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10 December 2022

The Book-Object Binary: Access and Sustainability in the Academic Library

Introduction

"A good library will never be too neat, or too dusty, because somebody will always be in it, taking books off the shelves and staying up late reading them," wrote Lemony Snicket in *Horseradish: Bitter Truths You Can't Avoid* (75). Nevertheless, access to e-books and other digital media complicated the book's monopoly as the preferred reading technology Snicket covets. In 2019, US academic libraries circulated 655 million e-books, databases, media, and serials through computers and smartphones, but patrons left as many books shelved in the dust ("Table 8" [Fiscal Year 2019]). However, scholars posit that patrons' access to digital media is not likely to replace books (Norrick-Ruhl and Vogel 232). Academic librarians defend patron access to information in whatever form they request—but is *that* sustainable?

Academic libraries are subject to their communities' interests regarding sustainability. Green publishing and e-readers demonstrate an effort to reduce the book's environmental impact. However, e-readers "have positive and negative environmental impacts" (Kang et al. 3). Nonetheless, the book's life cycle invites study because it is a necessary technology for change. The academic library responds to external and internal stimuli, and its shifts toward sustainable and ethical access may evince a practical model for a transformative sharing economy.

When it comes to the climate crisis, some see business investments in technology as a solution. Per the consulting group PwC's report, one of the biggest opportunities to respond to the climate crisis lies in the massive private investment underway in climate tech, with a total of 87.5 billion dollars invested in 2020 and 2021 (Felsenthal). In the shadow of such investments, patrons of academic libraries might wonder what they can do to curb climate change as individuals.

Adam Trexler, an ecocriticism scholar, posits the technology and consumer dilemma in his book *Anthropocene Fictions*. He writes, "Climate change introduces disproportionate scale effects, so minuscule domestic choices such as car ownership, vacation destinations, choices between suburban and urban homes, and thermostat settings contribute to catastrophic effects" (26). Trexler crafts a consumer paradox that complicates how active consumers select products on an ever-warming planet. Such patrons take the climate crisis upon themselves and select products marketers label as eco-friendly or sustainable. The choice between reading digital or print books is one such selection.

The library patron under environmental threat may ask, "How do I read sustainably?" However, the discourse surrounding digital media versus conventional media is not binary. Given the academic library's patron-driven service model, a study of the field's recent transformations, challenges, and projections is necessary to determine whether books can, should, and need to be sustainable.

This study outlines the relationship between the book as an object that occupies space and society's desire to be more sustainable. As patron interests cross into recent research in library and information science journals, the traditional function of an academic library may evolve. The study focuses on recent library and information science research, national and Lamar

University's library usage statistics, and the role of publishers as corporate merchants of books and digital media. In sum, this review addresses three research questions regarding the academic library and the publishing world:

Are e-books more sustainable than traditional books?

What did the availability of digital books and media do to society?

Is open access to information and things a sustainable model for a sharing economy?

Literature Review

The future academic library will juggle access to information and sustainability efforts intended to reduce long-term effects on the environment. The following literature review dives into general discourse from several library journal articles and other academic sources on sustainable practices within the academic library and stakeholder implications. The section below reviews collections, patronage, and deselection to illustrate sustainable practices within publishing and the library and information science field.

Collection sustainability depends more on how often the user engages with media than on the media's form. Previous research has found that "[t]he greater number of users per book, the more beneficial it is to read from a printed book. In contrast, the digital system increases almost linearly with each additional user" (Kang et al. 6). These findings imply that the academic library's physical collection is more sustainable than digital content. However, Qi Kang and colleagues suggest that "libraries lend reading materials and e-reading devices and offer digital and printed information services and facilities" (9). Academic libraries are positioned to

champion sustainable collections so long as they encourage patrons to use their services to avoid purchases.

