice was made to be the most illustrative of what a reader of these magazines would encounter. For example, if a reader encountered multiple papers highlighting the same firm, then that demonstrates its importance to what is valued in the field. When compared to a dataset completely deduplicated to 338 unique firms, the difference is minor—one percent or less in all instances (see table 2). The author derived an additional dataset that deduplicated firms to only one unique entry per journal and includes 340 firms. Dataset 1 (354 firm dataset, no deduplication) is used in question one below; dataset 2 (340 firms, deduplicated to one unique entry per journal) was used for the remaining questions. The completely deduplicated dataset is offered for comparison throughout the tables and figures provided.

There was a wide variance in the number of firms featured by each publication: 'AA' only covered 26 firms, whereas *Record* had a total of 160. Data analysis was run on each journal to determine statistical significance specifically for 'AA' against the other journals, using t-test measures in the data analysis add-on of Microsoft Excel. The t-test results indicated that the data were within acceptable range to be comparable to one another.

## Findings

The resulting dataset included 160 firms in *Record*, 69 in *Review*, 26 in 'AA', and 99 in *Detail*, for a total of 354 firms (see table 1). In deduplicating to only one entry per firm per journal dataset, *Record* still has 160 firms, 65 in *Review*, 25 in 'AA', and 90 in *Detail*. Table 2 shows the differences in percentages between deduplicated and original dataset; in most cases, the change in percentages is one percent or less.

The author's guiding questions included the following:

1. What are the demographic proportions of firm leadership covered by individual journals? Would they be comparable to demographic and occupational data gathered by other sources? Would there be an effect based on editorial scope? Would the prevalence of this issue in national discourse have any effect? Per Tavella's paper, the US and the UK are poorly rated in overall proportion of women architects, and so the author posited that *Record* and *Review* may reflect this as well.<sup>65</sup> However, much of the literature about representation is published out of those countries, so these publications may be more aware of the need to cover diverse firms. Germany (ranked fourth) and France (ranked sixth) have higher percentages of women architects, at 43 and 38 percent, respectively,

**Table 1.** Number of firms featured in 2019 articles, broken down by each journal, and compared by no deduplication versus deduplicated to one entry per journal

	<i>Record</i>	<i>Review</i>	'A'A'	<i>Detail</i>	Total
Number of firms featured in 2019 (no deduplication)	160	69	26	99	354
Number of firms featured in 2019, (deduplicated to 1 entry per journal)	160	65	25	90	340

**Table 2.** Percentage of women leadership in architecture firms versus percentage of women of color leadership in architecture firms, with the dataset compared from no deduplication, deduplicated to one entry per journal, and deduplicated to one unique entry across entire dataset.

	% of women in leadership	% of women of color in leadership
All firms without deduplication	25	7
Firms deduplicated to only 1 entry per publication	25	6
Firm deduplicated to 1 across all publications	24	6

so this may also be reflected in their periodicals.

2. Would the size of firm have an effect on the proportion of women leadership? Anecdotally, women architects tend to practice in small firms or as solo practitioners, so if this anecdotal evidence were borne out in the data, small and medium size firms would be more likely to have higher percentages of women leadership.<sup>66</sup>
3. Would different areas of specialization (such as interior design, lighting, urban planning, etc.) within the firms covered have different concentrations of women in leadership roles? The author surmised that out of the types of companies investigated, interior design firms would be more likely to have women leaders, and construction and engineering companies less likely.<sup>67</sup>
4. Would explicit support for social justice causes be more likely to be expressed by firms with higher leadership percentages of women of color?

### Question 1: Individual Journals' Coverage

Firms covered by the journals had an overall average of 24 percent women leaders reflected in the firms highlighted, and 6 percent women of color—both measured against overall leadership (see figure 2). *Record* outperformed the other journals, with 28 percent women leadership in firms mentioned, and 9 percent women of color in leadership roles. The next best performing journal was 'A'A', with 26 percent women in leadership, and 9 percent women of color. *Review* and *Detail* performed below the others: *Review* had 22 percent women and 4 percent women of color; and *Detail* had 19 percent women, and 2 percent women of color. The data distribution was negatively skewed due to the large number of firms with no or few women in their leadership, so medians were analyzed to provide another

access point (see figure 3). Across all journals, the median percentage of women in leadership roles was 20 percent, and the median of women of color in leadership roles was zero. For all women in leadership roles, *Record's* median was 25 percent, and 'A'A' was 23 percent, tracking fairly closely with their averages. However, *Review* and *Detail's* median percentages were far below than their averages, at 14 percent and 11 percent respectively.

