Abstract:

Sustainability is a hot topic these days. Demand for professionals and scholars who are knowledgeable about sustainability topics is growing exponentially. As with any nascent multidisciplinary subject area, sustainability students, scholars and professionals cope with the challenging imbalance of disorganized information abundance, coupled with knowledge scarcity. Questions far outweigh solutions and the pursuit of new knowledge abounds. For entrepreneurial librarians, environmentally conscious or otherwise, this is the perfect storm. Adept with much-needed research and organizational skills and a pre-existing ethic of collaboration and transparency, librarians are needed in this space. Motivated by their own personal passions and the needs of their patrons and institutions, entrepreneurial librarians demonstrate great leadership by carving new and essential niches for themselves in the emergent areas of scholarship and practice that embody sustainability.

**Keywords:** entrepreneurial librarians | sustainability | environmentalism | advocacy

**Book chapter:**

**Introduction**

Sustainability is a hot topic these days. Demand for professionals and scholars who are knowledgeable about sustainability topics is growing exponentially. As with any nascent multidisciplinary subject area, sustainability students, scholars and professionals cope with the challenging imbalance of disorganized information abundance, coupled with knowledge scarcity. Questions far outweigh solutions and the pursuit of new knowledge abounds. For entrepreneurial
librarians, environmentally conscious or otherwise, this is the perfect storm. Adept with much-needed research and organizational skills and a pre-existing ethic of collaboration and transparency, librarians are needed in this space. Motivated by their own personal passions and the needs of their patrons and institutions, entrepreneurial librarians demonstrate great leadership by carving new and essential niches for themselves in the emergent areas of scholarship and practice that embody sustainability.

The librarians highlighted in this chapter provide examples of how the leaders in this field employ the principles of social entrepreneurship in order to help solve social and environmental problems. Some get out from behind the reference desk in order to advocate on behalf of environmentally friendly libraries and institutions, bringing issues like transportation and energy efficiency to the forefront of the conversation. Others educate their communities and empower them to make lifestyle changes that are less resource dependent. Still others bring new value to their organizations by creating systems and programs that uniquely blend the strengths of librarianship with sustainability efforts. Regardless, like true entrepreneurs, all are changing the shape of librarianship and sustainability by challenging the status quo and expanding their job descriptions.

Librarians and Sustainability

Common trends were identified when the authors of this chapter surveyed sustainability entrepreneurs on why they think libraries and librarians are uniquely positioned to contribute to sustainability solutions. With a solid understanding of the information challenges in sustainability-related disciplines, many of the librarians interviewed during our research echoed the sentiments shared by Sarah Volpe of the California Center for Sustainable Energy, “In a busy world with so much information, people often come to libraries to seek direction on what is new and important, particularly for emerging topics, such as sustainability” (Volpe). Expanding on this, Fred Stoss of the State University of New York—Buffalo contends that librarians empower others to think outside of their traditional boxes, which allows entrepreneurial avenues to be explored (Stoss, “Re: Answers”). Andrea Minniear Cherney of the Energy Center of Wisconsin comments that “Today, energy issues are at the forefront of political conversation and we have an obligation to provide our users with accurate data...” noting that communities trust libraries and librarians as providers of accurate information (Cherney). This opening allows library professionals the opportunity to provide value to their communities by reducing user frustrations and increasing efficiencies, which saves both time and money. Furthermore, thinking of how communities maximize the use of their tax dollars to the benefit of future library users, Rebekkah Smith Aldrich of the Mid-Hudson Library System, proposes ways in which libraries play a role, “We are raising a generation of kids that will come to expect highly energy efficient buildings, low toxicity in building materials and adherence to ‘reduce, reuse, recycle.’ The library is one of the best places in the world (literally!) to demonstrate that commitment to sustainable choices. Kids grow up to be voters, politicians and policy makers and when they think back to who ‘got it’ early and who invested funds to make significant investments in sustainable options, I want libraries to stand out as early adopters” (Aldrich).
Librarians have been involved in the sustainability movement for decades, but the literature did not begin to reflect this until the 1990s. Since that time, library literature on sustainability and environmental concerns falls into four major categories:

- Sustainability of scholarship and collections
- Green library operations and practices
- Green library buildings
- Measuring and improving sustainability [Jankowska & Marcum].

An article by Monika Antonelli, published by the *Electronic Green Journal* in 2008 entitled “The Green Library Movement: An Overview and Beyond” provides a thorough summary of the green library movement through 2008. In this article Antonelli states that green libraries are approaching a tipping point creating a “true green library movement,” which aims to not only save energy and money, but approach solutions from a comprehensive standpoint, including avoiding toxic chemical cleaning products which can trigger asthma attacks, developing recycling programs beyond the library into the community or campus, providing more environmental resources, offering local expert panel discussions and talks, creating sustainability book clubs and fairs, and even in a few instances continuing education courses and workshops on eco-librarianship.

One of the earliest articles on green libraries appeared in 1991 in the *Wilson Library Bulletin’s* special section on “Libraries and the Environment” with James and Suzanne LeRue contributing the lead article entitled “The Green Librarian” (Antonelli, “The Green Library Movement”). A few other articles were also published in that same issue on topics related to making environmentally sustainable choices at home and in the library, developing environmental information resources, and the 20th anniversary of Earth Day. The intent behind this special issue was to bring these concepts to the forefront of the profession.

The creation of the *Electronic Green Journal* not only demonstrates entrepreneurial librarianship, but also marks an important milestone in sustainability research and publication. Started in 1992, *The Green Library Journal: Environmental Topics in the Information World* was formed by founder and editor Maria Anna Jankowska of the University of Idaho Library “to create an international exchange forum for librarians, information consultants, civic groups, organizations, educators and individuals” (Jankowska, “From Print to Gopher”). At this same time, the American Library Association Task Force on the Environment (TFOE) formed and collaboratively supported this new journal, which eventually switched to an open source system and became the *Electronic Green Journal*.