The academic library may enter the future by providing not only books but also an innovative space for patrons. Part of the shift is how diversified library collections have become and how patrons utilize library space. With information commons and collaborative spaces, academic libraries welcome faculty and staff to use the library as an extension of the classroom. Matt Enis's report in the *Library Journal* covered three library labs that introduced technology to campuses and acted as multidisciplinary hubs to explore new trends (18).

The one thing keeping the library from being overrun with books and media is deselection, an academic librarian's term for decluttering. Deselection keeps academic library collections current. Academic librarians have similar standards for deselection across digital and physical collections because both take up space—even if virtual. The deselection process, or weeding, looks different for every librarian. Some prefer to do it at night to avoid patron scrutiny, and others wait until the lull of summer to remove books or media. Regardless of format, stored information must include the most recent research (Culley 2). Deselection ensures patrons have access to relevant and organized information. While patrons do not decide what books librarians remove from collections, demand-driven acquisition (DDA) and patron-driven acquisition (PDA) encourage and generate input for which books enter the digital collections.

DDA and PDA give patrons agency over academic library collections. When academic libraries purchase print books that are not in demand, they may go unused and uncirculated. DDA and PDA offer a solution to this issue. Moreover, several librarians note the advantage of electronic books. Jennifer Culley states, "[T]hey take up no physical shelf space; they cannot wear out, nor can they be damaged, lost or stolen by patrons. They do not need to be re-shelved,

are never overdue, and titles rarely go out of print" (2). The electronic book benefits collection

management because it makes access convenient and instant and reduces the chances of unread

books. DDA and PDA are not unlike print on demand (POD), popularized by several publishing

companies in recent years.

   Trends toward more electronic media delivery and systematized printing on demand

reveal that most consumers prefer digital media. DDA, PDA, and POD became possible after

digital media and services. POD models ensure economized use of resources like paper, binding,

and ink. Nic Boshart writes, "With the advent of smartphones, our new buying habits have

conditioned us to live digitally. We expect content we want, when we want it" (23). Patron-

driven use may be part of the newer buying habits Boshart mentions. The following discussion

surveys how publishers reimagined the production and distribution of books because of advents

in digital media and green publishing.

   The popularity of digital publishing has motivated significant magazines, newspapers,

and book publishers to digitize or cease print publication. For example, *The Encyclopedia

Britannica* ceased print publishing in 2010. When asked why, Jorge Cauz, president of

Encyclopedia Britannica, Inc., said, "This has nothing to do with Wikipedia or Google. . . . This

has to do with the fact that now Britannica sells its digital products to a large number of people"

(qtd. in "Encyclopedia Britannica"). When it comes to publications going completely digital,

consumer preferences drive decisions on media format. Moreover, green publishing suggests

publishers want to connect production with consumer advocacy for sustainable products and

carbon neutrality. On the other hand, publishers also market to readers who see books as objects

to adorn homes and shelves.

Each side of the argument for sustainability wants to provide a solution, but these issues are indeed interconnected and dependent on more than one consumer archetype. According to Boshart, when faced with the thrifty allure of e-books, publishers will have to create more beautiful hard-copy editions to justify the purchase of an object (23). The book-as-an-object issue complicates the sustainable practice because it reduces the book to decor and suggests that publishers believe that readers prefer e-readers but want to display books. With the constant variance in consumer preference in formatting, publishers have debated green publishing with just as much fervor.

Corinna Norrick-Ruhl and Anke Vogel's research utilizes Geral Jackson and Marie Lenstrup's definition of *green publishing* as "[e]nvironmentally friendly/sustainable publishing":

> Conventional publishing is anything but "green"—paper production is particularly toxic, and the ethical fig leaves represented by the use of recycled and/or acid-free paper and vegetable dyes do not address the issue of fuel-inefficient global transport of printed books. Electronic publishing is touted as a green alternative, but the Internet is hardly carbon-neutral either: server farms consume enormous amounts of energy, for instance.
>
> (qtd. in Norrick-Ruhl and Vogel 221)

Jackson and Lenstrup's definition outlines the complex paradigm publishers face when considering any effort to become sustainable. Eco-friendly labels ignore distribution. Electronic publishing cannot circumvent the Internet's use of energy and physical infrastructure, which taxes the environment. Naturally, a book's sustainability extends beyond production because that event encompasses a small percentage of its total life cycle.