### Question 2: Size of Firm

This question was somewhat borne out in the data (see figure 4). Overall, women were more reflected in leadership of small firms, which averaged 31 percent women leadership, with medium firms at 20 percent and large firms at 24 percent respectively; women of color averaged 9 percent leadership in small firms, while attaining smaller proportions in medium and large firms, at 6 percent and 3 percent respectively. Once the numbers were broken down by individual journals, a different pattern emerged. *Record's* average increased significantly in small firms, with 37 percent of overall women, and 17 percent women of color leaders. Among medium and large firms, both held at 25 percent for overall women leaders, and at 8 percent and 4 percent correspondingly for women of color. With respect to the journal dataset, 'A'A' also performed well in this measure with 29 percent overall women leaders in small firms, and 13 percent women of color. Medium and large firms did fairly well with all women leaders averaging at 26 percent and 22 percent respectively, but performed less well for women of color, with 1 percent and 2 percent each. *Review* did fairly well with women leaders across firm size, with 26 percent for small, 18 percent for medium, and 23 percent for large, and *Detail's* performance was somewhat similar, with 27 percent for small, 11 percent for medium, and 21 percent for large firms. However, both *Review* and *Detail*



numbers were particularly poor in regard to women of color; small firms highlighted in these journals had 3 percent and 4 percent each, while medium held at 1 percent and 0 percent; large firms at 2 percent and 1 percent. Data seem to confirm the anecdotal evidence that small firms are more likely to have women leaders, whereas large firms are less likely to have women of any race in leadership roles, and particularly women of color. Surprisingly, medium firms frequently performed worse than large firms across the spread.

### Question 3: Type of Firm

This question considered how well women were represented in leadership of different firm specializations, with interiors being more likely, and construction and engineering less, based on anecdotal evidence. This supposition was not confirmed in the data, but neither were there enough data to firmly corroborate the author’s predictions (see table 3). The firms were divided into the following categories (with multiple types possible): Interiors/Interior Design (8), Architecture (144), Planning (10), Urbanism/Urban Design (10), Engineering and Construction (5); Landscape Architecture (8); Lighting (2), Design (2), and Architecture and Research (1). The category with the highest concentration was Architecture and Research (1), which performed at 100 percent women of color. Second was “Design,” with 61 percent women and 25 percent women of color.<sup>68</sup> Landscape architecture was next, with women leadership at 36 percent, and performed well with 9 percent women of color. Surprisingly, architecture firms did better than expected with 27 percent women and 10 percent women of color. Regarding overall women leadership, the next types are listed in descending order: Lighting (40 percent), Urbanism/Urban Design (24 percent), Interiors (23 percent), Engineering and Construction (20 percent), and Planning performing the worst at 17 percent. However, with respect to women of color, the order is quite different: Urbanism/Urbanism at 6 percent, Interiors at 4 percent, Lighting and Planning were both 1 percent, and Engineering and Construction were 0 percent. While some interesting variances emerged through the data, the data are insufficient to test for significant difference. This reporting should be considered anecdotal and bears further investigation before any meaningful conclusions are drawn.

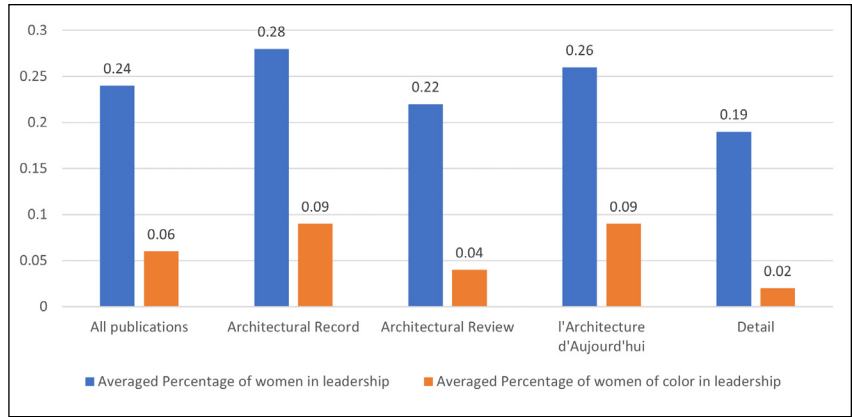


Figure 2. Averaged percentage of women in leadership compared to women of color in leadership across publications