The next round of green library research and publication did not reappear for another 10 years. In the early 2000s, *Library Journal* consistently began publishing on the topic of greening library buildings, with numerous articles such as “The New Green Standard” by Bill Brown, which focused on the concept of green building design. Starting in 2007, the Oregon Library Association published an entire issue each quarter, called “Going Green: Libraries and Sustainability,” which covered a wide variety of subjects, such as environmental auditing in your library and transportation alternatives and resources (Stotak).
Today, sustainability-related subjects and approaches are increasingly woven into many libraries’ services, resources and activities, as well as librarians’ job descriptions and titles. Indicative of the increasing importance and relevancy of this area within the library arena, there are too many published works on sustainability and libraries to mention them all. Previous articles have described how librarians learned to adapt strategies from other disciplines, examined green facilities and collections and highlighted sustainability resources and data. This chapter looks at the subject from a new angle, by sharing stories of how individual librarians use their strengths to implement nontraditional and entrepreneurial sustainability programs that re-frame how value is assessed and delivered in libraries.

Social Entrepreneurship and the Triple Bottom Line

A formal definition of social entrepreneurship has only recently started to emerge in the literature despite the fact that its practice has a long, albeit informal, history in the nonprofit world and the public sector. Interest in social entrepreneurship is closely linked to an expanded definition for business success called “The Triple Bottom Line.” This concept is commonly defined as “an expanded baseline for measuring performance, adding social and environmental dimensions to the traditional monetary benchmark” (Elkington, “Glossary of Terms”). “The Triple Bottom Line” is often informally referred to as the three P’s: people, planet, and profit. Organizations, companies and individuals that adopt “The Triple Bottom Line” develop innovative strategies and solutions that contribute to human quality of life and environmental protection, in addition to the more traditionally and narrowly defined economic “bottom line.” The outdoor apparel company, Patagonia, provides a good example of this approach in practice. As a company, Patagonia has made a commitment to not only promote safe working conditions and fair labor practices throughout their supply chain, but also to “cause the least harm to the environment,” all while, of course, pursuing a profitable business (“Company Info: Corporate Responsibility,” “Environmentalism: What We Do”). Patagonia illustrates “The Triple Bottom Line” in action, because it pursues an economic bottom line alongside social and environmental goals. Economic success increases the impact of its social and environmental goals, and they in turn help to drive the company’s economic success.

Social entrepreneurs are individuals who use the principles of entrepreneurship to apply “The Triple Bottom Line” within their communities, businesses and organizations. An entrepreneur, by definition is “one who undertakes innovations, finance and business acumen in an effort to transform innovations into economic goods” (Thachappilly, Gopinathan). Therefore, a social entrepreneur can be defined as one who undertakes innovations, finance and business acumen in an effort to transform innovations into social, environmental and economic goods. Social entrepreneurs are “leaders or pragmatic visionaries” who “often seem to be possessed by their ideas, committing their lives to changing the direction of their field” (Ashoka; Schwab Foundation for Social Entrepreneurship). Social entrepreneurs share common traits, including:

- An unwavering belief in the innate capacity of all people to contribute meaningfully to economic and social development.
- A driving passion to make that happen.
- A practical but innovative stance to a social problem, often using market principles and forces, coupled with dogged determination that allows them to break away from
constraints imposed by ideology or field of discipline, and pushes them to take risks that
others wouldn’t dare.
• A zeal to measure and monitor their impact. Entrepreneurs have high standards,
particularly in relation to their own organization’s efforts and in response to the
communities with which they engage. Data, both quantitative and qualitative, are their
key tools, guiding continuous feedback and improvement.
• A healthy impatience. Social entrepreneurs cannot sit back and wait for change to
happen—they are the change drivers [Ashoka; Schwab Foundation for Social
Entrepreneurship].

History is filled with famous leaders who fit this description, yet due to the very recent
development of social entrepreneurship as a formal discipline, most would not have self-
identified as social entrepreneurs. The field of librarianship provides numerous examples of
unknowing social entrepreneurs in action. By nature, libraries exist for the benefit of the
common good and librarians operate under the assumption that the bottom line should benefit
society. They also, of course, endeavor to maintain the stability of their programs and
institutions. Therefore, they were already two-thirds of the way to the “Triple Bottom Line,”
when this concept started gaining traction in the 1990s. Similar to progressive members of the
business community, for a growing number of librarians, elaborating upon the existing ethic
within the field has been an obvious extension of librarians’ roles and responsibilities within
knowledge communities. In the past few decades, leaders in the library profession have
transformed their institutions, patrons and general purpose by adopting the final “line”:
environmental sustainability. Many librarians demonstrate the spirit of social entrepreneurship
and make an ongoing commitment to “The Triple Bottom Line” as sustainability advocates,
educators and entrepreneurs.

Methodology

In order to understand the current sustainability trends and activities in librarianship, as well as
identify notable leaders in the field, the authors sent out a call to our community of practice. The
call was distributed to over twenty listservs and blogs whose audiences include all types of
librarians and information professionals. This initial information-gathering activity connected the
authors with approximately fifty librarians who are engaged in sustainability-related initiatives.
Each of these individuals was invited to respond to an online interview that provided the authors
with an in-depth understanding of how their work reflects entrepreneurial and sustainability
ethics. The questions asked were:

• How do you think librarians and information professionals are uniquely qualified to
contribute to the sustainability movement?
• Do you feel you have created a new innovative idea, program, approach or strategy that
wouldn’t exist in your area/institution otherwise?
• Have you recruited others to join in your cause or collaborated with other groups?
• How have you taken risks in order to establish and advocate for the existence of your
program, idea, etc.?
• Do you consider yourself a change agent? How so?
• Have you come up with innovative solutions to resource limitations?
• How do you measure success?
• What would you do differently (if anything) when you look back?

The entrepreneurial librarians highlighted in this chapter were selected because they exhibit the characteristics of social entrepreneurs, as defined by Ashoka and the Schwab Foundation for Social Entrepreneurship. Each of these individuals demonstrates the myriad ways in which employing the principles of entrepreneurship helps librarians to tackle complex issues related to sustainability.

It is important to note, however, that this analysis is limited by time and length and does not provide a comprehensive landscape of librarians’ involvement in the field of sustainability. There are certainly many examples of important leadership that are not, for one reason or another, included in this chapter. However, as a result of the connections created through this research and the discovery that entrepreneurial sustainability librarians had a need to connect with one another, the authors built an online network on LinkedIn for sustainable entrepreneurial librarians and all of the librarians we surveyed are represented there. Here, librarians will share stories and best practices with one another, momentum will continue to build, and others will be inspired to join the movement.