The third alternative, which Norrick-Ruhl and Vogel do not consider, is the societal node for sharing books: the library. Of course, publishers know the sharing model presents a cap on

consumer and author profit margins. However, the library offers readers an alternative to purchasing books and access to a collection of books that span further than any personal collection ever could.

The academic library is an institutional model for the sharing economy with responsive service and local solutions. The library of things (LOT) is an emerging concept within library scholarship focused on providing regular household goods to library communities using the check-in/check-out model usually reserved for books, which promotes access over ownership. The LOT model fits within academic libraries because they place a patron's needs first. In a pioneering study, Denise Baden and colleagues found that LOTs "shared common environmental and social values, with the most prevalent values being to use the library concept to reduce resource use and waste and to enable more equitable access to goods" (1). Public libraries implemented surveys for what things patrons used most and measured spared waste through their LOT models.

Though the LOT model exists solely within public libraries, academic libraries implemented loaning services for laptops and other digital devices after the onset of COVID-19 to combat the digital divide. As an alternative model of need-based consumption, academic libraries offer communities equitable access to otherwise expensive products using a subscription-based pricing model. The academic library has long been a place to address the digital divide, but the pandemic accelerated and emphasized the use of digital and remote access beyond conventional collections. "Real equity would entail making it possible for all students to achieve the same outcomes by giving them the differential resources they need to attain them" (Levine and Van Pelt 23). Slight modifications with equity and delivery emerged in the pandemic. The LOT is a model that prioritizes access and patrons' needs.

Methodology

The methodology for this research includes academic and nonacademic sources. The former are quantitative data on greenhouse gas emissions for each reading medium and collection circulation statistics for academic libraries nationwide and for Lamar University. The latter considers qualitative data from an anonymous survey of six academic librarians in Southeast Texas. Both sets represent numerical data to support current library trends and discourse analysis on librarians' expectations for those trends.

Results

Research on greenhouse gas (GHG) emissions after production proved sparse when looking into the book and sustainability. However, Kang and colleagues present a comprehensive look at GHG emissions after reuse (reread) on up to ten reads on various devices, including e-readers, tablets, smartphones, and laptops. A graph showed that paper books emit lower GHG than any e-reader—especially after the tenth reading. But a paper book emits more GHG if read only once. The graph's data complicated the expectation of one form being more sustainable than the other (Kang et al. 8).

Data from the National Center for Education Statistics revealed academic library collections and circulation statistics for digital and physical books headed in opposite directions between fiscal year 2018–19 and fiscal year 2019–20. Nationwide, academic libraries deselected 3,599,256 physical books from their collections. The circulation of physical books dropped by 14,666,866, and academic libraries added 164,697,503 e-books to their collections ("Table 8"

[Fiscal Year 2019]; "Table 8" [Fiscal Year 2020]). Lamar University's collections for e-books and shelved books increased, but in fiscal year 2018–19, circulation of physical books hovered at 5,454, while e-book circulation hit 19,257 (Reported data [2018–19]; Reported data [2019–20]).

When the researcher conducted personal interviews with Southeast Texas academic librarians about sustainable practices within their libraries, they tended to lean on an overall increase in and shift to digital resources.[1] However, one respondent proposed that sustainability was not a factor in the selection of material for library circulation; selection of material reflected patrons' needs, regardless of format. On the other hand, two respondents posited options to protect the environment that did not point to collections, such as recycling, ride sharing, adopting efficient energy use, and centralizing staff. Southeast Texas librarians feel that digital media are sustainable, but they are not selecting collections on that premise alone.