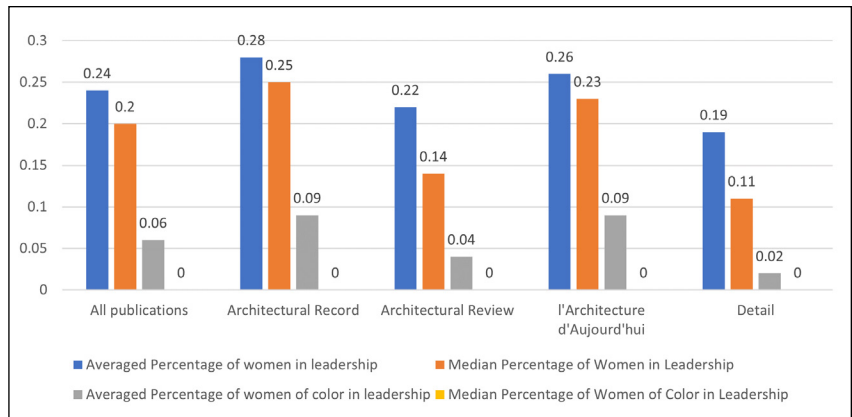


Figure 3. Mean vs. median for women and women of color leadership across publications

### Question 4: Black Lives Matter (BLM) Statement More Likely to Have Women of Color in Leadership Roles

This question also did not perform as predicted in the data (see figure 5). Those with a clear BLM statement (fifty-two total or 15 percent of overall dataset) included forty-three from *Record* (27 percent), four from *Review* (6 percent), one from ‘AA’ (4 percent), and four from *Detail* (4 percent).<sup>69</sup> The firms that made a more ambiguous gesture included fifty-six total firms, thirty-three firms from *Record* (21 percent), twelve from *Review* (19 percent), one from ‘AA’ (4 percent), and ten from *Detail* (11 percent). Across all publications, 232 of 340 firms, or 68 percent, did not issue any statement that was detected by researchers.<sup>70</sup> When broken down by individual journal, the 232 was comprised of eighty-four firms from *Record* (53 percent), forty-nine firms from *Review* (75 percent), twenty-three firms from ‘AA’ (92 percent), and seventy-six firms from *Detail* (84 percent). For

all publications, those firms that issued a clear BLM statement had 34 percent women leadership on average; *Record's* was 32 percent, *Review's* was 63 percent, *AA* was 23 percent, and *Detail* was 31 percent. Interestingly, *Review* continued to outperform other journals in women of color proportionately; 25 percent average, whereas the other journals came in at 12 percent for *Record*, 5 percent for *AA*, and 4 percent for *Detail*. However, upon further reflection it made sense that most the highest concentration of architecture firms that had issued a statement was in the US-based publication, since BLM is a movement emerging from the US.

### Architectural Record Compared to Reports in the United States

Because *Record* is an American publication, the author assembled other comparable data sources that are specific to the US to better understand its performance (see table 4). The AIA 2018 Firm survey reports 29 percent of principals and partners are women and also that there are 11 percent minorities in these leadership positions.<sup>71</sup> Unfortunately it does not break down the data in terms of both gender and minority status.<sup>72</sup> Nicholson's "Where are the Women?" report referenced above consolidates and analyzes many relevant statistics: compared more broadly, the US Census shows that women make up 51 percent of the overall US population, 57 percent of all enrolled college students, and 22 percent AIA associates.<sup>73</sup> *Record's* number at 28 percent tracks quite closely with the AIA firm survey, and performs better than many of the metrics assembled by Nicholson.