While each of the stories represented in this discussion is unique, the authors identified a few common themes, which inform the structure of our analysis. Therefore, the librarian leaders referenced herein are organized by the following common traits: Advocates, Educators, Entrepreneurs and Embedded Librarians.

Advocates

This section highlights examples of librarians advocating for sustainability practices in the profession, throughout their communities, and on their campuses. Leaders in the library profession serve a wide variety of communities, from institutional to local to national, which reflect their range of impact. Some librarians are sustainability advocates within the larger profession. These individuals attempt to instruct other librarians and to affect broad change in their field by creating committees, events, programs, and disseminating resources about sustainability. Those in academic environments get involved as sustainability leaders on campus; they work within student groups, create action-oriented campus teams, or market sustainability knowledge and resources to faculty and students. Still other sustainability leaders take an active role in their home communities by serving on non-library committees, advocating for libraries, using their expertise in creative ways and collaborating with others.

Frederick Stoss, the Associate Librarian for the Biological, Environmental Sciences & Mathematics at the University at Buffalo SUNY, is a key example of a social entrepreneur, an advocate and one who “cannot sit back and wait for change to happen” (Ashoka; Schwab Foundation for Social Entrepreneurship). Stoss has a driving passion to make a difference; educational degrees in biology, zoology and library studies; and eight years of research in toxicology and environmental health. He got involved in the sustainability arena over 25 years ago. His first job as a librarian was at the Center for Environmental Information in Rochester, New York, where he developed and managed the Acid Rain Information Clearinghouse. The
only librarian to chair environmental sections of the American Library Association (ALA) and the Special Libraries Association (SLA), Stoss is now a recognized sustainability leader within both associations. As one of the original members, past Chair, and Co-Chair of the ALA Task Force on the Environment, Stoss has been active in developing programming and resources on environmental issues, which many libraries today use regularly. Involved in ALA’s “Libraries Build Sustainable Communities” project, Stoss advocated for sustainability by creating print posters, guidebooks and a website of useful resources for library professionals and the general public. He has also created the Green Libraries Community on the ALA website, which brings sustainability librarians together in one place to share ideas and to network. Today, he still helps keep his fellow librarians up to date on sustainability initiatives through his regular publications in ALA’s Social Responsibilities Round Table (SRRT) Newsletter and the Electronic Green Journal. He focuses on “a wide variety of free and low-cost data and information resources, that were and are underutilized, simply by not being widely known in non-research settings,” such as data produced by World Data Centers, ecological research institutes, and other ecological and environmental data repositories in his publishing (Stoss, “Re: Answers”). For example, he has written helpful articles like “Librarians Taking the LEED and Sustainable Communities” (Stoss, “Librarians”) and “The Roles Libraries and Librarians Play,” which are useful to many librarians (Stoss & McCook).

Entrepreneurial leaders like Stoss take risks to advocate for their beliefs. In 1999, he successfully introduced a resolution to ALA’s Social Responsibilities Round Table in support of the establishment of the Environmental Protection Agency’s Office of Environmental Information (OEI). The OEI’s goal was to make the agency’s environmental information more easily accessible to the public—one that should be a natural desire for any librarian to advocate (Stoss, “Editorial”). In 2006, when OEI was hit with substantial budget cuts that threatened the existence of the EPA’s National Library Network, Stoss and others at ALA and SLA proposed resolutions and recommendations in support of restoring funds to OEI “to continue support during extremely stressful times, when it appeared that generation of, access to, and dissemination of critical and essential environmental data and information was in jeopardy” (Stoss, “Re: Answers”).

Stoss’ leadership is recognized outside of the library community as well. He facilitated library workshops for the 2001 National Council for Science and the Environment Conference, whose recommendations were later presented at the 2002 United Nations World Summit on Sustainable Development. Furthermore, in 2007 and 2010, he was trained under Vice President Al Gore and The Climate Project to present Gore’s slide show that served as the basis for his award-winning book and documentary film, An Inconvenient Truth. Stoss has subsequently given this presentation at too many places to list (Stoss, “Re: Answers”). His leadership, risk-taking, publishing, teaching and hard work illustrates that Stoss is an influential and inspirational sustainability advocate, educator and entrepreneurial librarian.

Rebekkah Smith Aldrich, Coordinator for Library Growth & Sustainability for the Mid-Hudson Library System, was named a Library Journal “Mover & Shaker” in 2010 for her dedication to helping libraries secure sustainable funding. This publicity helped to launch her career in sustainable library building design and operations (Library Journal). Aldrich is currently a public library consultant who helps over sixty public libraries in New York find funding and governance solutions for green library facilities. Demonstrating the characteristics of a social
entrepreneur, Aldrich uses practical innovations and marketing techniques to alleviate ideological constraints and deal with social and environmental problems, which are common traits of social entrepreneurs (Ashoka; Schwab Foundation for Social Entrepreneurship). Whether Aldrich is garnering community support or finding green building solutions, she is always helping libraries to achieve their goals of developing facilities with lower operating budgets and healthier environments for staff and patrons. She uses sustainability as a marketing tool, a way to change behaviors, and a motivating factor for employees. For example, Aldrich created a friendly team competition by challenging her staff to come up with innovative ways to save on electricity, paper, water and money within their library. Aldrich also networks with her local chapter of the U.S. Green Building Council, the New York State Preservation League, the New York State Energy Research and Development Authority, and politicians involved with the state Energy Committee to build networks to further her work in a more integrated manner. Her outreach, marketing, and advocacy demonstrate value to her libraries providing them more integrated sustainability services (Aldrich).

There are a number of web-based efforts by librarian entrepreneurs to provide free and open access to information reaching an infinite number of people. Green guru Monika Antonelli of Minnesota State University Libraries, has made a laudable commitment to resource-sharing, as she has created the well-known online directory called Green Libraries: A Website for Information about Green and Sustainable Libraries. Dedicated to documenting the greening of library facilities in North America, this site keeps a running list of libraries that were built with green building principles and archives resources that have helped people to green their libraries. In addition, Antonelli currently serves her home community as a member of the Greater Mankato Envision 2020 Energy Conservation Task Force and as the web administrator for the online discussion group, “Sustainable Mankato” (Antonelli, “Green Libraries”).