When the researcher asked Southeast Texas academic librarians how access to digital books and media affected academic libraries, they agreed that access expanded presence and saved the library. One respondent noted that digital media allowed patrons to access library material anywhere in the world, beyond the physical library building. Another respondent credited their library's embrace of technology as the reason the library has been able to continue to serve patrons and have a reputation for being reliable and credible. These results supported the hypothesis that digital books and media expanded library services to remote students.

Five out of six respondents noted that their college had repurposed physical space that once housed books or other physical media. This result supported the hypothesis that academic libraries are changing their spaces to meet patrons' needs. Such changes include repurposing spaces that once housed shelving for books. When asked whether the future of academic libraries

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[1] Personal interviews were conducted in the form of questionnaires sent by e-mail. Responses date from 28 March to 7 April 2022.

depended on access to and utilization of digital resources, five out of six respondents agreed. This result matched expectations aligned to the increased attention and accumulation of digital media.

The last question asked librarians to consider how the debate between open access and subscription-based services might drive change within the field. Respondents tended to side on neutrality as opposed to an either-or condition. One response weighed the importance of instruction in digital literacy, noting that open access resources vary widely in terms of their trustworthiness and credibility as sources of information. Despite the high costs of subscription-based services, academic librarians adamantly defended them. One respondent made the point that users may perceive free content to be of lower value and that users will continue to demand subscription-based services. It is clear from the responses that academic librarians see long-term sustainable benefits of digital media, changes to physical space, and subscription-based pricing models.

Discussion

While the role of paper products in climate change is by now common knowledge, institutions like the academic library offer an alternative to overconsumption: access. This study aimed to explore three questions: Are e-books more sustainable than traditional books? What did the availability of digital books and media do to society? Is open access to information and things a sustainable model for a sharing economy?

Sustainability depends on reading patterns, not just format, as seen in Kang and colleagues' graph (8). The anonymous survey responses to sustainability suggest that academic

librarians consider electronic resources the sustainable option. Moreover, with a decreased circulation of physical books, e-books seem more sustainable long-term. The availability of digital books and media appears to have given the academic library a reason to deselect books and accumulate more e-books over the last few years. Moreover, the repurposing of spaces that housed books signals another shift in direction from within academic libraries. Open access to information and things within the academic library is a model for a sharing economy if patrons do not expect librarians to become knowledge experts on every*thing* they offer.

Overall, the academic library—and libraries in general—are models for a sustainable sharing economy that prioritizes access over ownership, supporting consumer shifts toward subscription-based services and away from personal ownership.

Limitations

As with any study, this research encountered several limitations. These limitations consider several facets to explore and lessons to apply to future research projects. While the breadth of this research focused on sustainability as it relates to physical and digital collections, future research may further explore some areas, such as reports on sustainable academic library buildings, rewritable digital paper, and stone paper. Innovations such as these present another layer of sustainable practices within the academic library and for the patron. A specific limitation of this research was its concentration on academic libraries and their efforts to become sustainable, which left out public and grade school libraries. A second limitation surfaced while the researcher combed other studies on the topic; surveys were sent too early in the research process. Over the course of the research, several topics in library science emerged that the

researcher was not aware of. A timelier survey sent after the researcher had conducted initial readings would have included open-ended questions regarding methods for deselection or weeding, general disposal, and specifics on multimedia storage and distribution.

Conclusion

Perhaps sustainability is not just about the objects that share our space but also about how we use them. If the academic library's sharing model crossed into other areas of society, sustainability would not depend on the weight of one's pocketbook but on proximity to libraries and a small subscription-based fee for access. According to the definition of *sustainable* outlined in this paper, libraries are already sustainable because they offer systematized access to information and goods. Academic librarians provide a service dependent on the needs of the patrons over profit. Access to such services through library fees and subscription-based payments fosters an appreciation for sustainability as a method instead of a result. The secret to sustainable, ethical practices ostensibly lies within the academic library.

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