It is not currently possible to track meaningful data for all women of color in architecture. In nearly every report, statistics for women and people of color are tracked separately. However, there is reasonably accurate information for Black women available thanks to the frequently updated Directory of African American Architects (see table 5).<sup>74</sup> The Directory shows five hundred licensed Black women architects, or 0.4 percent of the overall licensed architects in the US. Comparing this against the data generated for

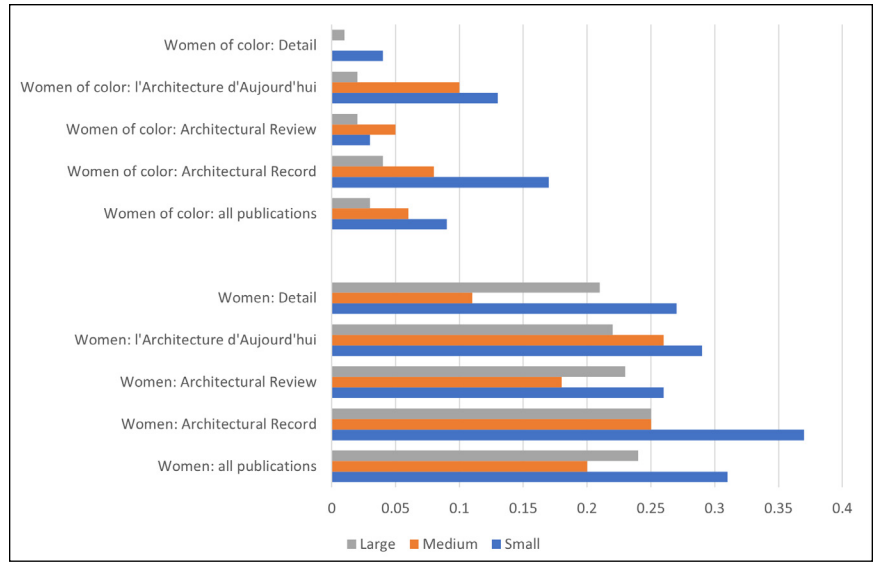


Figure 4. Percentages of women and women of color in leadership, broken down by firm size

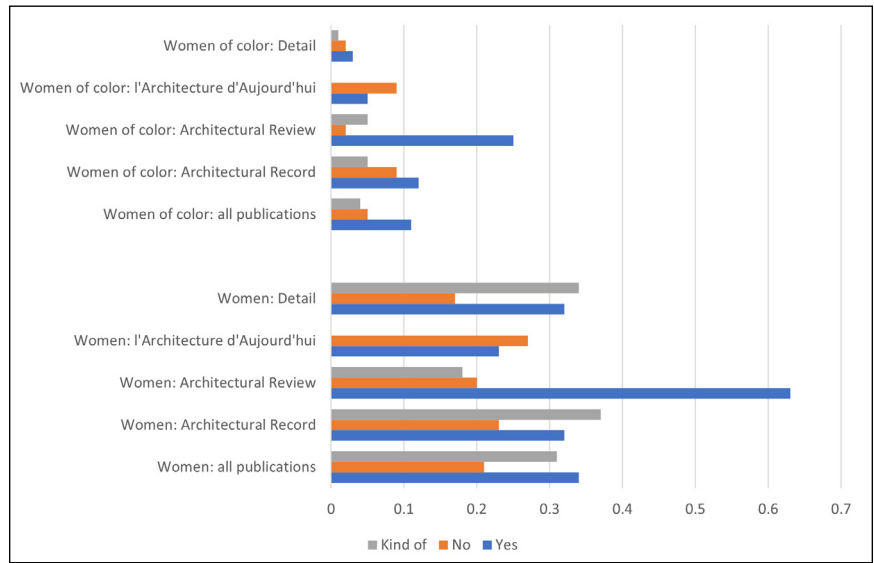


Figure 5. BLM statements (Yes, Kind of, No), modelled across publications and broken down by individual periodicals

this study's dataset showed that two out of 1,344, or 0.01 percent of all firm leaders highlighted by *Record*, are Black women. Again, ACSA Data Resources prove helpful: Nicholson reports Black women make up 1.9 percent of all architecture graduates in the US, whereas they make up 6 percent of the overall US population (see table 3).<sup>75</sup>

In thinking about Black women compared to all women in data specific to the United States, juxtaposing these external data sources in comparison to the information gathered in this dataset is also revealing (see table 6): Black

**Table 3.** Types of architecture firm practice, number of firms in each category, and averaged percentage of women leaders of architecture firms versus percentage of women of color in architecture firms.