An entrepreneurial team of librarians at Tufts University in Medford, Massachusetts got together for the first time in 2009, when Reference Librarian Laurie Sabol spearheaded the Tisch Library Sustainability Team (TST). Upon completion of her Tufts Eco-Ambassadors Program training—an optional environmental stewardship training for staff at Tufts University—Laurie advocated for the official chartering of TST, whose goal is to educate library staff and students about making sustainability a part of everyday choices. The team blogs and uses Twitter to share news, information, and ideas with campus community members, covering topics such as using eco-font, local recycling, and energy saving methods. TST also collaborates with other campus eco-ambassadors, the Library’s Special Events Committee and the Office of Sustainability in order to promote practical, but innovative solutions to social and environmental problems. In just two short years, this group of sustainability librarians has developed programs that inspire eco-friendly habits and behaviors.

TST initiated programs such as: collecting recyclable chip bags, wrappers, and writing utensils, in order to send them to Terra Cycle for up-cycling; switching to filtered tap water around the library to reduce consumption of bottled water; and becoming the host site for the second Community Compost Bin on campus. TST also created the Bring Your Own Place setting (BYOP) campaign to the library, which encourages library staff to bring in plates, mugs and silverware from home, in order to reduce the need for disposables at meetings and events (Thompson).
Academic Programs Librarian, Kristen Bullard, an active member of Northern Arizona University’s Environmental Caucus, is another campus sustainability leader and advocate. Recognizing the need to address transportation in a more comprehensive way, Bullard founded and chairs the Transportation Action Team (TransAT) of the Environmental Caucus. Bullard’s Transportation Action Team quickly grew to become the largest action team on campus, bringing together people from all parts of campus, not just Environmental Caucus participants. Some of the group’s successes, in less than one year, include: installing of electric car charging stations; establishing bike storage areas in garages and lockers on campus; conducting transportation surveys and creating action plans from the results; and promoting a campus ridesharing program. The group had three student interns during the 2010-11 school year, both Public Health and Environmental Sciences majors, who focused on projects concerning carbon offsets, the Bike Friendly University application, and education programming about sustainable commuting choices. TransAT also merged with the campus Bike Safety Committee, and collaborates with Flagstaff community organizations for events like Car-free Day and Bike to Work Week. TransAT has neither the authority nor a budget to implement these initiatives, but this passionate group demonstrates a “healthy impatience” nonetheless—an inspiring trait amongst social entrepreneurs (Ashoka; Schwab Foundation for Social Entrepreneurship). Rather than sit back and wait for change to happen, social entrepreneurs, like Bullard and TransAT, leverage the institutional roles, knowledge, and passion of individual members to achieve their sustainability goals.

Recently, Bullard was honored for her important work as a sustainability advocate by being awarded her campus’s 2011 Environmental Caucus Sustainability Leadership Award. She demonstrates the value of librarians proactively taking risks to make changes in their campus communities. Bullard suggests that sustainability initiatives like these “are increasingly viewed as tools for extending campus resources in creative ways to meet student needs and enrollment growth,” which is a value that academic libraries are often asked to provide (Bullard). More and more college students are demanding green campuses and seek out colleges that value sustainability. Integrating the library into both academic and non-academic life helps to demonstrate how relevant, useful, approachable, and helpful the library and its staff are. Connecting with students in these non-academic ways brings them into the library when their academic and research needs arise, allowing for librarians to expand their roles from advocates to educators.

**Educators**

Whether their patrons are students, the general public or colleagues, librarians are natural educators, researchers, information sharers, and awareness-builders. Moreover, the library buildings themselves offer a neutral venue to promote educational opportunities such as workshops, film nights, local speaker events, book clubs, contests, fairs, and art exhibits. Entrepreneurial librarians, possessed by their commitment to change through outreach, partnerships and education, are now educating with sustainability themes, resulting in some unique programs (Ashoka; Schwab Foundation for Social Entrepreneurship). As a result, there are numerous inspiring stories of entrepreneurial librarian-educators building awareness and sharing knowledge within their communities.
Librarians often organize and host educational events with local experts, and they collaborate with external partners in order to build powerful educational experiences for constituents. Increasingly, we are seeing a sustainability theme for these programs and experiences. While working at Craven Community College, librarian Julia Mielish organized a green team, which built environmental awareness each month by hosting local expert talks, workshops, and films on that theme. For example, a showing of the documentary *Fresh* followed by a talk on vegetable gardening, inspired students to petition the president of the college for a campus garden. Additionally, she started a Green Fair supported by her library, in which 36 local sustainability-focused organizations and businesses were invited to showcase their products. This partnership benefited the library, businesses and the community (Mielish). Mielish’s educational events demonstrate that she possesses the “healthy impatience” that commonly describes a social entrepreneur (Ashoka; Schwab Foundation for Social Entrepreneurship).

Another example of an educational sustainability film series developed by an entrepreneurial librarian can be found at the University of North Carolina—Greensboro where Sarah Dorsey, one of the co-authors of this chapter, is Head of the Music Library and the 2010 UNCG Champion of Sustainability. Dorsey created a film and discussion series five years ago that is still going strong with a loyal campus and community audience. Before each film, there is an opportunity for community advocates to share information with arriving audience members. Each film is followed by a group discussion led by experts to apply the film’s theme to local initiatives. For example, following the showing of the film *Bag It*, community members started an initiative to reduce the use of single-use plastic bags in Greensboro, and “in the process restoring our local community’s commitment to environmental sustainability.” The local Sierra Club is working with the city council, colleges, churches, and grocery stores to promote this campaign.

In 2011, the second annual UNCG sustainability short film competition was held with prizes given to filmmakers who created sustainably-themed films under 10 minutes in length. Highlights from these competitions include a film on sustainable burial (*A Natural Death*), and one shot entirely from a bicycle (*Balance*).

Additionally, the Green Libraries Group that Dorsey and others created in 2008 to educate library colleagues and encourage green behavior has (among other things) adopted a local stream and started a Green Book Group. Through these educational events, Dorsey’s leadership has educated her campus while connecting it to the wider community of Greensboro. This helps to cultivate a healthier culture based on sustainability.

Social entrepreneurs are proactive about collaboration as a means to create educational programs that build awareness in their communities (Ashoka; Schwab Foundation for Social Entrepreneurship). An example of this can be found in the “Brown Bag, Green Book” lunch-and-learn series created by Emily Ellis, Reference Librarian at Knox County Public Library. Ellis built partnerships outside of the library in order to develop “Brown Bag, Green Book,” a free, library-sponsored, community event. Each event features discussions on sustainability- related publications led by community leaders, such as a city councilman, a downtown developer, an architect, a university professor, the founding president of the Friends of the Smokies, and a local
TV meteorologist. Books in this series cover a variety of topics including environmental economics, consumerism, product design, climate change, nature deficit disorder and the food system. Ellis approached the city’s Office of Energy and Sustainability to ask for financial support and assistance in finding a venue to host the events closer to the hub of downtown. As a result the City of Knoxville joined as a co-sponsor. After several venues were tried, the series established itself at the East Tennessee History Center’s auditorium, two blocks from the centrally located Market Square in downtown Knoxville. The library’s Communications Department pitches in by developing marketing materials for the programs and the Friends of the Library buys each speaker a personal copy of the book and gives introductory remarks at each event. The reach of these events extends far beyond the actual discussion as the conversation continues virtually, and Ellis’ colleagues podcast the events to allow a broader reach to those who cannot attend live. Ellis’ collaborative entrepreneurial efforts have resulted in invaluable environmental educational experiences for her community.

On another level of education, Irene Reti, Director of the Regional History Project at the University of California at Santa Cruz Library, has completed a unique oral history, *Cultivating a Movement: An Oral History of Organic Farming and Sustainable Agriculture on California’s Central Coast*. This educational project is entrepreneurial due to the enormity of the plan, the variety of stakeholders involved and the many disciplines it supports. There are fifty-eight interviews included in the online archive for this project, with stories from farmers, community activists, researchers and educators. One of the narrators in this diverse oral history is María Inés Catalán, a migrant farm worker who entered an organic farming program in Salinas, CA in 1994, becoming the first Latina migrant farm worker to own and operate a certified organic farm in California and the first Latina in the country to run a CSA (Community Supported Agriculture). She is an activist working to improve food security for low-income communities and educating students who learn through residencies working at her family garden. Another narrator is California State Assemblyman Sam Farr, a “political hero for the sustainable agriculture movement” and the author of the California Organic Food Act of 1990 (Reti, “Oral History ... Farr”; Reti, “Oral History ... Catalán”).

In addition to the website and events that brought positive publicity to the campus and the library, popular exhibits of related artifacts are mounted at the University’s Science and Engineering Library and McHenry Library. Furthermore, a book that includes excerpts from the oral history will be published by the UCSC Library in the fall of 2011. Reti hopes the book will be used in various college courses such as a history of social movements, agroecology and environmental studies. As Reti says herself, “I consider myself a change agent and see this project as participatory research where the library partners with a community in creating knowledge ... [which] becomes a resource as the movement journeys forward and serves as a link between past generations of sustainability activists/environmentalists and the younger generation of college and even high school students engaged with these issues” (Reti, “Re: collecting”).

The influence of this project is spreading. In the Midwest, a historian is working to embark on a similar venture with the Wisconsin Historical Society. Writers and environmental documentarians seek Reti’s advice and organizations like the International Federation of Organic Agricultural Movements (IFOAM), Slow Food, the Ecological Farming Association, California Certified Organic Farmers and the Oral History Association are publicizing their work. At a
recent meeting of the national Ecological Farming Association, *Cultivating a Movement* was “praised ... as a model of the kind of project that should be done by libraries across the country” by recent president of the Organic Farming Research Foundation, Bob Scowcroft (Reti, “Re: collecting”).

Reti’s work to bring this unique undertaking to fruition exhibits entrepreneurial energy at its best. The power of this diverse community united over time through this project will continue to “cultivate a movement” inspiring local histories to be collected and preserved elsewhere.

**Entrepreneurs**

By definition, a start-up is “the act or an instance of setting in operation or motion, a fledgling business enterprise” (Merriam-Webster). Establishing a new initiative within a library or community of practice, along with its associated services, is no different from starting a company. These ventures are entrepreneurial by nature, requiring gap analysis, business and financial planning, stakeholder engagement, marketing and constant iteration. Social entrepreneurs possess “an unwavering belief in the innate capacity of all people to contribute meaningfully to economic and social development” (Ashoka; Schwab Foundation for Social Entrepreneurship). Examples of this attitude and approach are popping up increasingly in the sustainability movement, where opportunity abounds. Librarians are beginning to capitalize on this trend as well, by carving important niches for themselves and their expertise within their communities and institutions. The entrepreneurial librarians highlighted in this section are demonstrating leadership through their efforts to bring the principles and strengths of librarianship to sustainability-related efforts.

The Richmond Grows Seed Lending Library is the first of its kind to be housed within a U.S. public library. As the Co-Founder and Coordinator of the Richmond Seed Lending Library, Rebecca Newburn is a leader amongst green librarians. After hearing about the Bay Area Seed Interchange Library (BASIL) in Berkeley, California, Newburn was inspired to begin a similar initiative in her own community, in order “to create local resilience and a community of sharing and abundance” (Newburn). Newburn seized the opportunity to reintroduce seed saving to her community and attract patrons to the public library with a distinctive offering. The concept behind Richmond’s Seed Lending Library should be familiar to librarians and archivists alike; deemed important to the preservation of local heritage and culture; unique artifacts (seeds) are collected and shared with future generations. However, unlike a traditional library or archive, in a seed lending library, the artifacts are literally alive and often edible. Entirely operated by volunteers, this library engages the community by collecting, preserving and sharing local seeds. Furthermore, only a year after its inception, community demand and support from the public library have driven the program’s expansion. According to Newburn, “the project has benefited from being linked to a library because lots of people can see and access the seed library. We’ve been able to direct people to resources in the library because lots of people can see and access the seed library. We’ve been able to direct people to resources in the library to support them in learning about seed saving and the library staff has been very receptive to building their collection of seed saving books to support our community. We also recently assumed responsibility of the community garden at the library and are recreating it as a community seed garden where we will have educational signs about seed saving and work parties engaging the community in seed saving while growing quality seed for our community” (Newburn). Newburn’s initiative provides an
inspiring example of how much can be accomplished with nothing more than a passionate individual and an important cause.