Type of firm	Number	% of Women Leaders	% of Women of Color Leaders
Architecture	144	27	10
Architecture & Research	1	100	100
Design	2	61	25
Engineering and Construction	5	20	0
Interiors/Interior Design	8	23	4
Landscape Architecture	8	36	9
Lighting	2	40	1
Planning	10	17	1
Urbanism/Urban Design	10	24	6

**Table 4.** Women architecture firm leaders in *Record* dataset compared other data sources for US women architects.

<i>Record</i>	US Census	% of Women enrolled College Students	% of Women enrolled in NAAB Accredited Architecture Programs	% of Women Principals and Partners
28	51	57	46	29

Sources: 2010 US Census; Kendall A. Nicholson, “Where Are the Women? Measuring Progress on Gender in Architecture,” ACSA Data Resources, June 2020, <https://www.acsa-arch.org/resources/data-resources/where-are-the-women-measuring-progress-on-gender-in-architecture-2/>; Kermit Baker et al., “The Business of Architecture: AIA Firm Survey 2018,” American Institute of Architects, August 2018.

**Table 5.** Black women architecture firm leaders in *Record* dataset compared to other data sources for US Black women architects.

% of Black Women Leaders of Architecture Firms in <i>Record</i>	% of Licensed Black Women Architects	% of Black Women Architecture graduates	% of Black women in US Census
0.01	0.4	1.9	6

Sources: Directory of African American Architects, accessed November 20, 2020, <https://blackarchitect.us/about/>; Kendall A. Nicholson, “Where Are the Women? Measuring Progress on Gender in Architecture,” ACSA Data Resources, June 2020, <https://www.acsa-arch.org/resources/data-resources/where-are-the-women-measuring-progress-on-gender-in-architecture-2/>.

women make up 13 percent of all women in the US census, are 3.9 percent of total women graduates of architecture programs, and make up 1.8 percent of all licensed women architects. Comparing this specific dataset of the women researched in *Record*, Black women make up only 0.05 percent of all women leaders.

### Discussion

Trade literature is the focus of this study because of its position as an expression of the field, as a way to see that “representational belonging” through the architects and projects they feature as a source of role models and precedents. The relationship between library collections and role models is reflected in professional policy and in the literature. In its Policy Manual, ALA states that one key objective for integrating diversity in their values is to “promot[e] the publication, development, and purchase of materials, resources

and exhibits that present positive role models from diverse populations.”<sup>76</sup> Role models are important in any field, but certainly true within architecture; Omoyeni et al. discuss the visibility of role models as both extremely important and widely acknowledged in the field, drawing not only from architectural discourse but also that of social psychology.<sup>77</sup> The Royal Institute of British Architecture’s (RIBA) recent report emphasizes the importance of “promoting positive and inclusive role models in the profession and supporting progressive employment practice.”<sup>78</sup> Trade publications’ position as an indicator of to whom to pay attention in the field would certainly be a place where role models may be sought. Thus, who they promote is worthy of investigation to determine who is construed as belonging and who is not.

The data findings were surprising in many ways, but also in how they aligned closely with other metrics, such when as compared against those assembled by Tavella (see table 7). *Record* was consistently the most equitable journal, highlighting the highest proportion of women in the

**Table 6.** Tabulation of Black women architecture firm leaders versus all women architecture firm leaders in Record dataset, compared to other data sources for Black women architects versus all women architects, and US Census population.

<b>% of Black Women Leaders vs. All Women Leaders of Architecture Firms in Record</b>	<b>% of Licensed Black Women Architects vs. all Licensed Women Architects</b>	<b>% of Black Women Architecture Graduates vs. All Women Architecture Graduates</b>	<b>% of Black Women vs. All Women in the United States</b>
0.05	1.8	3.9	13

Sources: Directory of African American Architects, accessed November 20, 2020, <https://blackarchitect.us/about/>; Kendall A. Nicholson, “Where Are the Women? Measuring Progress on Gender in Architecture,” ACSA Data Resources, June 2020, <https://www.acsa-arch.org/resources/data-resources/where-are-the-women-measuring-progress-on-gender-in-architecture-2/>; 2010 US Census.

**Table 7.** Percentage of all women leaders of architecture firms broken down by journal, compared to data source for licensed women architects by country of publication.