For entrepreneurial librarians who are passionate about sustainability, their dream library might look something like this: a collection that focuses on energy efficiency, climate change, transportation, urban forestry, renewable energy and green building, with a tool lending library that lends energy meters and thermal imagers to the public, free of charge. This was exactly what Sarah Volpe, an inspiring entrepreneurial librarian, imagined. The best part of Volpe’s story is that she was the person who brought all these elements together at the California Center for Sustainable Energy (CCSE) in San Diego, California. CCSE is a nonprofit organization that helps individuals, businesses, municipalities and others to adopt greener practices and save energy and money through rebates, technical assistance and education. Volpe submitted a plan for completely revising the Energy Resource Library at CCSE, which outlined a work plan for new library resources as well as predictions for its success. Her proposal also made the case for why she would be the right person to implement the plan. Volpe’s proposal was accepted and CCSE’s Reference Library and Tool Lending Library was realized. As a result of Volpe’s entrepreneurial approach to problem solving, an invaluable set of services now contributes to the greater mission of her organization. According to Volpe, “the symbiotic nature of the library with the offerings of the Energy Resource Center provides a unique opportunity for our visitors. They can attend a workshop on a particular technology, see the display of that technology in our showroom and visit the library to check out a book or DVD to learn more about it and then borrow a tool to see how they can implement that technology in their own home or business. And it’s all completely free of charge” (Volpe). This is social entrepreneurship in action.

While they are holistic in their thinking and global in their reach, it is important to note that social entrepreneurs are also rather attuned to finding and delivering achievable solutions. In fact, one of the common traits shared amongst social entrepreneurs is their tendency to work toward “practical but innovative solutions to social problems” (Ashoka; Schwab Foundation for Social Entrepreneurship). “Practical but innovative” is a very fitting description for Beth Filar Williams, Distance Education Librarian at the University of North Carolina—Greensboro and a co-author of this chapter. Filar Williams has made a point to leverage her role in distance education in order to advocate for environmentally-friendly education delivery solutions that more effectively and efficiently serve distance students. As a result, Filar Williams’ program is much more efficient in terms of customer service and energy; it reduces transportation costs and carbon emissions by eliminating the need for students to travel to the library to use the resources, and the need for vendors to ship books to the library. Still, Filar Williams does not stop there, because she understands that virtual services can drive up energy costs. The collaborative efforts with her colleagues in the library Information Technology department, in which she works, are truly exemplary of an entrepreneur who aims to solve a larger social problem with a practical solution. Filar Williams’ group has implemented server virtualization, which greatly reduces the energy demands associated with online services. That she steps outside of the traditional role of a librarian in her situation in order to contribute to this larger issue is certainly exemplary.

Heather Cunningham, Reference Librarian and Web Coordinator of the Gerstein Science Information Centre at the University of Toronto, provides another example of a librarian who has found “practical but innovative solutions to social problems” (Schwab Foundation for Social
Entrepreneurship, 2011). In 2009, sustainability was not a primary priority for Cunningham’s organization, until she took the lead and found a solution to a common problem: paper use. Cunningham initiated a partnership between the library and the University’s Sustainability Office to decrease paper waste through green printing policies and paper reuse. The program became so successful that it was implemented throughout the central libraries on the University of Toronto campus. As a result of this effort, the Library has reduced paper use by over a half a million sheets per year. Furthermore, in 2010, Cunningham and her colleagues shared what they had learned with the library community by publishing a paper on the topic in Computers in Libraries, “Paper Cuts Don’t Hurt at the Gerstein Library” (Cunningham, Feder, and Muise). Through sharing their story with others, Cunningham and her team have made an impact at their own institution, and inspired others to initiate similar programs within their own organizations.

Providing access to information and creating opportunities for continuing education have long been primary elements of the ethic of librarianship, and librarians often leverage related principles in order to tackle complex sustainability issues. However, one notable entrepreneurial librarian rises to the top in this area—Maria Jankowska, Social Sciences/Government Information Librarian at the University of California—Los Angeles and founding member of the American Library Association’s Task Force on the Environment. Librarians were very rarely involved in publishing on topics outside of librarianship and formal journals on the subject of sustainability were limited in the early 1990s. Demonstrating that she truly possesses a “healthy impatience,” Jankowska saw a gap and took the initiative to fill it (Schwab Foundation for Social Entrepreneurship, 2011). At this time, Jankowska started the Electronic Green Journal (EGJ), a scholarly publication that aimed to “to assist in international scholarly environmental communication by providing a quality, unbiased, and freely accessible forum for the exchange of environmental information as an alternative to the costly, commercially produced scientific journals” (Jankowska, “Re: Interview questions”). This growing field of sustainability librarianship has Jankowska to thank for the continuing existence of this important resource. In 2002, Library Journal recognized Jankowska for her leadership in this area by naming her one of the fifty “Movers & Shakers” in the field. She continues to inspire others through “her scholarship, work on synthesizing information for Web access, promotion of environmental ethics and information, and national and international activities” (Jankowska, “Re: Interview questions”).

**Embedded Librarians**

Embedded librarianship, a quickly growing trend in all sectors, aims to serve patrons in the context in which their information needs arise. This approach “focuses on the user and brings the library and the librarian to the user, wherever they are—office, laboratory, home, or even on their mobile device” (Kesselman and Watstein). Sometimes the role of embedded librarians is intentionally created; for example, an academic library initiative that embeds librarians in university courses or in residence halls, in order to assist students in their own spaces. However, equally as important, sometimes the role of embedded librarians develops organically, resulting from initiatives started by entrepreneurial librarians. Sustainability-related initiatives and teams are inherently interdisciplinary and ever changing, with abundant knowledge gaps and opportunities. Entrepreneurial librarians who work on sustainability efforts are uniquely positioned to propose and experiment with embedded librarianship on interesting projects that
seek to change the way the world approaches issues related to energy, the environment and public health. The librarians noted in this section demonstrate that embedded librarians can help organizations efficiently and effectively achieve rigorous sustainability goals while displaying a social entrepreneur’s “healthy impatience” (Schwab Foundation for Social Entrepreneurship, 2011).

Many entrepreneurial librarians are bringing the concepts of sustainability to their libraries and institutions, but for those organizations that are already focused on sustainability, sometimes what they need is a dose of librarianship. The efforts made by Betsy Herzog at the Rocky Mountain Institute (RMI) demonstrate the value that librarians bring to sustainability-related businesses. RMI, a nonprofit think-and-do tank, is well known in the sustainability world for its innovative solutions to some of the world’s greatest energy problems (“About RMI”). When Herzog, now Librarian and Knowledge Manager, was hired as an intern in 2008, she saw an opportunity to fill an essential gap at RMI and subsequently created a role for herself. RMI’s researchers, consultants, communicators and fundraisers create new knowledge on a project-by-project basis, but unfortunately, as at many organizations, that knowledge is sometimes lost at the end of each project cycle. Herzog set out on a mission to capture RMI’s rich knowledge. She developed a database that catalogs all of RMI’s past work, communities of practice, project documents and individual expertise and skill sets. This knowledge management tool is now an invaluable resource that helps to build new and inspiring sustainability initiatives. Moreover, Herzog’s program has changed the culture of her institution, as she says, “my organization treats their internal knowledge, institutional memory, and research skills as important values for an organization to maintain. Prior to my tenure, the organization did not have an advocate for these ideas” (Herzog).

The U.S. Green Building Council (USGBC) is most commonly known for the LEED (Leadership in Energy and Environmental Design) rating system, which is a benchmark for energy-saving buildings that use resources responsibly (“Intro—What LEED Is”). Similar to the Rocky Mountain Institute, USGBC’s purpose is strongly based upon the principles of sustainability and the Triple Bottom Line. As a result, the organization was not lacking a sustainability advocate, but rather, a knowledge management advocate. That was until Anne Less, a co-author of this chapter and formerly USGBC’s Knowledge Center Specialist, saw an opportunity to share her skills as a librarian and knowledge manager with the organization. She envisioned a system that fosters cross-departmental communication internally, and member collaboration and education externally. Less outlined all of this in a proposal to the organization’s management team. With a great level of trust, a new position was created for Less to execute her plan for a Knowledge Center at USGBC’s Headquarters in Washington, DC. Less oversaw the development of the organization’s first library, from design and construction through collection development. She also developed an internal education program in which she taught classes on online searching and RSS feeds and hosted a sustainability movie hour each week. Through these efforts, like Betsy Herzog at RMI, Less helped to foster a culture of knowledge-sharing and professional development. Furthermore, Less extended the reach of her program by creating the first freely available digital library focused exclusively on green building. This online catalog, comprised of over 600 reports, websites and research papers, became a useful tool for green building professionals, state and local policy advocates and also other sustainability librarians.
Social entrepreneurs possess “a dogged determination, that allows them to break away from constraints imposed by ideology or field of discipline” (Ashoka; Schwab Foundation for Social Entrepreneurship). Breaking free from constraints is precisely what embedded librarianship is all about. In her current work on Google’s green building team, Anne Less has found that the benefits of stepping outside the traditional bounds of librarianship and joining an interdisciplinary team far outweigh the risks. As a consultant to Google, Inc., Less creates and implements resources that support the company’s goal to eliminate toxic chemicals from the workplace, while challenging the market to provide healthy products whose contents are fully transparent to consumers. Unfortunately, building materials do not have “ingredient labels” on them in the same way that food does. Therefore, consumers do not know when they could be unintentionally bringing harmful chemicals into their offices and homes. Less bridges this information gap in order to enable her teams, which are comprised of architectural designers and construction professionals, to successfully design and build offices that are toxin-free. Less has relied on her background in librarianship to develop guidelines for healthy building material selection and creating a digital library of toxin-free building materials. As an embedded librarian, Less not only has something unique and valuable to offer her team, but more importantly, by learning from team members from other professions, she has been exposed to a diverse set of problem-solving techniques. This systems approach to sustainability problems results in innovative, entrepreneurial solutions that would never be discovered if experts stayed safe in their professional silos.

Social entrepreneurs cannot sit back and wait for change to happen—they are the “change drivers” (Ashoka; Schwab Foundation for Social Entrepreneurship). The effort Cindy Davis has made to bring green building practices to her architecture firm provides notable examples of how “healthy impatience” incites positive change and influences others. Nowadays, it is common to hear about buildings that have achieved LEED certification and about design and construction professionals who are LEED Accredited Professionals (LEED APs). In the early 2000s, this was not the case. The building industry had yet to adopt the principles of the Triple Bottom Line, and instead focused on the bottom line in its most conservative definition. However, there were some leaders in the industry willing to take risks in order to learn more about building green. At Callison, a Seattle-based architecture firm, a team of innovators, including the firm’s librarian, Cindy Davis, developed a Green Research Team, which set out to transform the way the organization designs and builds. Since architects and construction professionals who work on LEED projects are required to possess the LEED AP professional certification, the first step Callison’s Green Research Team took was to be the first in their firm to become LEED APs. Davis was certainly an unprecedented leader in this regard, as she was likely the only LEED Accredited Librarian at that time (Davis). This step in Davis’ career not only changed how her firm approached building projects, but it also altered her own career path. Since Davis became a LEED AP in 2002, Callison’s Green Research Team has inspired over 130 employees to become LEED APs, and the firm has completed over 20 LEED-certified projects. Davis’ role in the organization has evolved beyond managing the Research & Information Center to now include management of the LEED certification process. Davis teaches classes on the LEED Rating System as a part of the firm’s professional development program, and she helps to organize LEED study groups. Most importantly, Davis’ green leadership is continuously rewarding,
particularly when she sees “some of those skeptics I have encountered make a 180 degree change in their position” (Davis).