<b>United States</b>		<b>United Kingdom</b>		<b>France</b>		<b>Germany</b>	
<b>% of All Women Leaders in Record</b>	<b>% of Licensed Women Architects in US</b>	<b>% of Women Leaders in Review</b>	<b>% of Licensed Architects in UK</b>	<b>% of Women Leaders in ‘A’A’</b>	<b>% of Licensed Architects in France</b>	<b>% of Women Leaders in 2019 Detail</b>	<b>% of Licensed Architects in Germany</b>
28	25	22	25	26	38	19	43

Source: Paola Tavella, “La Scalata delle Donne all’Architettura,” *Abitare*, June 9, 2017, <https://www.abitare.it/en/research/studies/2017/06/09/architecture-women/>.

leadership of firms. ‘A’A’ came in second and was followed by *Review* and *Detail*. *Detail*’s highly technical focus could provide some rationale for why they may not have been as focused on social representation. ‘A’A’ was surprising in its high ranking as compared to its editorial scope; however, in looking at the overall percentage of women architects in France, the results are less impressive. Perhaps most disappointing was the *Review*, which expressly details their commitment to showcasing relevant social issues in their publication but their firm coverage did not reflect this expression of values. While each journal was not limited to architectural projects in their country, nor to firms that primarily practice in their country, it can be argued that the journal reflects its cultural context.

While the proportion of women leaders was lackluster in all journals except for *Record*, women of color were particularly underrepresented, most notably in *Review* and *Detail*, suggesting that while women’s representation has been an ongoing issue, what needs more attention and improvement is representation of women of color. This is also reflected in the Equity by Design survey, which has shown overall improvement for increased numbers of white women in leadership positions, but less improvement for people of color.<sup>79</sup> This evidences Crenshaw’s observations on overlapping systems of oppression evidenced by her use of the term intersectionality.<sup>80</sup>

Unexpectedly, very few firms chose to explicitly issue a BLM statement in the wake of George Floyd’s murder. Architecture as a field may find that the profession would be more diverse if firms would embed values and social

issues much more explicitly in communications, practices, and workplace (among a comprehensive set of initiatives).<sup>81</sup>

As far as the motivating question of whether this subset of the library’s collection reflects the community it serves: the evidence, while limited, is telling. At best it reinforces already low representation; at worst, it elides marginalized individuals’ contributions to the discourse of architecture. These journals were chosen in part because they typify trade periodicals in architecture. Based on the editorial scope of the other journals in the Fundamental section of the AASL Core Periodicals List, there is no indication that other Fundamental journals cover more diverse content. *A + U (Architecture + Urbanism)* may be considered “diverse” from an American perspective. The same may be said of *C3 Korea* or *GA* (published in Asia). In contrast, the National Organization of Minority Architects (NOMA) publication is relegated to Topical, which is defined as “highly specialized or regionally focused.”<sup>82</sup> Perhaps that is the issue encapsulated: the concerns of minority architects (in NOMA’s parlance) are further minoritized. This begs the question of whether it is time to reconsider the AASL Core Periodicals list.

How might a subject specialist interpret this data? It shows that mainstream publications are not likely to reflect the field as more diverse than it is in reality, and may indeed be suggesting that the field is whiter and more male than it is in actuality. Referencing the earlier discussion of how collections, and specifically trade literature, may be an important source for role models and representational belonging, architectural library collections are providing role models that are predominately male, and almost exclusively white.

By extension, architectural library collections are demonstrating those who identify as white and male are those who most belong.

Beyond the specifics of subject specialization, any librarian whose responsibilities include collection development should carefully consider how their individual and collective acquisition and management choices affect the worldview they construct through the collections they build. This consideration can be applied to both collection management and development, including retrospective collecting to fill gaps. Using this approach as an outreach mechanism to attract students and faculty à la Manuell, McEntee, and Chester would ensure that the library's collecting activities are visible and not just the "history of the white man," in the words of Bowers, Crowe, and Keeran. Furthermore, the "Equity by Design" survey dataset shows that "Our youngest respondents were by far the most diverse, with the survey pool increasingly white and male amongst older respondents. This suggests that the composition of the industry is changing, and that we all have work to do to support this more diverse pipeline."<sup>83</sup> The shift in demographics seen in the profession is certainly related to the students who elect to pursue architecture as a profession. Architectural libraries must consider how to shift processes and practices proactively to be better positioned to support diverse students, such as embracing the recommendations from the Columbia students discussed above. That being said, in fiscal environments which have steadily reduced librarians' abilities to collect, systematic retrospective collection development may not be financially feasible, nor will materials necessarily still be available. Looking outside of books and journals for information, and focusing on curating available web resources rather than or in addition to more traditional collections may be a more suitable way to increase collection diversity while reducing dependence on the publishing ecosystem.