Andrea Minniear Cherney, Senior Project Manager at the Energy Center of Wisconsin, is committed to strategic “doing” as well as strategic planning, which she reveals continuously through her work. Her driving passion makes Cherney an excellent example of an entrepreneurial librarian, for she has carved a special niche for her expertise in an interdisciplinary environment (Schwab Foundation for Social Entrepreneurship, 2011; Ashoka, 2011). The Energy Center of Wisconsin is dedicated to reducing energy use and developing the next generation of solutions to clean energy challenges. This nonprofit organization, which engages in research and education and operates in a cross-disciplinary manner, is comprised of engineers, evaluators, planners, economists, an architect, communications professionals and librarians. Cherney’s willingness to take on new challenges has allowed her a wide variety of opportunities, from managing the Center’s research library, distributing energy efficiency materials and portable energy meters to public libraries in Wisconsin, developing an electronic information clearinghouse, to managing a conference for professionals in the residential building industry. Each of these experiences has influenced Cherney’s most recent accomplishment—leading the creation of a revenue-generating distance learning program for professionals in energy-related industries. This program, which aims to make energy efficiency knowledge as accessible as possible, has impressed both internal and external stakeholders, raising the level of support for Cherney’s work. Other energy organizations have noticed the impact of this program and now hire Cherney’s team to deliver content through their channels. The interdisciplinary approach the Energy Center of Wisconsin takes to problem solving, along with Cherney’s desire to “rely 100% on [her] librarian roots,” has fostered an entrepreneurial spirit in all of her projects.

Academic institutions are also starting to embed librarians within their sustainability-related disciplines and efforts. The University of Nevada–Las Vegas is fortunate to have Marianne Buehler as their Urban Sustainability Librarian, perhaps one of the first of her kind. One of Buehler’s main tasks is in creating digital archives to build UNLV’s Institutional Repository (IR), which allows global access and the electronic preservation of such items as: faculty and student’s e-theses and dissertations; conferences and campus events; and sustainability research from Brookings Mountain West and the Harry Reid Center. In this regard, Buehler serves as a bridge between the university and constituents with related sustainability goals, such as city, county and state agencies and local and national nonprofits. In concert with these organizations, Buehler works to bring topics like transportation, energy, water and land conservation to the forefront of state and local conversations. One of Buehler’s projects involves gathering what is often buried government documents, local reports, conference materials and digitized lectures, in order for citizens to more easily locate sustainability resources in the IR. Her focus on collaboration and relationship-building has afforded Buehler successes that would never have been possible if the university had approached these issues alone. Buehler’s dedication to cooperation and resource sharing provides Nevadans with the opportunity to learn about and join in the quest for sustainable solutions (Buehler).

Buehler is also a member of UNLV’s Urban Sustainability Initiative Council. Their most recent project has been completing the University’s STARS rating (Sustainability Tracking Assessment
& Rating System) for the Association for the Advancement of Sustainability in Higher Education (AASHE), which is an organization that aims “to empower higher education to lead the sustainability transformation” (AASHE). In addition to UNLV receiving STARS credits for the Sustainability Librarian position, the IR was instrumental in garnering points as a vehicle to showcase UNLV faculty and student sustainability research efforts archived in an open access environment. As a STARS Research Technical Advisor, Buehler is part of a team that regularly reviews and updates research credits for content related to faculty and student sustainability-related research activities (Buehler). Exhibiting a trait of social entrepreneurs who “break away from constraints imposed by ideology or field of discipline,” the most rewarding aspect of her work involves working with academics in order to reveal the advantages of open access to those individuals who are most accustomed to traditional modes of scholarly communication (Ashoka; Schwab Foundation for Social Entrepreneurship).

Conclusions and Opportunities

The accomplishments of the sustainability librarians and leaders mentioned in this chapter are not only inspiring, but also demonstrate the variety of ways in which growth in the sustainability movement provides librarians with a wealth of opportunities. Librarians who seize upon these opportunities are true entrepreneurs. Moreover, in an uncertain economic climate, these librarians are actively demonstrating their relevance and institutional value. Librarians who carve out a niche for themselves in the sustainability movement demonstrate that their roles and libraries bring additional value to their organizations and institutions, something that is increasingly demanded of them by funders. Entrepreneurial sustainability librarians are positioned to re-frame how value is assessed and delivered in libraries. An esteemed leader in our field, Maria Jankowska says, “libraries still have a long way to go in adopting the holistic view of sustainability ... [we] need hard data on how much energy, water, and money goes into making and storing our print collection versus how much goes into creating and storing electronic resources. We need an objective assessment of not only environmental sustainability but also economically and socially sustainable practices in our libraries” (Jankowska, “Re: Interview questions”). Libraries will achieve an important milestone when they embrace the performance metrics of “The Triple Bottom Line,” in lieu of traditional tenure expectations, circulation statistics, funding models, and number of reference questions answered.

The examples that have been provided here are worth replicating in other institutions, but there are other opportunities that have yet to be explored. For example, we anticipate that library schools and professional associations will offer subject-specific training in sustainability. Additionally, librarians can and should advocate for laws that favor sustainability initiatives at the local, state or federal levels. It is our hope that sharing these stories will inspire others in the field to take advantage of the ample opportunities for librarians in the sustainability movement. No matter who you are, there is a place for all of us in this ever-growing field, as Cindy Davis of Callison has found, “you can be influential without necessarily being in a leadership role” (Davis). Moreover, entrepreneurial initiatives are always more successful if approached collaboratively, so if you are inspired but hesitant about where you can make the most impact, take the advice of the Tisch Library Green Team, “seek out a group of like-minded individuals to identify some potential areas of improvement for sustainability practice and related communications within your workplace” (Thompson). Still, the most common thread amongst
all of the wonderful, inspiring librarians featured in this chapter is that they are not afraid to cross barriers. If each of us in our own small way took Fred Stoss’ advice, the authors sincerely believe that anything is possible: “take advantage of the opportunities placed in front of you and NEVER look at them as burdens, hurdles or barriers. Things placed in front of you are challenges to overcome: walk around them, crawl under them, jump over them, break through them—it makes you smarter and stronger” (Stoss, “Re: Answers”).

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