## Conclusion

This initial dataset can serve as the basis for further study through enhancement with additional variables, data sources, and methodologies. In addition to studying the place of publication, the location of the firm itself could be analyzed and compared to national statistics such as those highlighted by Tavella. Additionally, the demographic composition of the publication's editorial and full-time staff writers could be compared against those featured. It would be worthwhile to expand the journals covered to publications from a greater geographical spectrum. Another expansion might include comparison to similar fields such as visual arts.

This study focused on "visible" identity aspects of gender and race. Other demographic characteristics, such as sexuality or disability, are not adequately addressed using this methodology. A methodology that includes more qualitative information or self-identified information from architects themselves would be a better way to document these characteristics and is a direction the author is considering for future studies to complement the quantitative, collection-centered methodology used in this study.

The publications sampled for this study are evolving and changing to meet the needs of the field. For example, *Review* editors state, "For us, the term editorial practice encompasses, among other things, the processes by which decisions are made about the subjects and themes discussed as well as the writers, architects, photographers and illustrators who are published both in print and online. The [*Review*] is committed to *consistently diversifying who is visible in all of its spaces and platforms*"<sup>84</sup> (italics added for emphasis). An eventual comparative study to examine the impact of attempts to improve relative to the data in this study could inform the development of recommended practices for making progress on visibility and the related construct of belonging.

This research was initially conceived in the context of an initiative to remedy collection gaps, to increase students' awareness to architecture students of contributions to the field by women architects, and to partner with key stakeholders across the campus community to support efforts of improving career success for women in architecture. The original intention was to pair this study with outreach and events. Unfortunately, the COVID-19 pandemic interrupted plans but these activities will be undertaken as health and safety considerations allow. Regardless of format of outreach, building community with the library's constituents means responsible and transparent stewardship to cooperatively enrich collections.

Within libraries, collections are a foundational expression of building an equitable worldview. Drabinski's essay about libraries' neutrality (or lack thereof) demonstrates a critical need to assess what worlds librarians build through collection development and management. As Honma states, "All too often the library is viewed as an egalitarian institution providing universal access to information for the general public. However, such idealized visions of a mythic benevolence tend to conveniently gloss over the library's susceptibility in reproducing and perpetuating racist social structures found throughout the rest of society."<sup>85</sup> Pawley points out that "library collections themselves constitute a kind of legacy—one that successive generations of librarians inherit and tend to take for granted."<sup>86</sup> Combined, these assertions advise collection development librarians not to

accept collections as *a priori*, but rather to actively shape them to be more inclusive worldviews.

In the context of academic libraries, Quinn outlines a vision for how this can contribute to a liberatory education: “Libraries are uniquely positioned as spaces for undirected learning, where choices can be made and tangents can be followed without necessarily being restricted by time or remit. Librarians have a role in creating an environment without restrictions, and facilitating the individual goals of the library’s diverse groups.”<sup>87</sup> Collections are a core aspect of that mission provision. In this author’s opinion, facilitating self-directed learning through library resource provision means offering titles in which “representational belonging” is at the fore.

But developing and managing collections with representational belonging in mind is only one piece of the solution. Hudson has problematized the value of inclusion rhetoric that such diversity audit measures have inherently taken as true.<sup>88</sup> He argues that by focusing on calling out misalignments between collections and populations, the focus is diverted from actual, systemic, meaningful change.

Race remains undertheorized in the field in no small part because of the overwhelming LIS emphasis on the practical and the technical, and the attendant failure to recognize inquiry into matters of power and meaning as a worthwhile undertaking in its own right: it is difficult to undertake sustained collective discussions of theory, culture, and history when the vast majority of the intellectual output in the field collectively teaches us that research is best when it is accompanied by commodity solutions in the form of concrete policy recommendations, competencies, standards, activities, and other things that can be captured in bullet-pointed lists.<sup>89</sup>

Without a concomitant engagement with broader systemic change and necessary, difficult dialogues, libraries will not be able to change enough for their collections to be relevant.

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